令和元年7月30日

# 仏国「PLANS DE PRÉVENTION DU RISQUE INONDATION GARONNE et principaux affluents Secteur de l'AGENAIS」 (PREVENTION PLANS RISK FLOOD GARONNE and main tributaries Sector of AGENAIS)仮英訳

http://www.lot-et-garonne.gouv.fr/IMG/pdf/in-garonne-agenaise-reglement-20.pdf (参照:2019/07/30)

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1頁

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PREVENTION PLANS RISK FLOOD GARONNE and main tributaries Sector of AGENAIS Approved by prefectural decrees

Of the No. 47-2018-02-19-003 to the No. 47-2018-02-19-021 as of February 19, 2018

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# 4 頁 TITLE I: SCOPE OF PPR - GENERAL PROVISIONS I - 1- Organization of the Regulation This Regulation includes: Title I - Scope of PPR - General Provisions Title II - Regulation of new projects Title III - Preventive, protective and safeguard measures Title IV - Measures on Existing Goods and Activities Attachment

#### I - 2 - Scope

#### I - 2-1 - Delimitation of the scope

This Predictable Natural Hazard Prevention Plan applies to areas delineated by cartographies hazards for the flood risk for the highest known waters (see presentation note). The plan also aims to regulate, if necessary, areas that are not directly exposed but where developments could aggravate the risks or create new ones.

#### I - 2-2 - Objectives of the PPR

Pursuant to the Environmental Code (Book V), the PPR aims to ensure the safety of people and reduce the vulnerability of goods and activities in risk-prone areas.

To achieve these objectives, the plan, pursuant to Article L. 562-1, 3rd paragraph of the Environmental Code, may include:

 $\rightarrow$  define rules relating to public networks and infrastructures serving its area of application and to facilitate possible evacuation measures or rescue operations;

 $\rightarrow$  to prescribe to individuals or their groups the carrying out of works contributing to the prevention of risks and entrust them with the management of risk prevention or intervention mechanisms in the event of occurrence of the phenomena considered.

In addition, the PPR may also provide, in addition to the measures provided for in the Environmental Code, recommendations to reduce the vulnerability of goods and people in the form of, for example, and individual safeguarding plans under the conditions set out in Titles III and IV.

It can also help to guide communal development towards risk-free areas with a view to reduce the vulnerability of goods and people, consistent with other key principles of the urban planning, integrated into the planning documents (economical management of space, protection of natural and agricultural, preservation of ecological continuity and protection of landscapes).

#### I - 2-3 - Reminder of the obligations of the owner / client

The State and the communes do not have the obligation to ensure the protection of the properties against the natural action of the waters. It is the owners who must ensure the load of protective works on state and non-state watercourses.

As such, the owners/clients are responsible for carrying out the works and works of protection. The supervision and maintenance of the works are also the responsibility of the building owners. In addition, property owners bordering non-state watercourses must also maintain the courses of water. This interview is intended to allow, under Article L. 215-4 of the Environmental Code, the maintenance stream in its equilibrium profile and the free flow of water.

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#### I - 2-4 - Delimitation of zoning

The PPR (Articles L562-1 to L562-9 of the Environment Code) are intended to delimit the areas concerned risk and to regulate in a sustainable way the uses of the soil in these zones. For each risk regulated by the PPR, zoning is defined in application of the circulars and guides to implement these provisions.

Thus in each zone, the plan defines the measures (prohibitions and prescriptions) related to the different projects, the prevention, protection and safeguard measures as well as measures relating to the use or exploitation of existing structures, works, spaces cultivated or planted to the date of plan approval, actions to be taken by owners, operators or users.

#### I - 3 - Effects of PPR

#### I - 3-1 - The nature of servitude of public utility

The PPR is a public utility easement. It is applicable as soon as it is approved and enforceable when all advertising measures have been implemented.

It must be annexed by municipal by-law (update of the public utility easements) to the Occupation Plan of the Soils or the Local Town Planning Plan in accordance with Article L. 126-1 of the Urban Planning Code. If this formality is not executed within 3 months, the Prefect proceeds automatically after formal notice.

Compatibility of the planning document, although not mandatory, should be undertaken as

soon as possible, to ensure the best readability and understanding of the POS(Land Use Plan), PLU (Local Urban Plan) or CC (communal maps). The easements thus created cannot give rise to compensation.

#### I - 3-2 - The nature of planning documents and their consequences

The PPR is an urban planning document to which the prior notification procedure Article L. 600-1 of the Urban Planning Code.

In this respect, unlawfulness for defects in form or procedure cannot be invoked by way of the exception unlawful in the context of a contentious appeal, after the expiry of a period of six months from the date of effect of the PPR (see 7).

In accordance with Article L. 562-1 of the Environmental Code, the prescriptions on the existing (development of the PSI in this Regulation) must be brought into conformity within a maximum of 5 years from the effective date of this document. This period of 5 years may however be reduced depending on urgency and special provisions provided for by the PPR Regulation.

Their implementation is only necessary within the limit of the cost fixed at 10% of the market or estimated value of the property to be this same date, pursuant to Article R. 562-5 of the Environment Code.

In the absence of compliance within the prescribed period, the prefect may, after formal notice, order the prevention measures at the expense of the owner, the operator or the user.

Any opportunity to reduce the vulnerability of the buildings already exposed will have to be seized, looking for solutions for flood expansion and the safety of people and property.

#### I - 3-3 - Revision and Modifications of the PPR

Pursuant to Article R262-10 of the Environment Code, the plan for the prevention of natural risks foreseeable can be revised according to the procedure described in Articles R562-1 to R562-9 (procedure for PPRn). The plan for the prevention of natural risks may be modified on the basis, in particular, of an evolution of the knowledge of the risk.

#### 6頁

In application of Article R562-10-1 of the Environment Code, the plan for the prevention of natural risks foreseeable can be modified provided that the modification does not affect the general scheme of the plan. The modification procedure can be used in particular to:

- a) rectify a material error;
- b) modify a minor element of the regulation or the presentation note;
- c) modify the graphic documents delimiting the zones mentioned in 1  $^\circ$   $\,$  and 2  $^\circ$   $\,$  of II of

article L562-1, for take into account a change in the circumstances of fact.

The modification procedure is defined in the article R562-10-2 of the environment code.

#### I - 4 - Combined provisions of the PPR and other regulations

It is up to the petitioner to ensure and take into account legislative and regulatory developments in consulting in particular on the Internet the portal "Risks" http://www.prim.net/.

#### I - 4-1 - PPR and Urban Planning Code

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, the client engages his responsibility. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third-party recourse, refusal of compensation,...).

#### I - 4-1-1 - The most restrictive rule prevails

The regulation of this PPR is annexed to that of the town planning document applicable to the municipality (POS (Land Use Plan), PLU (Local Urban Plan), communal map). The occupations and land uses allowed by the planning document are only within the limits of respect for those of the PPR; the "most restrictive rule" prevails.

#### I - 4-1-2 - PPR and rules of application of the law of soils

#### □ Nature of the required documents

In application of Article R. 431-9 of the Urban Planning Code, for a project located in a flood zone defined by a PPRI, the dimensions of the architectural project are attached to the reference altimetry system (NGF (general leveling of France) 69) of the PPRI. If the petitioner does not meet this requirement, the file will be considered incomplete, for reference to article R431-4 of the urban planning code.

#### Prior technical studies (Article R. 431-16e of the urban planning code)

When in the present PPR, a construction project is subordinated to the carrying out of a preliminary study to determine the conditions of realization, use or exploitation, a certificate shall be established by the project architect or by an expert certifying the realization of this study and noting that the project takes into account these conditions at the design stage. If this requirement is not met, the file will be considered incomplete.

Works Compliance Checks

Work and developments carried out in the area regulated by this PPR are subject to a procedure mandatory proofing under the conditions provided for in Article R. 462-7d of the Urban Planning Code.

#### I - 4-1-3 - Article R111-2 of the urban planning code

Article R111-2 of the urban planning code (article of public order) can be used when the project is likely to undermine public safety by virtue of its location, size or location nearby other facilities. This may be the case in particular:

- If the project is located in a risk zone that is not mapped and therefore not regulated by the PPRn;

- If the requirements of the PPRn need to be specified taking into account the specific characteristics of the project (in some special cases the prohibition of the project may also be considered);

- If a new element of risk knowledge has occurred since the approval of the PPRn.

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#### I - 4-2 - PPR and classified installations for the protection of the environment

# I - 4-2-1 - General provisions concerning ICPE (facility classified for the protection of the environment) subject to authorization

For ICPEs (facility classified for the protection of the environment) subject to authorization, the plan may provide, in addition to the impact and hazard studies, carrying out a vulnerability diagnosis, the purpose of which is, in particular, to estimate the damage and potential malfunctions in a crisis.

On a case-by-case basis, ICPE (facility classified for the protection of the environment) authorization orders may specify, as necessary and after analysis of the activity, the provisions to be implemented.

# *I - 4-2-2 - Specific provisions concerning farmed ICPEs (facility classified for the protection of the environment)*

Concerning the upgrading of breeding facilities, in particular with regard to the Community action plan for the protection and welfare of animals, the plan may:

 $\rightarrow$  provide for derogations from the principle of non- constructability, in areas of high hazard, in the framework of works upgrading existing buildings,

 $\rightarrow$  frame these derogations by maximum limits of capacity and area (as a percentage of existing area rather than absolute value),

 $\rightarrow$  condition these derogations to the proof provided by the contracting authority that the

possible extension imposed by the standardization does not reduce the field of expansion of floods,

 $\rightarrow$  to authorize the extension justified by the setting to the standards that with the measures of prevention, protection and vulnerability reduction planned by the operator to cope with the danger form of a security plan.

#### I - 4-2-3 - Provisions concerning quarries and other screening and crushing

The order of 24 January 2001 laid down the principle of the prohibition of the exploitation of quarries in the mobility of the watercourse; this one being defined as "the space of the major bed inside which the minor bed can move ".

In accordance with the SDAGE (the River Basin Management Plans) Adour Garonne, the principle is the prohibition of quarries in the event of a proven risk of definitive capture of it and modification of the stream bed. This risk of capture is taken into account in the impact study.

Any extension or creation will have to be the subject of a study adapted to the level of hazard in the study of impact of the ICPE (facility classified for the protection of the environment) authorization file.

Regarding the extension of quarries and the modification of washing facilities, screening, the plan may impose the implementation of a security plan with appropriate measures to reduce the vulnerability and risk of pollution.

# I - 4-3 - PPR and Water Legislation (Environmental Code, Book II)

### I - 4-3-1 - General principles

Flood prevention is one of the components of balanced water management under the Code of the environment, art. L. 211-1 amended by the Law on Water and Aquatic Environments of 30 December 2006. This Balanced management of water requires respect for the free flow of water in the fields of expansion of floods and taking into account climate change.

#### I - 4-3-2 - PPR and Planning Document (PGRI)

The PPR must be compatible (Article L562-1 of the Environment Code) with the provisions of the Management Plan of Flood Risk (PGRI) as defined in Article L566-7 of the Environment Code, approved on 01/12/2015 for the Adour-Garonne basin.

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#### I - 4-3-3 - Water Police and PPRI

The authorizations issued under the water legislation shall be compatible with the

requirements of the risk prevention plan. The impact documents should, where appropriate, include a section devoted to Flood risk prevention with reference to the PPRI.

#### I - 4-3-4 - Protection arrangements and PPR

The ministerial circular of April 30, 2002 mentions that the areas behind the dikes remain flood risk, including bypassing, flooding downstream or upstream water table, and of course by exceeding the reference flood for which the dike was designed and by rupture of it. It does not enact a total prohibition to build in these dyke areas but recalls that, as for any area subject to flood risk, the best prevention remains the reduction of vulnerability. That-This assumes, first and foremost, the non-increase in the stakes, and therefore, the systematic search for an alternative implementation outside the risk zone in a geographical area at the intercommunal level. When no satisfactory alternative is found, the circular specifies conditions to be observed for new facilities in the areas behind the dikes, while respecting the principle of reduction of vulnerability. Exclusion of areas where hazard poses a threat to human lives part of these conditions, which implies the exclusion of areas that can bear the full impact of a break dike or overflow. Based on these principles, the plan provides for the entire floodplain compatible with the orientations and objectives of the SDAGE (the River Basin Management Plans).

#### I - 4-3-5 - Public interest easements related to floods and erosion zones

#### Areas of temporary detention or mobility of the minor bed

Article L. 211-12 of the Environment Code specified by the decree of February 7, 2005 (article R. 211-96 to R. 211-106 of the Environmental Code) allows the Prefect to define, after public inquiry, areas subject to easement, on land bordering a watercourse or the diversion of a watercourse.

One of these public utility easements is to create **temporary retention zones** for flood or runoff to reduce flooding or run-off in downstream areas. The other is intended to create or restore **mobility zones of the minor bed** of a watercourse upstream of the zones urbanized areas, in order to preserve or restore the essential hydrological and geomorphological stream.

In these areas, the prefectural decree may submit a prior declaration to the competent authorities in planning, works or works which do not fall within the scope of the authorizations or declarations instituted by the Urban Code, and which, by reason of their nature, importance or location, are likely to hinder, depending on the purpose of the easement, either storage or disposal water, the natural movement of the watercourse.

The introduction of these easements, other than those established by the PPRI, gives right to

compensation for owners of land in the encumbered areas when they create direct and certain material damage.

#### Rain zoning

The General Code of Territorial Communities (CGCT) requires mayors to establish a plan of zoning rain (Article L224-10); the development of this plan is all the more urgent when the risk is proven in their territory. This rain zoning is intended to delimit particular locations reserved for POS (Land Use Plan) / PLU (Local Urban Plan) for the development of water storage areas. Article L123-1 10  $^{\circ}$  of the urban planning code allows moreover define this zoning at the same time as the development or revision of the PLU (Local Urban Plan).

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#### I - 5 - Other prevention, information and rescue measures

#### I - 5-1 - Obligations of the State

### I - 5-1-1 - Departmental Dossier on Major Hazards - DDRM (articles R125-10 and R125-11 of the Environmental Code).

The information on the risks is, since the law n° 87-565 of July 22nd, 1987, a right for the citizens concerned, right which is today stipulated in the article L125-2 of the code of the environment.

Established by the State, the DDRM (Departmental Dossier on Major Hazards) includes the list of all the communes mentioned in Article R. 125-10 with enumeration and description of the major risks to which each of these communes is exposed, the statement of their foreseeable consequences for people, property and the environment, the chronology of events and known and significant accidents of the existence of these risks and the presentation of the general measures of prevention, protection and safeguard provided by the public authorities in the department to limit the effects. The prefect addresses to the mayors of the communes concerned the information contained in the documents mentioned in Article R. 125-10 concerning the territory of each of them, the existing cartographies of the zones as well as the list of decrees establishing the state of natural disasters.

#### I - 5-2. Obligations of local authorities

#### I - 5-2-1 - Display requirement

The Code of the Environment, art. R. 563-10 and following (old decree of 11/10/1990 modified), specifies the contents and the form of the minimum information that should be available to those who may be exposed at major risks.

This information on the risks and the instructions of safeguard must be posted in town hall

and in the places public.

#### I - 5-2-2 - Information on risks (Article L. 152-2, Code approx.)

At least once every 2 years, in municipalities where a natural risk prevention plan has been prescribed approved, the mayor must ensure, with the assistance of the State services, information of the inhabitants on the characteristics of the natural hazard (s) taken into account in the municipality, prevention and safeguards, the provisions of the plan, the alert arrangements, the organization of taken by the municipality to manage the risk, as well as the guarantees provided for in Article L. 125-1 of the Code of insurance. The mayor can choose the means of this information: municipal public meeting, file in the bulletin municipal, or any other appropriate means.

# I - 5-2-3 - The inventory and mandatory installation of flood markings (Article L. 563-3, Code approx.)

In areas at risk of flooding, the mayor, with the assistance of the competent State services, inventory the existing flood markers and establish benchmarks for historical floods, new exceptional floods and marine submersions. It sets the benchmarks corresponding to the highest Known Waters (PHEC). The commune materializes, maintains and protects these markers of floods.

# *I - 5-2-4 - The Communal Information Folder on Major Hazards - DICRIM (articles R125-10 and R125-11 of the Environmental Code).*

The DICRIM uses the information provided by the prefect. It indicates the measures of prevention, protection and safeguarding the major risks likely to affect the municipality. These measures include, in as and when necessary, the safety instructions to be implemented in the event of risk being realized.

The maps delimiting the sites where underground caverns or hinges are located which may provoke soil collapse developed in application of I of Article L563-6 are included in the document communal information on major risks.

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#### I - 5-2-5 - The Municipal Protection Plan (PCS)

The municipal plan of safeguard was instituted by article 13 of the law n° 2004-811 of August 13, 2004 of modernization of civil security for any municipality with a plan for the prevention of natural risks foreseeable, approved or included in the scope of a particular intervention plan on the basis of departmental file of major risks and DICRIM (The Communal Information

Folder on Major Hazards). The municipal plan of safeguard is stopped by the mayor from the community. Its implementation is the responsibility of each mayor on the territory of his commune. This plan defines the communal organization to ensure the alert, the information and the protection of the population. He establishes a census and risk analysis at the commune level.

#### I - 5-3 - Obligations of network operators

The law of 13 August 2004 on the modernization of civil security, and in particular Article 6, provides for a number of number of service continuity obligations for networks and infrastructures in case of major events. For strategic and sensitive networks, the managers concerned must carry out diagnostics and implement the resulting vulnerability reduction measures to ensure minimum functioning in case of crisis. These provisions are defined in the decree n° 2007-1400 of 28 September 2007 concerning the definition the priority needs of the population and the measures to be taken by the operators of a public service during crisis situations.

#### I - 5-4 - The obligations of private persons

The law of 30 July 2003 on the prevention of technological and natural risks and the repair of in its Article 77, codified in Articles L. 125-5 and R. 125-23 of the Environmental Code, information obligation of the buyer or the tenant of the real estate property (built and not built) located in seismicity and / or in a plan for prevention of natural or technological risks, prescribed or approved.

For this purpose, are established directly by the seller or the lessor:

 a state of natural and technological risks informed by the information made available by the departmental prefect;

• a statement of claims that have been indemnified following a disaster recognized as such.

In case of non-compliance with these provisions, the purchaser or the tenant may request the termination of the contract or ask the judge to lower the price.

#### I - 5-5 - Security Plans

This PPR recommends or imposes safety plans based on tools aimed at reducing Vulnerability (see Annex 3: Guide for Writing a Flood Safety Plan).

#### I - 6 - General characteristics of the PPR: hazard levels

See note presentation (General description of hazards) and infra title II

#### 11頁

#### I - 7- Litigation, responsibilities and insurance

#### I - 7-1 - Administrative litigation

The provisions of the PPR are considered a public utility easement and entail, by their annexation to the POS / PLU, limitations on building rights. Therefore, the order approving the PPR is subject to appeal for excess of power before the court Administrative. It should be recalled that the PPR, which is an urban planning document, is subject to the provisions of Article L.600-1 of the Urban Planning Code.

#### I - 7-2 - Liability for Violation of PPR Requirements

In application of article L. 562-5 of the Environmental Code, the fact of constructing or developing a piece of land in an area prohibited by the risk prevention plan or failing to comply with the conditions of implementation, of use or exploitation presented by this plan is punishable by the penalties provided for in Article L. 480-4 of the code de urbanism.

The fines may be imposed against the land users, the beneficiaries of the works, the architects, the contractors or any other person responsible for the execution of the said works. In addition, introduced by Article 65 of the Act of 30 July 2003, the new Article L. 480-14 of the Urban Planning Code allows the municipality or public institution of inter-municipal cooperation competent in PLU, to apply to the Tribunal de Grande Instance for the purpose of ordering the demolition or bringing into conformity of a constructed without the required authorization or in breach of this authorization in a sector subject to predictable natural hazards. The civil action is prescribed in such a case for ten years from the completion of the work.

#### I - 7-3 - Insurance

If the real estate constructed and the activities carried out contravened the requirements of the PPR, the insurance companies have the possibility, pursuant to Article L. 128-2 of the Insurance Code, to avoid their obligation of guarantee. These provisions also apply to existing assets prior to the approval of the PPR but only when it prescribes preventive measures for these goods and these measures have not been carried out in the time allowed by the PPR. This same article of the Insurance Code provides that insurance companies cannot avoid this obligation only upon initial conclusion or renewal of the contract.

#### I - 8- Financial measures

#### I - 8-1 - Studies and preventive work imposed by a PPR

Article L. 561-3 1/4 of the Environmental Code provides for financing by the risk prevention

fund natural resources (FPRNM) studies and prevention work on existing residential or used in professional activities, made compulsory by the PPR (see Title IV: implementation of a PSI (Flood Safety Plan) for highly vulnerable and sensitive institutions). The cost of measures relating to the development, use or exploitation of the property concerned, less anywhere applicable, insurance benefits paid under the natural disaster guarantee may benefit aid amounting to:

- 40% for residential and mixed-use properties,
- 20% for professional use.

The cost of these measures must not exceed 10% of the value of the goods.

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# I - 8-2 - Expropriation or amicable acquisition of goods exposed to a natural hazard major or goods damaged by a natural disaster

Under the conditions strictly defined in Articles L561-1 and R561-1 et seq. Of the Environmental Code, the State may declare the expropriation by itself, the communes or their groupings, of exposed to this risk, under the conditions provided for by the expropriation code for reasons of public utility and provided that the means of safeguarding and protecting the population proved to be more expensive than expropriation.

In application of article L561-3 point I 1° and 2°, the FPRNM (the risk prevention fund natural resources) can finance the amicable acquisition by a group of municipalities or the State of a property exposed to a foreseeable or half of its value and compensated (residential use or used in the course of professional activities natural or legal persons employing less than 20 employees), seriously endangering human lives, as well as the measures necessary to limit access and prevent any occupation, provided that the price amicable acquisition proves less costly than the means of safeguarding and protecting the population.

#### 13頁

Title II: Measures applicable to buildings and installations news and plans to modify the existing

#### Recall Hazard Classes and Regulatory Zoning Plan:

The entire flood zone of the Garonne River and its main tributaries is divided into four hazard classes, according to the water levels and the rates of the reference flood *(see presentation note)*:

- Low gap: water depth less than 0.50 m without current (speed <0.5 m / s)
- Middle gap: water depth between 0.50 m and 1 m without current (v < 0.5 m / s)

• Strong water: water level between 1 m and 2 m without current (v <0.5 m / s) or water depth less than 1 m with current (v > 0.5 m / s)

•Very strong water: water height greater than 2 m with or without current, or water level between 1 m and 2 m with current (v> 0.5 m/s)

#### **REGULAR ZONING GARONNE:**

Two zone colors are identifiable, each with levels:

• RED corresponding to the areas where the hazard is Strong (Red) or Very Strong (Dark Red) or behind dikes (Brown), and / or areas of expansion of floods to preserve (Red light, Red or Dark red) according to the level of hazard);

• BLUE corresponding to urban areas where the hazard is Low (Blue) or Medium (Dark Blue).

In each zone, it is also possible to distinguish different sectors materialized by frames different:

- Urban center (frame 1),
- Concerted Development Zone (ZAC) existing for activities and / or mixed (frame 2),
- Equipment sector (frame 3),
- Another sector already urbanized (frame 4).

These screened sectors can be the subject of special treatment in the area regulation.

#### **REGULATORY ZONING AFFLUENTS:**

In addition to hazards and issues, the zoning applicable to tributaries also results from the consideration of nature. Floods (sudden, violent) different from that of the Garonne.

Therefore, only one zone color is identifiable, with levels:

• RED: areas where the hazard is Low (Light Red) or Medium (Light Red) or High (Red) or Very strong (Dark red) or back of dikes (Brown), and / or areas of expansion of floods to preserve (Light red, Red or Dark red depending on the hazard level).

Within the Red Zone, it is also possible to distinguish between different sectors represented by different frames:

•Concerted Development Zone (ZAC) existing for activities and / or mixed (frame 2),

•Equipment sector (frame 3),

•Another sector already urbanized (frame 4).

These screened sectors can be the subject of special treatment in the area regulation.

NB: - Parts of urban centers located in low or medium hazard by flooding tributaries (Agen, Layrac in Agenais, Aiguillon and Vianne in Confluence) are similar to those flooded by the Garonne, in zones Blue and dark blue.

- The parks located in the urban center are classified in zone of expansion of the floods to preserve.

	Rear of dikes			Garonne	and Tributaries : Brown		
	Zones of expansion of floods		Exceptions Tributaries:	Light red	8	daronne and Tributaries: Red	Garonne and Tributaries: Dark red
	(* Transfér Anne seture urbanis (bro	e 2, frame 3 + frame	ame 2 + frame 3 + frame 4	k blue, frame 2 + frame	ame 2 + frame 3 + frame 4	 Garonne and Tributaries: Red, frame 4	ark red, frame 2 +
tory note):	URBANIZED AREAS URBANIZED AREAS Frame: 3 - Facilities	Garonne and Tributaries: Blue, screened 1 and G. Blen, frame 2, frame 3 + frame	Exceptions tributaries: Light red, frame 2 + frame 3 + frame 4	Garonne and Tributaries: Dark blue, frame 1 and G: Dark blue, frame 2 + frame 3+ frame 4	Exceptions Tributaries: Light red, frame 2 + frame 3 + frame 4	Garonne and Tributaries: Red, frame 2+frame 3	Garonne and Tributaries: Dark red, frame 2 + frame 3 + frame 4
regulatory zoning (see introductory note):	Frame. I - Urban center ]	Garonne and Tributs	+	Garonne and Tributa 3+ frame 4		Tributaries: Red, R frame 1	Garonne and Garonne and Tributaries: Red fi dark, frame 1
regui	hazard		Low	- T V		Strong	Very Strong

The crossing of the four Dalea classes with the analysis of the stakes made it possible to delimit six areas of the

※ (Secteur de l'AGENAIS, GARONNE et principaux affluents 2018) 14 頁より作成。
 \* 解像度により読み取れなかったフランス語は、機械英訳はせずそのまま記載。

## 15 頁 DEFINITIONS OF ZONES, OBJECTIVES OF THE REGULATION:

#### General informations :

As the definition of zoning is similar for the 19 municipalities of the Garonne valley concerned, all zones are not always present on each commune.

Regardless of the area concerned, certain operations such as highly vulnerable establishments or similar (for example: the creation of camping, the creation of reception area for Travelers....), are prohibited in the area flood.

In the margins of the six defined areas (Brown, Dark Red, Red, Light Red, Dark Blue, Blue) directly exposed to flood risk for the reference flood, there are also sectors that are not directly exposed to the risk of flooding for the reference flood because not flooded but enclaved in the flood zone, therefore likely to be isolated. Given different criteria (area of the enclave, level of hazard to proximity, near or far environment, nature of the project, ...), it is not appropriate for the most of these areas are developed and should be preserved.

#### Definition of the brown zone:

The brown zone corresponds to:

- a safety strip at the rear of the protective structures (50 meters wide strip for works whose height is less than 2 meters, 100 meters for works whose height is greater than 2 meters). This zone presents a particular hazard related to a dike break; As such, its regulations are binding on all types of sectors, including urban centers.

The regulation of this zone aims to:

- to strictly prohibit any new construction;

- to allow the maintenance of existing activities or land uses by facilitating developments aimed at reduction of vulnerability.

All the projects presented in this Brown zone will have been the subject of a search for implantation out of flood zone or failing that in a zone of less risk.

#### Definition of the Dark Red Zone:

The Dark Red box is:

- sectors exposed to a very strong hazard.

The regulation of this zone aims to:

- to strictly prohibit any new construction, with the exception of certain equipment that cannot be outside the risk zone or in a zone of lower risk, compatible with optimal preservation of areas of flood expansion and environmental health;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

The 4 frames allow to adapt the regulation to the different types of urbanized zones.

All projects in this Dark Red area will have been previously researched outside the flood zone or, failing that, in a zone of lower risk.

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#### Definition of the Red Zone:

The Red zone corresponds, in sectors exposed to a strong hazard (Garonne and tributaries):

- to urbanized sectors (framed 1 to 4 according to the type of urbanization),

- areas of expansion of floods.

This zone has a very large water storage capacity in the event of a high flood, which should be preserve. It is also characterized by a particular danger related to the characteristics of floods on tributaries (suddenness, violence).

The regulation of this zone aims to:

- to strictly prohibit any new construction, with the exception of certain equipment and constructions land-use activities, compatible with the high hazard level and the safety of the middle;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

The 4 frames make it possible to adapt the regulation to the different types of urbanized zones.

All the projects presented in this Red Zone will have been previously researched outside the flood zone or failing this in a zone of less risk.

#### Definition of the Red Light Zone:

The zone Red light corresponds, in sectors exposed to low and medium risks: - the urbanized areas in the floodplain of the tributaries (framed 2-4 according to the type of urbanization),

- the areas of expansion of floods (Garonne and tributaries).

This area is characterized by:

- a particular danger related to the characteristics of floods on tributaries (suddenness, violence);

- an important water storage capacity in case of high flood (expansion zones), which should be preserve, on the Garonne as on the tributaries.

The regulation of this zone aims to:

- to strictly prohibit any new construction, with the exception of certain equipment and constructions necessary for land reclamation activities, compatible with low and medium hazard levels, optimum preservation of the flood expansion fields and the health of the environment;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

The 4 frames make it possible to adapt the regulation to the different types of urbanized zones.

All projects presented in this Light Red Zone will have been previously searched outside the flood zone or, failing that, in a zone of lower risk.

#### Definition of the Dark Blue area:

The dark blue zone corresponds, in areas exposed to an average hazard of the Garonne and tributaries:

- highly urbanized sectors identified as urban centers (as defined in the circular of 24 April 1996), delineated in the stakes and raster map 1,

- to other urbanized areas (screened 2-4), delineated in the issue map.

The purpose of the Regulation is to allow normal operation, urban renewal and measured development of these sectors without increasing their vulnerability.

The 4 frames make it possible to adapt the regulation to the different types of urbanized zones.

Even if the dark blue zone allows constructions, a search for implantation outside the flood zone is always to favor, or failing that, in a zone of less risk.

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#### Definition of the Blue zone:

The Blue zone corresponds, in sectors exposed to a low hazard of the Garonne and tributaries: - highly urbanized sectors identified as urban centers (as defined in the circular of 24 April 1996), delineated in the stakes and raster map 1,

- to other urbanized areas (screened 2-4), delineated in the issue map.

The purpose of the Regulation is to allow normal operation, urban renewal and measured development of these sectors without increasing their vulnerability.

The 4 frames make it possible to adapt the regulation to the different types of urbanized zones.

Even if the Blue zone allows constructions, a search for implantation outside the flood zone is always preferred

## 18 頁 Chapter II - 1: Measures applicable in brown zone

#### Definition of the brown zone:

The brown zone corresponds to:

- a safety strip at the rear of the protective structures (50 meters wide strip for works whose height is less than 2 meters, 100 meters for works whose height is greater than 2 meters). This zone presents a particular hazard related to a dike break; As such, its regulations are required all types of sectors, including urban centers.

The regulation of this zone aims to:

- to strictly prohibit any new construction;

- to allow the maintenance of existing activities or land uses by facilitating development aimed at reducing vulnerability.

All projects presented in this Brown zone will have been previously researched outside the flood zone or, failing that, in a zone of lower risk.

#### II - 1-1 - Occupations and land use prohibited

#### Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars ...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (With the exception of various tanks and fixed tanks authorized: cf. Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

**Embankments and platforms** other than those strictly necessary for the construction of works, installations and constructions (including their access) authorized below (II-1-2).

The ex nihilo creation of large buildings: concerns any project including the largest façade (facade in the sense of the greatest length of right of way on the flood zone) is greater than 50 meters and its location is close to urban or built-up areas (distance to neighboring buildings 100 meters, for existing buildings and future urbanization areas). The concept of building large dimension applies to any construction project of any kind.

**Modular building installation, kiosk or equivalent**, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...).

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-1-2.

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II - 1-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptionsII - 1-2.1 - Management of the existing and modification projects of the existing

A - COMMON PROVISIONS Are authorized:

**Maintenance and day-to-day management,** in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-1-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams...

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (in the cases authorized below), without creation housing or very vulnerable facilities (see annexes list and *PSI*). *The extension is allowed in conditions defined below according to the destination of the building.* 

**Modeling of land** required for a project (excluding embankments strictly necessary for construction), condition that a preliminary study demonstrates both the balance between the volumes of fill and cuttings realized, and the non-aggravation of the risk of flooding on the

sector as a result of this work.

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction**, when this is not due to flooding, by maximum reduction of vulnerability and without increasing the stakes.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: cf. heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

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Large buildings: concerns any extension project of any kind whatsoever building, including the largest facade after works (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself but also for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, a study will have to be carried out to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project. NB: for projects also concerned by an authorization or a declaration under the law on Water, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment ground), designed to resist flooding.
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*NB: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements for construction rules to reduce vulnerability and defined in

Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...)

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**B** - HABITAT (including gite and B & B) AND ANNEXES Are authorized:

The rehabilitation (rehabilitation of housing) of premises formerly of houses, without creation of additional housing and provided that all habitable floors are located above the flood of reference.

The increase of the living space of an existing dwelling, by change of destination or partial assignment of an existing room on the date of approval of the PPR, without creation of housing additional, provided that the habitable floors created are located above the reference level.

The extension of existing dwellings, without creating additional housing, only through elevation levels, provided that the created habitable floors are located above the elevation flood.

The extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the date of approval of the PPR, the total footprint of all of these premises created must not exceed 20 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private per dwelling for a collective building. When an individual dwelling is provided with a room on the ground floor, located under the habitat, the footprint of the latter must be taken into account in the 20 m<sup>2</sup> of authorized ancillary premises.

In addition, the total footprint of all buildings must not exceed 30% of the total surface area of the land unit. If this threshold is already reached, 10 m<sup>2</sup> of additional premises would be tolerated, starting from the approval of the PPRI. Pollutants and vulnerable and / or expensive goods will be located above the reference dimension or will be easily moved.

**Extension or creation of open premises** accessory to existing dwellings (garage, shed, garden shelter, technical room...), whether they are contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), should preserve as much as possible the field of flood expansion and the flow of water, and remain open later to maintain the hydraulic transparency.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and/or outside, except in the immediate vicinity of dikes,** including a filtering device for floodwaters or above the reference coast, as well as a network cut-off device electric. Security fences are allowed.

**C - AGRICULTURE** (production, packaging, storage) Excluding trading activity: cf. heading D - Industry, trade, crafts, tertiary) **Are authorized:** 

The change of destination or assignment of existing buildings, *with or without extension*, for use agricultural (except breeding, animal shelter and dwelling, not allowed), subject to:

• place above the reference grade vulnerable and / or expensive goods, pollutants or toxic

• comply with the requirement for large buildings (in case of extension: see provisions municipalities).

• The hydraulic transparency of the construction will be sought.

The extension of existing buildings made necessary to comply with certifications, subject to justification of impossibility of implantation in a non-flood zone or, failing that, in a zone of less risk, and within the limit of 10% of additional footprint in relation to the footprint of the all of the existing building behind dyke. Where appropriate, the prescription on large buildings dimension after extension will be respected.

The extension of surface irrigation networks. Vulnerable and / or expensive equipment will be out of water or waterproof.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplars within 20 meters of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

The cutting and felling of trees, subject to a minimum of on-site storage for avoid the risk of ice jams. In the absence of removal in the shortest possible time, the storage of cut timber is authorized subject to limiting the impact on the flow of water (orientation of the stores) and stowing it to withstand the current during a reference flood.

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**D** - INDUSTRY, COMMERCE, CRAFTS, TERTIARY (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: cf. heading E - Accommodation with night reception and collective management) Are authorized:

The reorganization of the activity of an existing establishment, subject to reducing the vulnerability of the whole site and:

• to achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce the vulnerability and the risk of pollution of the whole installation.

The change of destination or assignment of existing buildings, giving rise to the creation industries, shops, crafts or tertiary activities, which are not listed in Annex 1 (very vulnerable sites) and Annex 2 (sensitive establishments) for low-risk and non-polluting activities on the ground floor, above the flood level for others, subject to:

• place above the reference level vulnerable and / or expensive goods, pollutants or toxic.

**E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT** (of which hotels, campsites, holiday centers and residences, retirement homes, Hospitals, boarding school.... Except bed and breakfast: cf. heading B - Housing and premises annexes) **Are authorized:** 

For activities other than campground, recreational park, holiday village classified in light accommodation... the development / redevelopment of an existing facility, subject to from:

• not increase the capacity of accommodation in a flood zone,

• place above the benchmark the accommodation floors that would be created in existing building,

• place toxic or polluting products as well as vulnerable goods above the flood of reference or

in a retention chamber resistant to this flood,

• take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),

• carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,

• carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

#### F - OUTDOOR ACTIVITIES (in collective or private use)

Are authorized:

The extension, development of outdoor recreational activities, ' green spaces, areas and plains games and sports fields not covered, subject to:

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic,

• anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,

• preserve the flow of water in case of flood

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**G-COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED) SERVICES** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: cf. heading E - Accommodation with night reception and collective management)

#### Are authorized:

The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- •take all measures to reduce the vulnerability of the structures,
- •place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

#### Change of destination or assignment of existing buildings for infrastructure creation transport

and surface parking, subject to:

- •carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- •take all measures to reduce the vulnerability of the structures,
- •place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of furniture provided that they are anchored in such a way as to withstand the reference flood.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

#### Extension or rehabilitation of treatment plants subject to:

•carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

•place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

• place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,

• comply with the requirement for large buildings (see provisions Commons)

• carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,

• to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### Expansion of waste treatment facilities subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

• comply with the requirement for large buildings (see provisions Commons)

• carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,

• carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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#### The extension of ' water treatment plants for human consumption provided that:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,

• to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The extension of transport infrastructure and car parks (excluding parking-silos or car parks in elevation), subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

• carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,

• comply with the requirement for large buildings (see provisions municipalities).

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of highly urbanized sites, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained In particular, the structures will be dimensioned to provide protection against the reference

#### flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works outside highly urbanized sectors, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

# The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

- limit the footprint to the most restrictive condition between:
- \* 30% more compared to the existing
- \* and total footprint of buildings <50% of the total area of the unit land,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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# II - 1-2.2 - New buildings and installations likely to be authorized under reserve of prescriptions

Information: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, classified installations for the protection of the environment (ICPE), establishments receiving public (ERP)...

#### A - COMMON PROVISIONS

#### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, subject to limit its impact on the flow of water in case of flood: orientation of the building with respect to the current, layout and size of openings, barbacans, flood resistance to limit the risk of ice jams...

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: cf. heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for electric vehicles, subject to taking all the provisions possible to ensure the resistance of the installation to the flood (anchoring, circuit breaker, height of implantation...).

Tanks and various fixed tanks subject to being located above the reference flood level or to be protected against the effects of the reference flood: lashing, weighting, contained in an enclosure waterproof...

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to flooding:
maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or plus for deep recessed poles, 3 meters or more for wider posts requiring ground fixation),

• and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,

• and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited to 2 meters of height, with spaced posts (spacing of about 2 meters or more for fine posts recessed, 3 meters or more for wider posts requiring ground anchoring), designed to resist the flood.

• Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.

• Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.

• By exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific security needs of the institutions.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplars

within 20 meters of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

**Cuttings** from authorized works and developments must be evacuated outside the flood zone. This by-law imposes a rating for **floors with vulnerable and / or expensive properties**.

The floor height will depend on the specific vulnerability of each activity, the vulnerable goods and / or expensive to be located above the flood elevation or be easily moved or waterproof. It is up to the project owner to define these properties according to the nature of his activity, possibly in consultation with its insurer *(NB: in the event of a claim, the insurer is not required to indemnify vulnerable and / or costly goods that would not have been placed on the PPR's rating).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third-party compensation...)

### 26頁

**B** - HABITAT (including gite and B & B) AND ANNEXES Are authorized:

## The creation of an individual dwelling, subject to:

- it is strictly necessary for agricultural activities,
- and it is located in close proximity to the headquarters,
- and that habitable floors are located above the reference elevation.
- As of the PPR approval date, housing creation will be limited to one housing by farm;

• Where applicable, the construction shall comply with the requirement for large dimension (see common provisions).

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and

/ or integrated or not to the existing dwelling. As of the PPR approval date, the total footprint of all these premises created shall not exceed 20 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all buildings must not exceed 30% of the total area of the land unit. If this threshold was already reached, 10 m<sup>2</sup> of ancillary premises would be tolerated, upon approval by the PPRI. Pollutants and goods Vulnerable and / or expensive will be located above the reference level or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and** / **or outside, except in the immediate vicinity of dikes,** including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed

**C - AGRICULTURE** (production, packaging, storage) Excluding trading activity: cf. heading D - Industry, trade, crafts, tertiary) **Are authorized:** 

**Demolition (total or partial) -reconstruction of greenhouses** (except demolition due to flooding) under reserve that:

• the construction of the structure makes it possible to limit the risk of ice jams (resistance to flooding) and facilitates the flow of water in case of flood (openings, orientation...).

**The creation of surface irrigation networks**: vulnerable and / or expensive equipment will be water or waterproof.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is

allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - INDUSTRY, COMMERCE, CRAFTS, TERTIARY (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: cf. heading E - Accommodation with night reception and collective management)

### 27頁

**E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT** (of which hotels, campsites, holiday centers and residences, retirement homes, Hospitals, boarding school... Except bed and breakfast: cf. heading B - Housing and premises annexes) None.

## F - OUTDOOR ACTIVITIES (in collective or private use)

Are authorized:

The creation of outdoor recreational activities, ' green spaces, areas and plains of games and courses not covered, subject to:

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic,

• anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,

• preserve the flow of water in case of flood.

For the only projects in collective use, **the demolition (total or partial)** -reconstruction of **premises legally necessary annexes (sanitary...)** within the maximum limit of the existing or in the limit of the regulations required.

**G-COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED) SERVICES** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: cf. heading E - Accommodation with night reception and collective management)

## Are authorized:

#### The creation of networks and their associated technical equipment subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

• take all measures to reduce the vulnerability of the structures,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The creation of transport infrastructure and car parks (excluding parking-silos or elevated car parks), under reserve of:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

• take all measures to reduce the vulnerability of the structures,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

• carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,

• comply with the requirement for large buildings (see provisions municipalities).

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of dikes to protect highly urbanized sites, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes outside highly urbanized areas, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and to participate in the coherent management of an existing protection system, according to the assessment of the service in charge of the control of hydraulic structures. Unless otherwise required, structures will be sized to provide at least the same protection as existing protection system.

### 28 頁

#### Chapter II - 2: Measures applicable in dark red zone (without frame)

### Definition of the dark red zone (without frame):

The dark red box (without frame) corresponds to:

- areas of flood expansion exposed to a very strong hazard.

This area has a very high water storage capacity in case of high flood, which should be to preserve, on the Garonne as on the tributaries.

The regulation of this zone aims to:

- to strictly prohibit any new construction, with the exception of certain equipment that cannot be carried out outside the risk zone or in a zone of lower risk, and activities to promote the soil, compatible with optimal preservation of areas flood expansion and environmental health;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All projects in this Dark Red area will have been previously researched outside the flood zone or, failing that, in a zone of lower risk.

# II - 2-1 - <u>Occupations and land use prohibited</u> Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (With the exception of various tanks and fixed tanks authorized: see Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

Embankments and platforms other than those strictly necessary for the construction of works,

installations and constructions (including their access) authorized below (II-2-2).

The ex nihilo (out of nothing) creation of large buildings: concerns any project including the largest façade (facade in the sense of the greatest length of right of way on the flood zone) is greater than 50 meters and its location is close to urban or built-up areas (distance to neighboring buildings

100 meters, for existing buildings and future urbanization areas). The concept of building large dimension applies to any construction project of any kind.

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-2-2.

29 頁

II - 2-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions
 II - 2-2.1 - Management of the existing and modification projects of the existing

### A - COMMON PROVISIONS

### Are authorized:

**Maintenance and day-to-day management,** in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-2-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (in the cases authorized below), without creation housing or very vulnerable facilities (see annexes list and PSI). *The extension is allowed in conditions defined below according to the destination of the building.* 

**Modeling of land** required for a project (excluding embankments strictly necessary for construction), condition that a preliminary study demonstrates both the balance between the volumes of fill and cuttings realized, and the non-aggravation of the risk of flooding on the sector as a result of this work.

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction**, when this is not due to flooding, by maximum reduction of vulnerability and without increasing the stakes.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; In addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof

#### enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...)

### 30頁

Large buildings: concerns any extension project of any kind whatsoever building, including the largest facade after works (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself but also for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, a study will have to be carried out to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

NB: for projects also concerned by an authorization or a declaration under the law on Water, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for posts longer wide, requiring ground fixation),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring ground anchorage), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.

• As an exception for reasons of security of public institutions, other types of fences may be allowed, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fitting.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# 31 頁 B - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

**Rehabilitation (rehabilitation of housing) of formerly residential premises**, subject to that all habitable floors are located above the flood of reference and without creation of additional accommodation, except where strictly necessary for agricultural activities and within the limit of one additional housing as of PPR approval.

The creation of only one additional dwelling strictly necessary for agricultural activities, to

count the approval of the PPR by change of destination or assignment:

- a portion of an existing building on the date of approval of the PPR and already containing a dwelling,
- an existing building on the date of approval of the PPR, near an existing dwelling, and provided that habitable floors are located above the reference elevation.

The increase of the living space of an existing dwelling, by change of destination or partial assignment of an existing room on the date of approval of the PPR, attached to the dwelling, without creation additional housing, provided that the created habitable floors are located above the reference rating.

The extension of an existing building located near a dwelling and / or an existing dwelling for the creation of only one additional dwelling strictly necessary for agricultural activities, from the approval of the PPR, only by raising the levels and provided that the Living floors are located above the reference rating.

The extension of existing dwellings, without creating additional housing, only through higher levels, provided that the habitable floors created are located above the flood rating.

Extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all buildings must not exceed 50% of the total area of the land unit. Pollutants and goods Vulnerable and / or expensive will be located above the reference level or will be easily moved.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and /

or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see. heading D - Industry, trade, crafts, tertiary) Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (see provisions common)
- The hydraulic transparency of the construction will be sought.

**The extension of agricultural buildings** other than those intended for animal husbandry (or animal refuge) or housing subject to placing vulnerable and / or expensive goods above the reference polluting or toxic products, and to ensure the hydraulic transparency of the construction as well than its resistance to flooding. The requirement for large buildings will be respected (see common provisions).

### 32頁

### The extension of buildings intended for breeding (or animal shelter) subject to:

- place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents,
- and to ensure the hydraulic transparency of the construction as well as its resistance to flood.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

The extension of platforms (without building) intended to place vulnerable goods above the baseline, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

**The extension of irrigation networks**. Vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The extension of existing water reservoirs for agricultural use, created by scouring, provided that the extension does not create additional embankments; the cuttings resulting from the extension of reservoirs must be evacuated outside the flood zone.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields... Excluding accommodation: see heading E - Accommodation with night reception and collective management)

## Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common

provisions),

- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

### 33頁

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, with the exception of quarries (see below) and concrete plants, subject to:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- in case of extension, create the floors on stilts, above the reference flood level,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

# The extension of the quarries, as well as the modification of their facilities of washing, crushing, crushing and screening subject to:

- place facilities, vulnerable and / or expensive equipment and / or equipment over the reference polluting or toxic products,
- anchor facilities to withstand flooding,
- justify by an expertise or a hydraulic study (to be adapted according to the stakes and the level of risk) that the establishment of the facilities, embankments and walls related to the exploitation and the storage of materials limits the worsening of the risks for the neighborhood,
- remove the mounds and walls remaining at the end of the operation,
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,

• carry out the work by minimizing the vulnerability of all installations with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

### 34 頁

E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, Hospitals, boarding school, .... Except bed and breakfast: see heading B - Housing and premises annexes) Are authorized:

The extension, development / redevelopment of an existing land-type property landscaped campsite, residential leisure park, holiday village classified as light accommodation..., including by change of destination or existing building designation nearby, subject to:

- not to increase the capacity of accommodation in a flood zone,
- always favor non-flood zones or, if not, areas of least risk for the implementation of hosting solutions,
- to implement hosting solutions without foundations (distinct from the notion of anchor), removable, transportable or towable,
- not to introduce new types of accommodation that could increase the vulnerability of the site,
- design the installation procedures for the installations to limit the risk of ice jams (example: limitation of the number of columns for structures on stilts),
- design the installation procedures for the installations to enable them to resist the flood (choice of non-water-sensitive materials, dimensioning of the size and anchoring to the ground in function of the structure, the water level and the currents in the event of a reference flood),
- the total footprint of all the buildings of the service buildings (reception, sanitary facilities, technical rooms, common room..., excluding caretaker's accommodation), as of the approval of the PPR, will be limited to the strictest necessary to the activity and to 400 m<sup>2</sup> maximum,

- comply with the requirement for large buildings (see provisions Commons)
- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- carry out a *Flood Safety Plan* defining the measures to improve the safety of people and reducing the vulnerability of goods,
- carry out the work by improving the safety of people throughout the site and by minimizing vulnerability of assets, with reference to *the Security Plan Flood*.
- Canopies and removable terraces are allowed.

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of a existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- not increase the capacity of accommodation in a flood zone,
- build on stilts the created accommodation floors, above the flood level of reference,
- place above the reference rating the accommodation floors that would be created in existing building,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- Canopies and removable terraces are allowed.

### 35頁

F - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

The extension, development of outdoor recreational activities, ' green spaces, areas and plains games and sports fields not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 200 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to

resist the reference flood,

- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

**G-COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management) Are authorized:

### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), limit the footprint to the most restrictive condition between:
- \* 30% more compared to the existing
- \* and total footprint of buildings <50% of the total area of the land unit,
  - The requirement for large buildings will be respected (see provisions municipalities).

# The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site,

reference to the Flood Safety Plan.

#### 36頁

Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for station creation treatment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for center creation landfill of inert waste, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole site, with reference to the Flood Safety Plan.

# The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

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Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

### Extension or rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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# The extension of landfills of inert waste including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The extension of water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The extension of transport infrastructure and car parks (excluding parking-silos or car parks in elevation), subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or

toxic, with the exception of those which are watertight,

- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of highly urbanized sites, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

## 39頁

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works outside highly urbanized sectors, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

# The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the footprint to the most restrictive condition between:
  - \* 30% more than the existing one,
  - \* and total footprint of buildings <50% of the total area of the unit land,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)

- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

### 40頁

*II - 2-2.2 - New buildings and installations likely to be authorized under reserve of prescriptions* <u>Information</u>: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, classified installations for the protection of the environment (ICPE), establishments receiving public (ERP)...

### A - COMMON PROVISIONS

### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, subject to limit its impact on the flow of water in case of flood: orientation of the building with respect to the current, layout and size of openings, barbacans, resistance to flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for electric vehicles, subject to taking all the provisions possible to ensure the resistance of the installation to the flood (anchoring, circuit breaker, height of implantation...).

The creation of underground tanks (or tanks) and retention basins intended to collect water from rain runoff. The hydraulic transparency of the structures will be sought. The system of collection and rainwater treatment must be maintained in order to ensure perfectly and at all times its functions, in particular of clipping. For buried tanks (or tanks), the device must be ballasted; of Furthermore, emptying, cleaning and disinfecting these structures after a flood is obligatory when recovered waters are then used inside buildings, and are highly recommended for others uses.

Tanks and various fixed tanks subject to being located above the reference flood level or to be protected against the effects of the reference flood: lashing, weighting, contained in an enclosure waterproof...

- Fences and barriers, subject to ensuring the hydraulic transparency and resistance to flooding:
  •maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground fixation),
  - •and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
  - and / or aerated structure (grid, mesh, openwork, barrier, ....) total height limited to 2 meters height, with spaced poles (spacing of the order of 2 meters or more for poles deep objects, 3 meters or more for wider posts requiring ground fixation), designed to withstand the flood.
  - Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.
  - Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
  - As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting ( *and any protective devices*), with the exception of poplars within 20 meters of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the flood zone.

This by-law imposes a rating for **floors with vulnerable and / or expensive properties**. The floor height will depend on the specific vulnerability of each activity, the vulnerable goods and / or

expensive to be located above the flood elevation or be easily moved or sealed. It is up to the project owner to define these properties according to the nature of his activity, possibly in consultation with its insurer (note: in the event of a claim, the insurer is not required to indemnify vulnerable and / or costly goods that would not have been placed on the PPR's rating).

#### 41 頁

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the RPP, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# **B** - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all buildings must not exceed 50% of the total area of the land unit. Pollutants and goods Vulnerable and / or expensive will be located above the reference level or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

Private pools buried, semi-buried or above ground, discovered, inside a building and / or outside, except in the immediate vicinity of dikes, including a water filtration device flood-proof or above the reference datum, as well as a network cut-off device electric. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. Excluding trading activity: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The creation of agricultural buildings other than those intended for breeding (or animal refuge) or housing (see section B -Habitat) subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants
- design the building to ensure its hydraulic transparency and resistance for the reference flood,
- where applicable, comply with the requirement for large buildings (see common provisions).

### The creation of greenhouses provided that:

- the construction of the structure makes it possible to limit the risk of ice jams (resistance to flooding) and facilitates the flow of water in case of flood (openings, orientation, ...);
- depending on their level of vulnerability, any heating equipment is located above the reference rating.

Greenhouses may be equipped with photovoltaic panels provided that these and equipment associates are located above the reference level.

#### 42 頁

The creation of platforms (without building) to place vulnerable goods over the coast reference, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

The creation of irrigation networks: vulnerable and / or expensive equipment will be out of

water or waterproof. The networks will resist scouring.

The creation of water reservoirs for agricultural use, created by scouring and carried out without embankments; the excavation resulting from the creation of reservoirs will have to be evacuated outside the flood zone.

**Tree and hedge plantings** (and their possible protective devices), with the exception of poplars within 20 m of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - INDUSTRY, COMMERCE, CRAFTS, TERTIARY (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: see heading E - Accommodation with night reception and collective management)

### Are authorized:

The opening of quarries and / or gravel pits, as well as their washing facilities, grinding, crushing and screening subject to:

- carry out an impact assessment study to justify the implementation of embankments related to the exploitation and storage of materials limits the worsening of flood risks for neighboring buildings,
- anchor facilities to resist flooding,
- place facilities, vulnerable and / or expensive equipment and / or equipment over the reference pollutants,
- remove the mounds and walls remaining at the end of the operation,
- where applicable, comply with the requirement for large buildings (see common provisions).

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is

designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; In addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

### 43頁

# E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, Hospitals, boarding school.... Except bed and breakfast: see heading B - Housing and premises annexes)

None.

## **F** - <u>OUTDOOR ACTIVITIES</u> (in collective or private use)

## Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 200 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in collective use, **the demolition (total or partial)** -reconstruction of **premises accompanying techniques** within the limits of the strictly necessary to the activity and within the limit of 200 m<sup>2</sup> total footprint for all technical support rooms.

## G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND ASSIMILATED)

(Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

### Are authorized:

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the total footprint of buildings to no more than 50% of the total the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

### The creation of treatment plants, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole site, with reference to the Flood Safety Plan

### 44 頁

The creation of inert waste landfills including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the footprint of the technical premises to 50 m<sup>2</sup>,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The creation of transport infrastructure and car parks (<u>excluding parking-silos or elevated car</u> parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

The creation of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- limit the total footprint of buildings to 50% of the total area of the unit land,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect <u>highly urbanized sites</u>, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes outside highly urbanized areas, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and to participate in the coherent management of an existing protection system, according to the assessment of the service in charge of the control of hydraulic structures. Unless otherwise required, structures will be sized to provide at least the same protection as existing protection system.

### 45頁

Chapter II - 3: Measures applicable in dark red zone, screen 2 (Existing ZAC dedicated to activities and / or mixed), screened 3 (equipment sectors) or grid 4 (other urbanized sectors)

### Definition of the Dark Red, Halftone 2, Halftone 3 or Halftone 4 area:

The dark red zone 2, 3 or 4 corresponds to:

- areas exposed to a very high hazard;

- The frames allow to distinguish the different types of urbanized areas; given the level very strong, the regulation is the same for these 3 sectors.

The regulation of this zone aims to:

- to strictly prohibit any new construction, with the exception of certain equipment that cannot be carried out outside the risk zone or in a zone of lower risk, compatible with a preservation optimal flood expansion areas and environmental health;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All the projects presented in this dark red zone, screen 2, 3 or 4, will have been previously a search for implantation outside the flood zone or, failing that, in a zone of less risk.

## II - 3-1 - <u>Occupations and land use prohibited</u> Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (With the exception of various tanks and fixed tanks authorized: see Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

**Embankments and platforms** other than those strictly necessary for the construction of works, installations and constructions (including their access) authorized below (II-3-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-3-2.

46頁

II - 3-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions
 II - 3-2.1 - Management of the existing and modification projects of the existing
 <u>A - COMMON PROVISIONS</u>
 Are authorized:

**Maintenance and day-to-day management,** in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-3-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (in the cases authorized below), without creation housing or very vulnerable facilities (see annexes list and PSI). *The extension is allowed in conditions defined below according to the destination of the building.* 

Modeling of land required for a project (excluding embankments strictly necessary for

construction), condition that a preliminary study demonstrates both the balance between the volumes of fill and cuttings realized, and the non-aggravation of the risk of flooding on the sector as a result of this work.

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction**, when this is not due to flooding, by maximum reduction of vulnerability and without increasing the stakes.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

### 47頁

Large buildings: concerns any extension project of any kind whatsoever building, including the largest facade after works (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself but also for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, a study will have to be carried out to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project. Note: for projects also concerned by an authorization or a declaration under the law on Water, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...)

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# **B** - <u>**HABITAT**</u> (including gite and B & B) <u>**AND ANNEXES**</u> **Are authorized:**

**Rehabilitation (rehabilitation of housing) of formerly residential premises**, subject to that all habitable floors are located above the flood of reference and without creation of additional accommodation.

The extension of existing dwellings, without creating additional housing, only through elevation levels, provided that the created habitable floors are above flood rating.

**Extension or creation of closed premises** accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling

is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all buildings must not exceed 50% of the total area of the land unit. If this threshold was already reached,  $10 \text{ m}^2$  of ancillary premises would be tolerated, upon approval by the PPRI. Pollutants and goods Vulnerable and / or expensive will be located above the reference level or will be easily moved.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and** / **or outside, except in the immediate vicinity of dikes,** including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary)

### Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (see provisions municipalities).
- The hydraulic transparency of the construction will be sought

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

- limit the footprint to the most restrictive condition between:
  - 30% more than the existing one
  - and total footprint of buildings <50% of the total area of the unit land,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- ensure the hydraulic transparency of the construction and its resistance to flooding.

The requirement for large buildings will be respected (see common provisions).

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

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**Tree and / or hedgerow planting** (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: see heading E - Accommodation with night reception and collective management)

# Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor above flood level for others, subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, or by redevelopment, or by change of destination or assignment of an existing building located nearby, or by construction of a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, subject to:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- comply with the requirement for large buildings (see provisions commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

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**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

For activities other than campground, recreational park, holiday village classified in light

accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- not increase the capacity of accommodation in a flood zone,
- place above the reference rating the accommodation floors that would be created in existing building,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the unit land,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- Canopies and removable terraces are allowed.

### F - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, and the ancillary premises which are required by law (sanitary...), subject to:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

### G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and

#### collective management)

# Are authorized:

#### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- The requirement for large buildings will be respected (see provisions municipalities).

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The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

### Extension, rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)

- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge....) under reserve of:

- •carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- •place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

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# Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The extension of landfills of inert waste including facilities and premises essential techniques subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The extension of water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### 53頁

# The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

#### The extension of transport infrastructure and car parks, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the

minimization of impacts, both in terms of pollution and hydraulic impacts,

- search for the hydraulic transparency of the structure,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of highly urbanized sites, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained In particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works outside highly urbanized sectors, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the

equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

#### 54 頁

#### II - 3-2.2 - New buildings and installations likely to be authorized subject to prescriptions

Information: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

#### A - COMMON PROVISIONS

#### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; In addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for extensions or new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself but also for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, a study will have to be carried out to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project. Note: for projects also concerned by an authorization or a declaration under the law on Water, data and information from this study can also be valued.

#### 55頁

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced posts (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground fixation),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, grid, openwork wood, barrier, ....) of total height limited to 2 meters height, with spaced posts (spacing of about 2 meters or more for fine posts recessed, 3 meters or more for wider posts requiring ground anchoring), designed to resist the flood.
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.

- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- By exception for reasons of safety of public institutions, other types of fences may be authorized, depending on the specific security needs of the institutions.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# **B - HABITAT** (including gite and B & B) **AND ANNEXES Are authorized**

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual

dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all buildings must not exceed 50% of the total area of the land unit. If this threshold was already reached,  $10 \text{ m}^2$  of ancillary premises would be tolerated, upon approval by the PPRI. Pollutants and goods Vulnerable and / or expensive will be located above the reference level or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

#### 56 頁

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

Private pools buried, semi-buried or above ground, discovered, inside a building and / or outside, except in the immediate vicinity of dikes, including a water filtration device flood-proof or above the reference datum, as well as a network cut-off device electric. Security fences are allowed.

**C** - <u>AGRICULTURE</u> (production, packaging, storage. Excluding trading activity: see heading D - Industry, trade, crafts, tertiary)

None.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: see heading E - Accommodation with night reception and collective management) Are authorized:

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic

system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

## E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... Except bed and breakfast: see heading B - Housing and premises annexes) None.

### F - OUTDOOR ACTIVITIES (in collective or private use)

Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, and the ancillary premises which are legally required (sanitary...), under reserve of:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

57頁

For the only projects in collective use, **the demolition (total or partial)** -reconstruction of **premises legally necessary annexes (sanitary...)** within the maximum limit of the existing or in the limit of the regulations required.

# G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

### Are authorized:

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the total footprint of buildings to no more than 50% of the total the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The creation of transport infrastructure and car parks (excluding parking-silos or elevated car parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes,

current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,

• comply with the requirement for large buildings (see provisions municipalities).

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

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The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- limit the total footprint of buildings to 50% of the total area of the unit land,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect highly urbanized sites, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained In particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes outside highly urbanized areas, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

# 59 頁 Chapter II - 4: Measures applicable in dark red zone, screened 1 (Urban center) Definition of the dark red zone, screen 1:

The dark red zone 1 corresponds to:

- areas exposed to a very high hazard,

- The frame 1 corresponds to the sectors situated in the urban center (within the meaning of the circular of 24 January 1996).

The regulation of this zone aims to:

- to allow urban renewal and renewal of buildings in view of their location in urban center, consistent with the high level of hazard and environmental health;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

Even if the regulation of the dark red zone 1 allows constructions, a search implantation outside flood zone is always preferred, or failing this in a zone of less risk.

# II - 4-1 - Occupations and land use prohibited

#### Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (With the exception of various tanks and fixed tanks authorized: cf. Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

**Embankments and platforms** other than those <u>strictly necessary</u> for the construction of works, installations and constructions (including their access) authorized below (II-4-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-4-2.

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II - 4-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions

# *II - 4-2.1 - Management of the <u>existing</u> and modification projects of the existing* <u>A - COMMON PROVISIONS</u> Are authorized:

Maintenance and day-to-day management, in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs (*the creation of housing or activity new is regulated in Ch. II-4-2.2*).

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

**Modeling of land** required for a project (excluding embankments strictly necessary for construction), condition that a preliminary study demonstrates both the balance between the volumes of fill and cuttings realized, and the non-aggravation of the risk of flooding on the

sector as a result of this work.

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction**, seeking maximum reduction of vulnerability and without increase the stakes.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; In addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...)

# 61頁

Large buildings: concerns any extension project of any kind whatsoever building, including

the largest facade <u>after works</u> (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on</u> Water, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment ground), designed to resist flooding.
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

### 62頁

**B** - <u>**HABITAT**</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

**Rehabilitation (rehabilitation of housing) of premises formerly of dwellings**, with or without creation of additional dwelling (s), provided that <u>all habitable floors</u> are located above the reference flood.

The extension of existing dwellings without the creation of additional accommodation, provided that the created habitable floors are located above the flood elevation and that the footprint is limited to the most restrictive condition between:

- \* 40 m<sup>2</sup> extension,
- \* 30% more than the existing one,
- \* and total footprint of buildings <50% of the total area of the land unit.

The extension of existing dwellings, for the creation of additional housing (s), subject to that the created habitable floors are located above the flood elevation and that the footprint is limited to the most restrictive condition between:

- \* 40 m<sup>2</sup> extension,
- \* 30% more than the existing one,
- \* and total footprint of buildings <50% of the total area of the land unit.

The increase of the living space of an existing dwelling, by change of destination or partial assignment of an existing room on the date of approval of the PPR, without creation of housing additional space, provided that the habitable floors created are located above the elevation reference, that the existing room is attached and / or integrated or not existing housing.

The creation of housing (s) by change of destination or assignment of an existing building to the date of approval of the PPR, provided that <u>all habitable floors</u> are located above reference flood.

Extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the PPR approval date, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all building must not exceed 50% of the total area of the land unit. If this threshold was already reached, 10 m<sup>2</sup> of ancillary premises would be tolerated, upon approval by the PPRI. Pollutants and goods Vulnerable and / or expensive will be located above the reference level or will be easily moved.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican, ...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary) Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (see provisions municipalities).
- The hydraulic transparency of the construction will be sought.

#### 63頁

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the unit land,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- ensure the hydraulic transparency of the construction and its resistance to flooding.

The requirement for large buildings will be respected (see common provisions).

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management) Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the

ground floor, pavement, above flood level for others, subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Safety Plan Flood* defining measures to reduce the vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, under reserve of:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

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**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- For <u>highly vulnerable institutions</u> (see Annex 1), <u>do not increase capacity accommodation</u> in a flood zone,
- place above the reference rating the accommodation floors that would be created in existing building,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- Canopies and removable terraces are allowed.

#### F - OUTDOOR ACTIVITIES (in collective or private use)

# Are authorized:

The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, and the ancillary premises which are required by <u>law</u> (sanitary...), subject to:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.

• to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

# G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND ASSIMILATED)

(Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

# Are authorized:

#### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- The requirement for large buildings will be respected (see provisions municipalities)

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# The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site,

#### reference to the Flood Safety Plan.

# The change of destination or assignment of existing buildings for the creation of buildings public service (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), to limit the total footprint buildings up to 50% of the total area of the land unit.

The requirement for large buildings will be respected (see common provisions).

Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of networks and **technical equipment**, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- above the reference level, vulnerable and / or costly goods and polluting or toxic products, with the exception of those that are watertight.

# Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The change of destination or assignment of existing buildings for the creation of furniture Urban subject anchor to resist the reference flood

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# Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- •carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

# Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of ' water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

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### The extension of transport infrastructure and car parks, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- search for the hydraulic transparency of the structure,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained In particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works <u>outside highly urbanized sectors</u>, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the unit land,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining the measures for joint reduction of vulnerability,

hydraulic impacts and the risk of pollution of the existing,

• to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future)

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# II - 4-2.2 - New buildings and installations likely to be authorized subject to prescriptions

<u>Information</u>: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

#### A - COMMON PROVISIONS

### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the installations resist current, allow the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain

**runoff.** The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for <u>extensions or</u> new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out to</u> present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project. <u>Note</u>: for projects also concerned by an <u>authorization or</u> a declaration under the law on Water, data and information from this study can also be valued.

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Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited

to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment ground), designed to resist flooding.

- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

B - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

Demolition (total or partial) -reconstruction for the improvement or creation of dwellings

### individually or in groups, provided that:

- all habitable floors are located above the flood level,
- the footprint of the construction is limited to the most restrictive condition between:
  - \* 40 m<sup>2</sup> extension,
  - \* 30% more than the existing one,
  - \* and total footprint of buildings <50% of the total area of the land unit.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

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Demolition (total or partial) -reconstruction for the improvement or creation of collective housing, provided that:

- all habitable floors are located above the flood level,
- the total footprint of buildings is less than 50% of the total area of the unit land,
- a *Flood Safety Plan is drawn up*, defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- that the work be done with as little vulnerability as possible and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 20 m<sup>2</sup> of authorized premises. In addition, the total footprint of all buildings must not exceed 50% of the total area of the land unit. If it turned out that this threshold was already reached, 10 m<sup>2</sup> of ancillary premises would be tolerated, as from the approval of the PPRI. Pollutants and Vulnerable and / or expensive goods will be located above the reference rating or will be easily displaceable.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve

as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of 5 m<sup>2</sup> per shelter.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and** / **or outside, except in the immediate vicinity of dikes,** including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

**C** - <u>AGRICULTURE</u> (production, packaging, storage. Excluding trading activity: see heading D - Industry, trade, crafts, tertiary)

None.

# 71 頁

D - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, museums, places of worship, covered sports fields... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

# Are authorized:

Demolition (total or partial) -reconstruction for the improvement or creation of buildings industrial, commercial, craft or tertiary sector subject to:

- do not accommodate accommodation,
- position low-risk, non-polluting activities on the ground floor, others above of the flood rating,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- where applicable, comply with the requirement for large buildings (see common provisions).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be implemented to Define measures for joint reduction of vulnerability, hydraulic impacts and risk of pollution of the existing. The work will be carried out by minimizing vulnerability and the risk of pollution of the entire site, with reference to the Flood Safety Plan.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment are located above the reference dimension or are watertight, that the installation designed to withstand the reference flood, and subject to the production of a hydraulic survey (depending on the project) if the project is close to urban or built-up areas (less than 100 meters) to justify measures taken to limit the increased risk to the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after a flood mandatory when the recovered water is subsequently used inside the buildings, and is strongly recommended for other uses.

### E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... Except bed and breakfast: see heading B - Housing and premises annexes)

None.

# F - OUTDOOR ACTIVITIES (in collective or private use)

## Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the premises of support will be limited to the strict minimum necessary to the activity and to 200 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,

 to limit as much as possible the light and / or dismountable installations allowing the practice of the activities nautical, fishing, walking, sport (pontoons, huts, tackles, lookouts ...) and under provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of premises accompanying techniques within the limits of the strictly necessary to the activity and within the limit of 200 m<sup>2</sup> total footprint for all technical support rooms.

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#### G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND ASSIMILATED)

(Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except</u> <u>accommodation</u>: see heading E - Accommodation with night reception and collective management)

# Are authorized:

The creation of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), to limit the total footprint buildings up to 50% of the total area of the land unit.
- The requirement for large buildings will be respected (see provisions municipalities).

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the total footprint of buildings to no more than 50% of the total the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),

- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The creation of transport infrastructure and car parks (<u>excluding parking-silos or elevated car</u> parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

### 73 頁

# The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or

toxic, with the exception of those which are watertight,

- limit the total footprint of buildings to 50% of the total area of the unit land,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect highly urbanized sites, provided that the project retained limits the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes <u>outside highly urbanized areas</u>, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

# 74 頁 Chapter II - 5: Measures applicable in Red Zone (without frame)

# Definition of the red zone (without frame):

The red zone (without frame) corresponds to:

- areas of flood expansion exposed to a strong hazard.

This zone has a very large water storage capacity in the event of a high flood, which should be preserve, on the Garonne as on the tributaries.

The regulation of this zone aims to:

- to strictly prohibit any new construction, with the exception of certain equipment and constructions necessary for activities to promote the soil, <u>compatible with the level of hazard</u> strong and the health of the environment;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All projects presented in this Red Zone will have been previously researched outside the flood zone or, failing that, in a zone of lower risk.

# II - 5-1 - <u>Occupations and land use prohibited</u> Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (With the exception of various tanks and fixed tanks authorized: see Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

Embankments and platforms other than those strictly necessary for the construction of works,

installations and constructions (including their access) authorized below (II-5-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-5-2.

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II - 5-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions

*II - 5-2.1 - Management of the <u>existing</u> and modification projects of the existing* A - <u>COMMON PROVISIONS</u> Are authorized:

**Maintenance and day-to-day management,** in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-5-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

Modeling of land required for a project (excluding embankments strictly necessary for

construction), condition that a preliminary study demonstrates both the balance between the volumes of fill and cuttings realized, and the non-aggravation of the risk of flooding on the sector as a result of this work.

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction**, seeking maximum reduction of vulnerability and without increase the stakes.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...)

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Large buildings: concerns any <u>extension</u> project of any kind whatsoever building, including the largest facade <u>after works</u> (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on Water</u>, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve

the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

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# **B** - <u>**HABITAT**</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The rehabilitation (rehabilitation of housing) of premises formerly of houses, without creation of additional accommodation, provided that <u>all habitable floors</u> are located above the flood of reference.

The extension of existing dwellings without the creation of additional accommodation, provided that the Created living floors are located above the flood elevation.

The extension of an existing building for the creation of a single additional dwelling <u>strictly</u> <u>necessary for agricultural activities</u>, from the approval of the PPR, provided that habitable are located above the reference dimension. If necessary, the construction must respect the prescription concerning large buildings (see common provisions).

The creation of a single additional dwelling strictly necessary for agricultural activities, starting from PPR approval by change of destination or assignment:

- a portion of an existing building on the date of approval of the PPR and already containing a dwelling,
- an existing building on the date of approval of the PPR, near an existing dwelling, and provided that habitable floors are located above the reference elevation.

The increase of the living space of an existing dwelling, by change of destination or partial assignment of an existing room on the date of approval of the PPR, attached to the dwelling, without creation of additional accommodation, provided that the created habitable floors are located above the reference.

The extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the date of approval of the PPR, the total footprint of all of these premises created must not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private per dwelling for a collective building. When an individual dwelling is provided with a room on the ground floor, located under the habitat, the footprint of the latter must be taken into account in the 40 m<sup>2</sup> of authorized ancillary spaces (and in the 10 m<sup>2</sup> per housing for a collective building). Pollutants and vulnerable goods and / or expensive will be located above the reference dimension or will be easily moved.

**Extension or creation of open premises** accessory to existing dwellings (garage, shed, garden shelter, technical room...), whether they are contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), should preserve as much as possible the flood expansion field and the flow of water, and remain open later to maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtering device for floodwaters or above the reference coast, as well as a network cut-off device electric. Security fences are allowed.

**C** - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary)

#### Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for use agricultural (except breeding, animal shelter and dwelling, not allowed), subject to:

- above the reference level, vulnerable and / or expensive goods, pollutants or toxic
- comply with the requirement for large buildings (see common provisions).
- The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for breeding (or animal shelter) or for habitation under reserve of:

• place above the reference grade vulnerable and / or costly goods and pollutants or toxic

• ensure the hydraulic transparency of the construction and its resistance to flooding. The requirement for large buildings will be respected (see common provisions).

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The extension of buildings intended for breeding (or animal shelter) subject to:

- place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents,
- and to ensure the hydraulic transparency of the construction as well as its resistance to flood.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

The extension of platforms (without building) intended to place vulnerable goods above the baseline, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

The extension of irrigation networks. Vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The extension of existing water reservoirs for agricultural use, created by scouring, provided that the extension does not create additional embankments; the cuttings resulting from the extension of reservoirs must be evacuated outside the flood zone.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

### Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor, pavement, above flood level for others, subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*

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The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by building a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants (see below), subject to:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure, ...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

# The extension of the quarries, as well as the modification of their facilities of washing, crushing, crushing and screening subject to:

- place facilities, vulnerable and / or expensive equipment and / or equipment over the reference polluting or toxic products,
- anchor facilities to withstand flooding,
- justify by an expertise or a hydraulic study (to be adapted according to the stakes and the level of risk) that the establishment of the facilities, embankments and merlons related to the exploitation and the storage of materials limits the worsening of the risks for the neighborhood,
- remove the mounds and merlons remaining at the end of the operation,
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by minimizing the vulnerability of all installations with reference to *the Flood Safety Plan* when it exists.

### The extension of concrete plants or asphalt plants subject to:

 place above the benchmark, facilities, vulnerable and / or expensive equipment as well as polluting or toxic products,

- justify by an expertise or a hydraulic study (to be adapted according to the stakes and the level of risk) that the establishment of the facilities, embankments and merlons related to the exploitation and the storage of materials limits the worsening of the risks for the neighborhood,
- anchor facilities to withstand flooding,
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by minimizing the vulnerability of all installations with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

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**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

The extension, development / redevelopment of an existing land-type property landscaped campsite, residential leisure park, holiday village classified as light accommodation..., including included by change of destination or existing building designation nearby, subject to:

- not to increase the capacity of accommodation in a flood zone,
- always favor non-flood zones or, if not, areas of least risk for the implementation of hosting solutions,
- to implement hosting solutions without foundations (distinct from the notion of anchor), removable, transportable or towable,
- not to introduce new types of accommodation that could increase the vulnerability of the site,
- design the installation procedures for the installations to limit the risk of ice jams (example: limitation of the number of columns for structures on stilts),
- design the installation procedures for the installations to enable them to resist the flood

(choice of non-water-sensitive materials, dimensioning of the size and anchoring to the ground in function of the structure, the water level and the currents in the event of a reference flood),

- the total footprint of all the buildings of the service buildings (reception, sanitary facilities, technical rooms, common room, ..., excluding caretaker's accommodation), as of the approval of the PPR, will be limited to the strictest necessary to the activity and to 400 m<sup>2</sup> maximum,
- comply with the requirement for large buildings (see provisions Commons)
- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- carry out a *Flood Safety Plan* defining the measures to improve the safety of people and reducing the vulnerability of goods,
- carry out the work by improving the safety of people throughout the site and by minimizing vulnerability of assets, with reference to *the Security Plan Flood*.
- Canopies and removable terraces are allowed.

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- For <u>highly vulnerable institutions</u> (see Annex 1), <u>do not increase capacity accommodation</u> in a flood zone,
- place above the reference rating the accommodation floors that would be created in existing building,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the whole installation,.

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## F - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

The extension, development of outdoor recreational activities, ' green spaces, areas and plains games and sports fields not covered, subject to:

• in collective use, the accompanying premises are authorized: the total footprint of the

accompanying premises will be limited to the minimum necessary for the activity and 400 m<sup>2</sup> maximum,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

## G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

### Are authorized:

#### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

# The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### Extension, rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for station creation treatment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

Change of destination or assignment of existing buildings for the creation of facilities storage and / or sorting of waste subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for center creation landfill of inert waste, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

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# Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of motorhome subject to placing vulnerable and / or expensive goods above the reference and polluting or toxic products, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,

• carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*

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The extension of landfills of inert waste including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of 'water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole site, with reference to the Flood Safety Plan.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The extension of transport infrastructure and car parks (<u>excluding parking-silos or car parks</u> in elevation), subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works <u>outside highly urbanized sectors</u>, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

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The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

# The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

### 86頁

## II - 5-2.2 - New buildings and installations likely to be authorized subject to prescriptions

<u>Information</u>: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

#### A - COMMON PROVISIONS

### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood

to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for <u>extensions or</u> new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project. <u>Note</u>: for projects also concerned by an <u>authorization or</u> a declaration under the law on Water, data and information from this study can also be valued.

### 87頁

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to flooding:

- maximum 3-wire fences stacked with spaced posts (spacing of about 2 meters or plus for deep recessed poles, 3 meters or more for wider posts requiring ground fixation),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or with an airy structure (grid, grid, openwork wood, barrier, ....) of total height limited to 2 meters of height, with spaced posts (spacing of about 2 meters or more for fine posts recessed, 3 meters or more for wider posts requiring ground anchoring), designed to resist the flood.
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- By exception for reasons of safety of public institutions, other types of fences may be authorized, depending on the specific security needs of the institutions.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This by-law imposes a rating for **floors with vulnerable and / or expensive properties**. The floor height will depend on the specific vulnerability of each activity, the vulnerable assets and / or expensive to be located above the flood elevation or to be easily moved or sealed. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not required to indemnify vulnerable and / or costly goods that would not have been placed on the PPR's rating*).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the RPP, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# **B** - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The creation of an individual dwelling, subject to:

- it is strictly necessary for agricultural activities,
- it is located in close proximity to the head office,
- and that habitable floors are located above the reference elevation.
- From the date of approval of the PPR, the creation of housing will be limited to one dwelling per agricultural exploitation;
- If applicable, the construction must comply with the requirement for large buildings dimension (see common provisions).

**Creation or extension of closed premises** accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the date of approval of the PPR, the total footprint of all of these premises created must not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private per dwelling for a collective building. When an individual dwelling is provided with a room on the ground floor, located under the habitat, the footprint of the latter must be taken into account in the 40 m<sup>2</sup> of authorized ancillary rooms (and in the 10 m<sup>2</sup> by housing for a multi-family building). Pollutants and vulnerable goods and / or expensive will be located above the reference dimension or will be easily moved.

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The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve

as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and** / **or outside, except in the immediate vicinity of dikes,** including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. Excluding trading activity: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

### ....

**The creation of agricultural buildings** other than those intended for breeding (or animal refuge) or housing (see section B -Habitat) subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or otherwise in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants
- design the building to ensure its hydraulic transparency and resistance for the reference flood,
- where applicable, comply with the requirement for large buildings (see common provisions).

### The creation of greenhouses provided that:

- the construction of the structure makes it possible to limit the risk of ice jams (resistance to flooding) and facilitates the flow of water in case of flood (openings, orientation, ...);
- depending on their level of vulnerability, any heating equipment is located above the reference rating.

Greenhouses may be equipped with photovoltaic panels provided that these and equipment associates are located above the reference level.

The creation of platforms (without building) to place vulnerable goods over the coast reference, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters

for as is the case for large buildings.

**The creation of irrigation networks**: vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The creation of water reservoirs for agricultural use, created by scouring and carried out without embankments; the excavation resulting from the creation of reservoirs will have to be evacuated outside the flood zone.

**Tree and hedge plantings** (and their possible protective devices), with the exception of poplars within 20 m of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

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**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

### Are authorized:

# The opening of quarries and / or gravel pits, as well as their washing facilities, grinding, crushing and screening subject to:

- carry out an impact assessment study to justify the implementation of embankments related to the exploitation and storage of materials limits the worsening of flood risks for neighboring buildings,
- anchor facilities to resist flooding,
- place facilities, vulnerable and / or expensive equipment and / or equipment over the reference pollutants,
- remove the mounds and merlons remaining at the end of the operation,
- where applicable, comply with the requirement for large buildings (see common

provisions).

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

## E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... Except bed and breakfast: see heading B - Housing and premises annexes)

None.

# F - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

# The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 400 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,

• to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of premises accompanying techniques within the limits of the strictly necessary to the activity and within the limit of 400 m<sup>2</sup> total footprint for all technical support rooms.

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G - <u>COLLECTIVE EQUIPMENT AND SERVICES PUBLIC (AND</u> <u>ASSIMILATED)</u> (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

# Are authorized:

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the total footprint of buildings to no more than 50% of the total the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# The creation of wastewater treatment plants, without buildings or civil engineering works, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The creation of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The creation of inert waste landfills including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the footprint of the technical premises to 50 m<sup>2</sup>,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### 91頁

## The creation of networks and their associated technical equipment subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The creation of transport infrastructure and car parks (<u>excluding parking-silos or elevated car</u> parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The creation of motorhome stops subject to placing the property above the reference vulnerable and / or expensive and polluting or toxic products, with the exception of those that are waterproof.

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- limit the total footprint of buildings to 50% of the total area of the unit land,
- where applicable, comply with the requirement for large buildings (see common provisions),

- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The creation of dikes to protect highly urbanized sites, provided that the

The project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes <u>outside highly urbanized areas</u>, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

## 92頁

Chapter II - 6: Measures applicable in Red Zone, screen 4 (Other urbanized sectors) Definition of the red zone, screen 4:

## The raster red zone 4 corresponds to:

- areas exposed to a strong hazard,

- Frame 4 corresponds to urbanized sectors, other than urban centers, existing ZACs activities and / or mixed and equipment sectors.

The regulation of this zone aims to:

- prohibit any new construction, with the exception of certain equipment that cannot be realized outside at-risk zone or in a zone of lower risk, compatible with high hazard level and safety in the middle, given their location in an urbanized area.

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All the projects presented in this red zone will have been the subject of a research outside the flood zone or, failing that, in a zone of lower risk

# II -6-1 - <u>Occupations and land use prohibited</u> Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (with the exception of various tanks and fixed tanks authorized: see Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

**Embankments and platforms** other than those <u>strictly necessary</u> for the construction of works, installations and constructions (including their access) authorized below (II-2-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

# All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-2-2

93 頁 II - 6-2 - Occupancies and uses of the soil likely to be authorized under reserve of prescriptions

II - 6-2.1 - Management of the existing and modification projects of the existing

#### A - COMMON PROVISIONS

Are authorized:

Maintenance and day-to-day management, in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs (*the creation of housing or activity new is regulated in Ch. II-6-2.2*).

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

The upgrading and compliance work, seeking maximum reduction of vulnerability and

hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction,** seeking to reduce vulnerability and without increasing the issues. The extension is authorized under the conditions defined below according to the destination of the building.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities are resistant to current and that vulnerable equipment is located above reference or be waterproof.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

### 94 頁

Large buildings: concerns any <u>extension</u> project of any kind whatsoever building, including the largest facade <u>after works</u> (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to

neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

Note: for projects also concerned by an <u>authorization or a declaration under the law on Water</u>, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

#### 95頁

# **B** - <u>**HABITAT**</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The rehabilitation (rehabilitation of housing) of premises formerly of houses, without creation of additional dwelling (s), provided that <u>all habitable floors</u> are located above reference flood.

The creation of only one additional dwelling strictly necessary for agricultural activities, to count the approval of the PPR by change of destination or assignment:

- a portion of an existing building on the date of approval of the PPR and already containing a dwelling,
- an existing building on the date of approval of the PPR, near an existing dwelling, and provided that habitable floors are located above the reference elevation.

Increasing the living space of an existing dwelling by changing destination or partial assignment of an existing room, without the creation of additional accommodation, provided that the created living floors are located above the reference elevation, that the existing space is and / or integrated or not to existing housing.

The extension of existing dwellings without the creation of additional accommodation, provided that the created habitable floors are located above the flood elevation and that the footprint is limited to the most restrictive condition between:

- \* 40 m<sup>2</sup> extension,
- \* 30% more than the existing one,
- \* and total footprint of buildings <50% of the total area of the land unit.

**Extension or creation of closed premises** accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). Products pollutants and vulnerable and / or expensive goods will be located above the reference easily movable.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

• place above the reference level vulnerable and / or expensive goods, pollutants or toxic,

- comply with the requirement for large buildings (see common provisions).
- The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- ensure the hydraulic transparency of the construction and its resistance to flooding.

The requirement for large buildings will be respected (see common provisions)

### 96頁

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

The extension of irrigation networks. Vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

D - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields... Excluding accommodation: see heading E - Accommodation

with night reception and collective management) Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by constructing a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, under reserve of:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

97頁

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

### E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... Except bed and breakfast: see heading B - Housing and premises annexes) Are authorized:

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- not increase the capacity of accommodation in a flood zone,
- place above the reference rating the accommodation floors that would be created in existing building,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure, ...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- Canopies and removable terraces are allowed.

### **F** - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

# The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, subject to:

• in collective use, the accompanying premises are authorized: the total footprint of the

accompanying premises will be limited to the minimum necessary for the activity and 200 m<sup>2</sup> maximum,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

#### 98頁

# G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

## Are authorized:

### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- The requirement for large buildings will be respected (see provisions municipalities).

# The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- limit the footprint to the most restrictive condition between:

- \* 30% more compared to the existing
- \* and total footprint of buildings <50% of the total area of the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of buildings public service (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products.

# Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge ....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*

### 99頁

# Change of destination or assignment of existing buildings for the creation of facilities storage and / or sorting of waste subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)

- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of motorhome subject to placing vulnerable and / or expensive goods above the reference and polluting or toxic products, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

# Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or

toxic, with the exception of those which are watertight,

- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

### 100頁

#### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

## The extension of water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The extension of transport infrastructure and car parks (<u>excluding parking-silos or car parks</u> in elevation), subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained In particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works <u>outside highly urbanized sectors</u>, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

### 101 頁

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

### The extension of buildings and structures necessary for the operation and management of a

lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the footprint to the most restrictive condition between:
  - \* 30% more than the existing one,
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

### 102頁

### II - 6-2.2 - New buildings and installations likely to be authorized subject to prescriptions

<u>Information</u>: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

### A - COMMON PROVISIONS

## Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; In addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for <u>extensions or</u> new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by <u>an authorization or a declaration under the law on Water</u>, data and information from this study can also be valued.

## 103 頁

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# **B** - <u>**HABITAT**</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

Demolition (total or partial) -reconstruction for the improvement or creation of dwellings individually or in groups, provided that:

- all habitable floors are located above the flood level,
- the footprint of the construction is limited to the most restrictive condition between:
  - \* 40 m<sup>2</sup> extension,
  - \* 30% more than the existing one,
  - \* and total footprint of buildings <50% of the total area of the land unit.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

## 104 頁

Demolition (total or partial) -reconstruction for the improvement or creation of collective housing, provided that:

- all habitable floors are located above the flood level,
- the footprint of the construction is limited to a total footprint of the buildings <50% of the total area of the land unit,
- a *Flood Safety Plan is drawn up*, defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- that the work be done with as little vulnerability as possible and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

### The creation of an individual dwelling, subject to:

- it is strictly necessary for agricultural activities,
- and it is located in close proximity to the headquarters,
- and that habitable floors are located above the reference elevation.
- As of the PPR approval date, housing creation will be limited to one housing by farm;
- Where applicable, the construction shall comply with the requirement for large dimension (see common provisions).

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). The pollutants and vulnerable and / or expensive goods will be located above the reference or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican, ...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of 5  $m^2$  per shelter.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes,** including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

**C** - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary)

None

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D - <u>INDUSTRY, TRADE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public and private meeting rooms, meeting rooms, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

### Are authorized:

Demolition (total or partial) -reconstruction for the improvement or creation of buildings industrial, commercial, craft or tertiary sector subject to:

- not hosting accommodation,
- position low-risk, non-polluting activities on the ground floor, others above the flood rating,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- where applicable, comply with the requirement for large buildings (see provisions municipalities).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be implemented to define measures for joint reduction of vulnerability, hydraulic impacts and pollution risk of the existing. The work will be carried out in as little as possible reducing the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment are located above the reference dimension or are watertight, that the installation designed to withstand the reference flood, and subject to the production of a hydraulic survey (depending on the project) if the project is close to urban or built-up areas (less than 100 meters) to justify measures taken to limit the increased risk to the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention basins intended to collect water from rain runoff. The hydraulic transparency of the structures will be sought. The collection device and rainwater treatment system must be maintained to ensure that its functions are perfectly and at all times in particular clipping. For buried tanks (or tanks), the device must be ballasted; moreover, the emptying, the cleaning and the disinfection of these structures after a flood are obligatory when the recovered waters are then used inside buildings, and are highly recommended for other uses.

### E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... Except bed and breakfast: see heading B - Housing and premises annexes)

None.

## F - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

The creation of outdoor recreation activities, green spaces, playgrounds and plains and uncovered sport field, subject to:

- in collective use, the support premises are authorized: the total footprint of the premises of support will be limited to the strict minimum necessary to the activity and to 200 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and pollutants above the reference or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,
- Minimize light and / or dismountable facilities for activities nautical, fishing, walking, sport (pontoons, huts, tackles, lookouts ...) and under provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of premises accompanying techniques within the limits of the strictly necessary to the activity and within the limit of 200 m<sup>2</sup> total footprint for all technical support rooms.

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### G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND ASSIMILATED)

(Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except</u> <u>accommodation</u>: see heading E - Accommodation with night reception and collective management)

### Are authorized:

### The creation of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- For all types of public service buildings (and similar), to limit the total footprint buildings up to 50% of the total area of the land unit.
- The requirement for large buildings will be respected (see provisions municipalities).

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- limit the total footprint of buildings to no more than 50% of the total the land unit,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

### The creation of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The creation of transport infrastructure and car parks (<u>excluding parking-silos or elevated car</u> parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

### 107頁

The creation of motorhome stops subject to placing the property above the reference vulnerable and / or expensive and polluting or toxic products, with the exception of those that are waterproof.

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

# The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- limit the total footprint of buildings to 50% of the total area of the unit land,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect <u>highly urbanized sites</u>, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes <u>outside highly urbanized areas</u>, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

### 108頁

Chapter II - 7: Measures applicable in Red Zone, screen 2 (ZAC existing dedicated to activities and / or mixed) or screened 3 (sectors equipment)

### Definition of the Red, Raster 2 or Raster 3 zone:

The red zone 2 or 3 corresponds to:

- areas exposed to a strong hazard,

- The frames allow to distinguish the different types of urbanized areas; given the high hazard level, the regulation is the same for these two sectors.

The regulation of this zone aims to:

- to allow the creation of certain buildings in view of their location in an urbanized area, compatible with the high level of hazard and the healthiness of the environment;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All projects presented in this red zone, screen 2 or 3, will have been the subject of a search for implantation outside the flood zone or, failing that, in a zone of less risk.

# II -7-1 - Occupations and land use prohibited Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (with the exception of various tanks and fixed tanks authorized: see Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

Embankments and platforms other than those strictly necessary for the construction of works,

installations and constructions (including their access) authorized below (II-7-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-7-2.

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II - 7-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions

II - 7-2.1 - Management of the existing and modification projects of the existing

#### A - COMMON PROVISIONS

Are authorized:

Maintenance and day-to-day management, in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs (*the creation of housing or activity new is regulated in Ch. II-7-2.2*).

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction,** seeking to reduce vulnerability and without increasing the issues. The extension is authorized under the conditions defined below according to the destination of the building.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities are resistant to current and that vulnerable equipment is located above reference or be waterproof.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...)

### 110頁

Large buildings: concerns any <u>extension</u> project of any kind whatsoever building, including the largest facade after works (facade in the sense of the longest length of right-of-way the

flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on</u> Water, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

### 111頁

**B** - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The rehabilitation (rehabilitation of housing) of premises formerly of houses, without creation of additional dwelling (s), provided that <u>all habitable floors</u> are located above reference flood.

The extension of existing dwellings without the creation of additional accommodation, provided that the created habitable floors are located above the flood elevation and that the footprint is limited to 30% more than the existing one.

Extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multi-

family building). Products pollutants and vulnerable and / or expensive goods will be located above the reference easily movable.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (see common provisions).
- The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

- limit the footprint to an additional 30% compared to the existing one,
- place vulnerable and / or expensive goods and pollutants above the reference or toxic,
- ensure the hydraulic transparency of the construction and its resistance to flooding.

The requirement for large buildings will be respected (see common provisions).

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

### 112頁

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

### Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by constructing a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, under reserve of:

• not to increase the storage capacity of highly vulnerable establishments (as Annex 1),

- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future)

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**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- not increase the capacity of accommodation in a flood zone,
- place above the reference rating the accommodation floors that would be created in existing building,
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,

- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- Canopies and removable terraces are allowed.

## F - OUTDOOR ACTIVITIES (in collective or private use)

### Are authorized:

The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, and the ancillary premises which are required by law (sanitary...), subject to:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND ASSIMILATED) (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

## Are authorized:

### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

### 114 頁

#### Extension, rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

## Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The extension of landfills of inert waste including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The change of destination or assignment of existing buildings for the creation of buildings

### public service (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products.

# Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge ....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

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# Change of destination or assignment of existing buildings for the creation of facilities storage and / or sorting of waste subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of motorhome subject to placing vulnerable and / or expensive goods above the reference and polluting or toxic products, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

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### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The extension of transport infrastructure and car parks, surface parking, silos or elevations, under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works <u>outside highly urbanized sectors</u>, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

## 117 頁

The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight,

that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

# 118 頁 *II - 7-2.2 - <u>New</u> buildings and installations likely to be authorized subject to prescriptions*

Information: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

## A - COMMON PROVISIONS

### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for <u>extensions or</u> new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on</u> Water, data and information from this study can also be valued.

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Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced posts (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground fixation),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited to 2 meters height, with spaced posts (spacing of about 2 meters or more for fine posts recessed, 3 meters or more for wider posts requiring ground anchoring), designed to resist the flood.
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with

a roasting), on one side of the field, may be allowed.

- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- By exception for reasons of safety of public institutions, other types of fences may be authorized, depending on the specific security needs of the institutions.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cuttings** from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# **B** - <u>**HABITAT**</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or

grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). The pollutants and vulnerable and / or expensive goods will be located above the reference or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

## 120 頁

On land with existing dwelling, private pools buried, semi-buried or above ground, discoveries, inside an existing building and / or outside, except in the immediate vicinity of <u>dikes</u>, with a flood-proof or above-shore water filtration device reference, as well as a device for disconnecting the electrical network. Security fences are allowed.

**C** - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary)

None.

**D** - <u>INDUSTRY, TRADE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public and private meeting rooms, meeting rooms, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

Are authorized:

Demolition (total or partial) -reconstruction for the improvement or creation of buildings industrial, commercial, craft or tertiary sector subject to:

- not hosting accommodation,
- position low-risk, non-polluting activities on the ground floor, others above the flood

rating,

- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,
- where applicable, comply with the requirement for large buildings (see common provisions).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be implemented to define measures for joint reduction of vulnerability, hydraulic impacts and pollution risk of the existing. The work will be carried out in as little as possible reducing the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

In the "hollow teeth" (initial lot of the ZAC not built) of existing ZACs dedicated to activities and / or mixed, the creation of industrial, commercial, craft or service sector, for low-risk and non-polluting activities on the ground floor, for others above the flood level reference.

The creation of sports ground covered, public or private meeting places, places of worship, under vulnerable goods and equipment are located above the flood level except those easily movable or waterproof.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment are located above the reference dimension or are watertight, that the installation designed to withstand the reference flood, and subject to the production of a hydraulic survey (depending on the project) if the project is close to urban or built-up areas (less than 100 meters) to justify measures taken to limit the increased risk to the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention basins intended to collect water from rain runoff. The hydraulic transparency of the structures will be sought. The collection device and rainwater treatment system must be maintained to ensure that its functions are perfectly and at all times in particular clipping. For buried tanks (or tanks), the device must be ballasted; moreover, the emptying, the cleaning and the disinfection of these structures after a flood are obligatory when the recovered waters are then used inside buildings, and are highly recommended for other uses.

**E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT** (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals,

boarding school, .... Except bed and breakfast: see heading B - Housing and premises annexes)

None

# 121 頁 F - <u>OUTDOOR ACTIVITIES</u> (in collective or private use) Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, and the ancillary premises which are legally required (sanitary...), under reserve of:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of premises legally necessary annexes (sanitary...) within the maximum limit of the existing or in the limit of the regulations required.

## G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

## Are authorized:

## The creation of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;

• The requirement for large buildings will be respected (see provisions municipalities).

# The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

## The creation of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*

#### 122頁

#### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

#### The creation of transport infrastructure and car parks (excluding parking-silos or elevated car

parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The creation of motorhome stops subject to placing the property above the reference vulnerable and / or expensive and polluting or toxic products, with the exception of those that are waterproof.

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect <u>highly urbanized sites</u>, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained

in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes <u>outside highly urbanized areas</u>, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future)

#### 123 頁

#### Chapter II - 8: Measures applicable in the Red Zone, screen 1 (center urban)

#### Definition of the red zone, screen 1:

The red zone 1 corresponds to:

- areas exposed to a strong hazard;

- The frame 1 corresponds to the sectors situated in the urban center (within the meaning of the circular of 24 January 1996).

The regulation of this zone aims to:

- to allow urban renewal and renewal of buildings in view of their location in urban center, compatible with the level of strong hazard and the health of the environment;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

Even if the regulation of the red zone 1 allows constructions, a research implantation outside flood zone is always preferred, or failing this in a zone of less risk.

# II -8-1 - Occupations and land use prohibited Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars, ...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (With the exception of various tanks and fixed tanks authorized: see Common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

**Embankments and platforms** other than those <u>strictly necessary</u> for the construction of works, installations and constructions (including their access) authorized below (II-8-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity, ...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

# All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-8-2.

124 頁 II - 8-2 - Occupations and uses of the land likely to be authorized under reserve of prescriptions

II - 8-2.1 - Management of the existing and modification projects of the existing

#### A - COMMON PROVISIONS

Are authorized:

**Maintenance and day-to-day management,** in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-8-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

The upgrading and compliance work, seeking maximum reduction of vulnerability and

hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction,** seeking to reduce vulnerability and without increasing the issues. The extension is authorized under the conditions defined below according to the destination of the building.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities are resistant to current and that vulnerable equipment is located above reference or be waterproof.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

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Large buildings: concerns any <u>extension</u> project of any kind whatsoever building, including the largest facade <u>after works</u> (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to

neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project. <u>Note</u>: for projects also concerned by an <u>authorization or</u> a declaration under the law on Water, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed.
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for floors with vulnerable properties and / or expensive. The

floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR*).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

126 頁 B - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

**Rehabilitation (rehabilitation of housing) of premises formerly of dwellings**, with or without creation of additional dwelling (s), provided that <u>all habitable floors</u> are located above the reference flood.

The extension of existing dwellings with or without the creation of additional housing (s), under reserve that the created habitable floors are located above the flood level.

The increase of the living space of an existing dwelling, by change of destination or partial assignment of an existing room on the date of approval of the PPR, without creation of housing additional space, provided that the habitable floors created are located above the elevation reference, that the existing room is attached and / or integrated or not existing housing.

The creation of housing (s) by change of destination or assignment of an existing building to the date of approval of the PPR, provided that <u>all habitable floors</u> are located above reference flood.

Extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the PPR approval date, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with a ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multi-family building). Products pollutants and vulnerable and / or expensive goods will be located above the reference easily movable.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

**Private pools buried, semi-buried or above ground, discovered, inside a building existing and** / **or outside, except in the immediate vicinity of dikes,** including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (see common provisions).
- The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

 place vulnerable and / or expensive goods and products above the reference pollutants or toxic, • ensure the hydraulic transparency of the construction and its resistance to flooding. The requirement for large buildings will be respected (see common provisions).

#### The extension of buildings intended for breeding (or animal shelter) subject to:

• place above the reference level floors created to accommodate animals, property vulnerable and / or expensive, polluting or toxic products and effluents,

• and to ensure the hydraulic transparency of the construction and its resistance to flooding. The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

## 127 頁

Tree and / or hedgerow planting (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

## Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),

- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by constructing a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, under reserve of :

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

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**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- place above the benchmark the floors of accommodation that would be created,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- Canopies and removable terraces are allowed.

With the exception of very vulnerable establishments (including camping), establishment creation only by change of destination or assignment and for accommodation temporarily, provided that the habitable floors created are located above the elevation reference flood. An ISP will be implemented defining the measures to reduce vulnerability and risk of pollution of the entire installation.

#### **F - OUTDOOR ACTIVITIES** (in collective or private use)

#### Are authorized:

The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 200 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

### G - COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED)

**SERVICES** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

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The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole site, with reference to the Flood Safety Plan.

# The change of destination or assignment of existing buildings for the creation of buildings public service (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products.

Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge ....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# Change of destination or assignment of existing buildings for creation transport infrastructure, surface parking, silos or elevations, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight

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The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

# Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

#### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of ' water treatment plants for human consumption provided that:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The extension of transport infrastructure and car parks, surface parking, silos or elevations, under reserve of

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

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The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works <u>outside highly urbanized sectors</u>, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized area **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- •carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

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### II - 8-2.2 - New buildings and installations likely to be authorized subject to prescriptions

Information: the projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP), ...

#### A - COMMON PROVISIONS

#### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for <u>extensions or</u> new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried</u> out to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on Water</u>, data and information from this study can also be valued.

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Fences and barriers, subject to ensuring the hydraulic transparency and resistance to flooding:

- maximum 3-wire fences stacked with spaced posts (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground fixation),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or with an airy structure (grid, fence, openwork wood, barrier....) of total height limited to 2 meters of height, with spaced posts (spacing of about 2 meters or more for fine posts recessed, 3 meters or more for wider posts requiring ground anchoring), designed to resist the flood.
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed.
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- By exception for reasons of safety of public institutions, other types of fences may be authorized, depending on the specific security needs of the institutions.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This by-law imposes a rating for **floors with vulnerable and / or expensive properties**. The floor height will depend on the specific vulnerability of each activity, the vulnerable assets and / or expensive to be located above the flood elevation or to be easily moved or sealed. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not required to indemnify vulnerable and / or costly goods that would not have been placed on the PPR's rating*).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# **B** - <u>**HABITAT**</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

<u>In "hollow tooth</u>", **the creation of individual or group dwellings,** provided that the floors dwellings are located above the reference elevation. If necessary, the construction must respect the requirement for large buildings (see common provisions).

In "hollow tooth", the creation of collective dwellings, provided that:

- habitable floors are located above the reference rating,
- a *Flood Safety Plan is drawn up*, defining the measures for joint reduction of the vulnerability, hydraulic impacts and the risk of pollution of the existing,
- that the works be carried out minimizing the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.
- Where applicable, the requirement for large buildings (see provisions common places) will be respected.

# Demolition (total or partial) -reconstruction for the improvement or creation of dwellings individually or in groups, provided that:

• all habitable floors are located above the flood level.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

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Demolition (total or partial) -reconstruction for the improvement or creation of collective housing, provided that :

- all habitable floors are located above the flood level,
- a *Flood Safety Plan is drawn up*, defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- that the work be done with as little vulnerability as possible and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). The pollutants and vulnerable and / or expensive goods will be located above the reference or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room, ...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican, ...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

On land with existing dwelling, **private pools buried**, **semi-buried or above ground**, **discoveries**, **inside an existing building and / or outside**, <u>except in the immediate vicinity of dikes</u>, with a flood-proof or above-shore water filtration device reference, as well as a device for disconnecting the electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary)

None.

D - INDUSTRY, COMMERCE, CRAFTS, TERTIARY (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

Demolition (total or partial) -reconstruction for the improvement or creation of buildings industrial, commercial, craft or tertiary sector subject to:

- not hosting accommodation,
- position low-risk, non-polluting activities on the ground floor; above the flood level,
- where applicable, comply with the requirement for large buildings (see common provisions).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be to define the joint reduction measures of vulnerability, hydraulic impacts and the risk of pollution of the existing. The work will be carried out by minimizing vulnerability and the risk of pollution of the entire site, with reference to *the Flood Safety Plan* 

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In "hollow tooth", the creation of industrial, commercial, craft or estate buildings tertiary subject to:

- not hosting accommodation,
- position low-risk, non-polluting activities on the ground floor; above the flood level,
- where applicable, comply with the requirement for large buildings (see common provisions).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be to define the joint reduction measures of vulnerability, hydraulic impacts and the risk of pollution of the existing. The work will be carried out by minimizing vulnerability and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

## E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... Except bed and breakfast: see heading B - Housing and premises annexes) Are authorized:

For activities other than campground, recreational park, holiday village classified in accommodation... and, with the exception of very vulnerable institutions, **the creation of an establishment**, subject to:

- place above the benchmark the floors of accommodation that would be created in existing buildings,
- place toxic or polluting products as well as vulnerable goods above the flood reference or in a retention chamber resistant to this flood,
- make the necessary arrangements to stop the materials that would be carried away by the reference flood (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the whole installation.

F - <u>OUTDOOR ACTIVITIES</u> (in collective or private use) Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and land not

covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 200 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

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For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of premises accompanying techniques within the limits of the strictly necessary to the activity and within the limit of 200 m<sup>2</sup> total footprint for all technical support rooms.

## G - <u>COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED)</u>

**SERVICES** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

## Are authorized:

#### The creation of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The creation of transport infrastructure and car parks, surface parking, silos or elevations, under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

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# The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect highly urbanized sites, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes outside highly urbanized areas, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up (less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future)

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#### Chapter II - 9: Measures applicable in light red zone (without frame)

#### Definition of the area Light red (without frame):

The light red box (without frame) corresponds to:

- flood expansion areas exposed to low and medium hazards.

This zone has a very large water storage capacity in the event of a heavy flood that should be preserve, on the Garonne as on the tributaries.

The regulation of this zone aims to:

to strictly prohibit any new construction, with the exception of certain equipment and constructions necessary for activities to promote the soil, <u>compatible with low and medium</u> <u>risks</u>, optimum preservation of the flood expansion fields and the safety of the middle;
to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All projects presented in this Light Red Zone will have been previously searched outside the flood zone or, failing that, in a zone of lower risk.

# II -9-1 - Occupations and land use prohibited Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (with the exception of various tanks and fixed tanks authorized: see common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

Embankments and platforms other than those strictly necessary for the construction of works,

installations and constructions (including their access) authorized below (II-9-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-9-2.

139頁

II - 9-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions

II - 9-2.1 - Management of the existing and modification projects of the existing

#### A - COMMON PROVISIONS

#### Are authorized:

Maintenance and day-to-day management, in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs (*the creation of housing or activity new is regulated in Ch. II-9-2.2*).

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction,** seeking to reduce vulnerability and without increasing the issues. The extension is authorized under the conditions defined below according to the destination of the building.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities are resistant to current and that vulnerable equipment is located above reference or be waterproof.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

#### 140頁

Large buildings: concerns any <u>extension</u> project of any kind whatsoever building, including the largest facade after works (facade in the sense of the longest length of right-of-way the

flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on Water</u>, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Fencing parts above the flood level may be "full" (in order to preserving land from the view of others), since the lower parts of the fence (at least 0.50 meter in all cases and according to the Medium flood hazard) will preserve the flow of water in case of flood (see above prescriptions).
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed. Similarly, a wall with barbacans may be allowed on both sides of a "lunch car park".
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

# 141 頁 B - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

**Rehabilitation (rehabilitation of housing) of premises formerly of dwellings**, with or without creation of only one additional dwelling, provided that <u>all habitable floors</u> are located above the reference flood.

The extension of existing dwellings, provided that the habitable floors created are located above the flood level. In case of major constraints, when the existing habitable floor is in below the reference dimension, the extension under the reference dimension will be possible within the limit of 20 m<sup>2</sup> and this only once during the period of validity of the PPR.

The extension of an existing building for the creation of a single additional dwelling <u>strictly</u> <u>necessary for agricultural activities</u>, as of the approval of the PPR, provided that the floors dwellings are located above the reference elevation. If necessary, the construction must respect the requirement for large buildings (see common provisions).

Increasing the living space of an existing dwelling by changing destination or partial assignment of an existing room, without the creation of additional accommodation, provided that the created living floors are located above the reference elevation, that the existing space is and / or integrated or not to existing housing.

The creation of only one additional dwelling, from the approval of the PPR by a change of destination or assignment:

- a portion of an existing building on the date of approval of the PPR and already containing a dwelling,
- an existing building on the date of approval of the PPR, near an existing dwelling, and provided that habitable floors are located above the reference elevation.

Extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the PPR approval date, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m 2 private by lodging for a collective building. When an individual dwelling is provided with a the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multi-family building). Products pollutants and vulnerable and / or expensive goods will be located above the reference easily movable.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security

fences are allowed.

# C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading

D - Industry, trade, crafts, tertiary)

# Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except dwelling, unauthorized, for breeding or animal sanctuary see below), subject to from:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (see provisions municipalities).
- The hydraulic transparency of the construction will be sought.

#### 142 頁

The change of destination or assignment of existing buildings for livestock activity (or animal sanctuary) subject to:

• place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- ensure the hydraulic transparency of the construction and its resistance to flooding.

The requirement for large buildings will be respected (see common provisions).

### The extension of buildings intended for breeding (or animal shelter) subject to:

• place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly

the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The hydraulic transparency of the construction will be sought.

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

The extension of platforms (without building) intended to place vulnerable goods above the baseline, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

The extension of irrigation networks. Vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The extension of existing water reservoirs for agricultural use, created by scouring, provided that the extension does not create additional embankments; the cuttings resulting from the extension of reservoirs must be evacuated outside the flood zone.

Tree and / or hedgerow planting (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

## 143 頁

D - INDUSTRY, COMMERCE, CRAFTS, TERTIARY (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of

worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management) **Are authorized:** 

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by constructing a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants (see below), for low-risk and non-polluting activities on the ground floor, above the coast for others, subject to:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

#### The extension of the quarries, as well as the modification of their facilities of washing, crushing,

#### crushing and screening subject to:

- place facilities, vulnerable and / or expensive equipment and / or equipment over the reference polluting or toxic products,
- anchor facilities to withstand flooding,
- justify by an expertise or a hydraulic study (to be adapted according to the stakes and the level of risk) that the establishment of the facilities, embankments and merlons related to the exploitation and the storage of materials limits the worsening of the risks for the neighborhood,
- remove the mounds and merlons remaining at the end of the operation,
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability of all the installations in reference to *the Flood Safety Plan* when it exists

#### 144 頁

#### The extension of concrete plants or asphalt plants subject to:

- place above the reference rating, facilities, equipment that is vulnerable and / or expensive and polluting or toxic products,
- justify by an expertise or a hydraulic study (to be adapted according to the stakes and the level of risk) that the establishment of the facilities, embankments and merlons related to the exploitation and the storage of materials limits the worsening of the risks for the neighborhood,
- anchor facilities to withstand flooding,
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability of all the installations in reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, and that the facility is designed to withstand the reference flood.

#### E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

The extension, development / redevelopment of an existing land-type property landscaped campsite, residential leisure park, holiday village classified as light accommodation..., including by change of destination or existing building designation nearby, subject to:

- not to increase the capacity of accommodation in a flood zone,
- always favor non-flood zones or, if not, areas of least risk for the implementation of hosting solutions,
- to implement hosting solutions without foundations (distinct from the notion of anchor), removable, transportable or towable,
- not to introduce new types of accommodation that could aggravate the vulnerability of the site,
- design the installation procedures for the installations to limit the risk of ice jams (example: limitation of the number of columns for structures on stilts),
- design the installation procedures for the installations to enable them to resist the flood (choice of non-water-sensitive materials, dimensioning of the size and anchoring to the ground in function of the structure, the water level and the currents in the event of a reference flood),
- the total footprint of all the buildings of the service buildings (reception, sanitary facilities, technical rooms, common room, ..., excluding caretaker's accommodation), as of the approval of the PPR, will be limited to the strictest necessary to the activity and to 400 m<sup>2</sup> maximum,
- comply with the requirement for large buildings (see provisions Commons)
- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- carry out a *Flood Safety Plan* defining the measures to improve the safety of people and reducing the vulnerability of goods,
- carry out the work by improving the safety of people throughout the site and by minimizing vulnerability of assets, with reference to *the Security Plan Flood*.
- Awnings and removable terraces are allowed.

#### 145 頁

For activities other than campground, recreational park, holiday village classified in light accommodation... The development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

• For <u>highly vulnerable institutions</u> (see Annex 1), <u>do not increase capacity accommodation</u> in a flood zone,

- place above the benchmark the floors of accommodation that would be created,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by improving the safety of people throughout the site and reducing as much as possible the vulnerability of the property, with reference to *the Flood Safety Plan*.
- Canopies and removable terraces are allowed.

With the exception of very vulnerable establishments (including camping), the creation or extension establishments only by change of destination or assignment and for temporary accommodation, provided that the created habitable floors are located above of the reference flood rating. In creation as in extension, a PSI will be realized defining the measures to reduce the vulnerability and the risk of pollution of the entire installation. For extensions, the work will be an opportunity to reduce the vulnerability of the site.

#### F - OUTDOOR ACTIVITIES (in collective or private use)

#### Are authorized:

The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 400 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

#### G - COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED)

**SERVICES** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

#### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

#### 146 頁

The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### Extension, rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*

#### Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for the creation of stations treatment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*

#### 147 頁

Change of destination or assignment of existing buildings for the creation of facilities storage

#### and / or sorting of waste subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of centers landfill of inert waste including essential technical installations and rooms under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

### Change of destination or assignment of existing buildings for creation transport infrastructure and surface parking, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or

toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of motorhome subject to placing vulnerable and / or expensive goods above the reference and polluting or toxic products, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan.*

#### 148 頁

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

#### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole site, with reference to the Flood Safety Plan.

### The extension of landfills of inert waste including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of ' water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The extension of transport infrastructure and car parks (<u>excluding parking-silos or car parks</u> in elevation), subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

#### 149頁

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works <u>outside highly urbanized sectors</u>, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

### The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a Flood Safety Plan defining the measures for joint reduction of vulnerability,

hydraulic impacts and the risk of pollution of the existing,

• to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, and that the facility is designed to withstand the flood of reference

#### The extension of cemeteries, with or without columbarium, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- carry out a study to evaluate the environment of the site notably the proximity possible point of capture (public or private) of water intended for consumption -, the impact of this implementation in terms of health risks and the measures envisaged to limit these risks

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### II - 9-2.2 - <u>New buildings and installations likely to be authorized subject to prescriptions</u>

<u>Information</u>: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

#### A - COMMON PROVISIONS

#### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The notion of a large building applies to any construction project, of any kind, for extensions or constructions new.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on Water</u>, data and information from this study can also be valued Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Fencing parts above the flood level may be "full" (in order to preserving land from the view of others), since the lower parts of the fence (at least 0.50 meter in all cases and according to the Medium flood hazard) will preserve the flow of water in case of flood (see above prescriptions).
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed. Similarly, a wall with barbacans may be allowed on both sides of a "lunch car park".
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.
- By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements for construction rules to reduce vulnerability and defined in

Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

### **B** - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The creation of an individual dwelling, subject to:

- it is strictly necessary for agricultural activities,
- it is located in close proximity to the head office,
- and that habitable floors are located above the reference elevation.
- As of the PPR approval date, housing creation will be limited to one housing by farm;
- Where applicable, the construction shall comply with the requirement for large dimension (see common provisions).

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The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). The pollutants and vulnerable and / or expensive goods will be located above the reference or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

On land with existing dwelling, **private pools buried**, **semi-buried or above ground**, **discoveries**, **inside an existing building and / or outside**, <u>except in the immediate vicinity of dikes</u>, with a flood-proof or above-shore water filtration device reference, as well as a device for disconnecting the electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary) Are authorized:

**The creation of agricultural buildings** other than those intended for breeding (or animal refuge) or housing (see section B -Habitat) subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or otherwise in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants
- design the building to ensure its hydraulic transparency and resistance for the reference flood,
- where applicable, comply with the requirement for large buildings (see common provisions).

The creation of farm buildings intended for breeding (or animal sanctuary), subject to:

- place above the reference level floors created to accommodate animals, property vulnerable and / or expensive, polluting or toxic products and effluents,
- and to ensure the hydraulic transparency of the construction as well as its resistance to flood.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

#### The creation of greenhouses provided that:

- the construction of the structure makes it possible to limit the risk of ice jams (resistance to flooding) and facilitates the flow of water in case of flood (openings, orientation, ...);
- depending on their level of vulnerability, any heating equipment is located above the reference rating.

Greenhouses may be equipped with photovoltaic panels provided that these and equipment associates are located above the reference level.

The creation of platforms (without building) to place vulnerable goods over the coast reference, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

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The creation of irrigation networks: vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The creation of water reservoirs for agricultural use, created by scouring and carried out without embankments; the excavation resulting from the creation of reservoirs will have to be evacuated outside the flood zone.

**Tree and hedge plantings** (and their possible protective devices), with the exception of poplars within 20 m of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

D - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management) Are authorized:

The opening of quarries and / or gravel pits, as well as their washing facilities, grinding, crushing and screening subject to:

• carry out an impact assessment study to justify the implementation of embankments

related to the exploitation and storage of materials limits the worsening of flood risks for neighboring buildings,

- anchor facilities to resist flooding,
- place facilities, vulnerable and / or expensive equipment and / or equipment over the reference pollutants,
- remove the mounds and merlons remaining at the end of the operation,
- where applicable, comply with the requirement for large buildings (see common provisions).

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device Collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; In addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

### E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... Except bed and breakfast: see heading B - Housing and premises annexes)

None.

### 154 頁 F - <u>OUTDOOR ACTIVITIES</u> (in collective or private use) Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, subject to:

- in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 400 m<sup>2</sup> maximum,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, **the demolition (total or partial)** -reconstruction of **premises accompanying techniques** within the limits of the strictly necessary to the activity and within the limit of 400 m<sup>2</sup> total footprint for all technical support rooms.

### G - <u>COLLECTIVE EQUIPMENT AND SERVICES PUBLIC (AND</u> <u>ASSIMILATED)</u> (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### The creation of treatment plants, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The creation of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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# The creation of inert waste landfills including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole site, with reference to the Flood Safety Plan.

#### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

### The creation of transport infrastructure and car parks (<u>excluding parking-silos or elevated car</u> parks), under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The creation of motorhome stops subject to placing the property above the reference vulnerable and / or expensive and polluting or toxic products, with the exception of those that are waterproof.

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

# The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or

toxic, with the exception of those which are watertight,

- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect <u>highly urbanized sites</u>, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes <u>outside highly urbanized areas</u>, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

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The creation of any facility for the production of renewable energy provided that the vulnerable equipment are located above the reference dimension or are watertight, and that the installation is designed to withstand the reference flood.

#### The creation of cemeteries, with or without columbarium, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- carry out a study to evaluate the environment of the site notably the proximity possible point of capture (public or private) of water intended for consumption -, the impact of this implementation in terms of health risks and the measures envisaged to limit these risks

#### 157 頁

Chapter II - 10: Measures applicable in light red zone, screen 2 (Existing ZAC dedicated to activities and / or mixed), screened 3 (equipment sectors) or grid 4 (other urbanized sectors)

#### Definition of the zone Red light, raster 2, raster 3 or raster 4:

The light red zone 2, 3 or 4 corresponds to:

- areas exposed to low and medium hazards;

- it is characterized by a particular danger related to the characteristics of the floods on the tributaries (suddenness, violence).

- The frames allow to distinguish the different types of urbanized areas; given the level of low and medium contingencies, the regulation is the same for these 3 sectors.

The regulation of this zone aims to:

- to allow the creation of certain buildings in view of their location in an urbanized area, compatible with low and medium hazard levels and environmental health;

- to allow the normal operation of existing activities or land uses by facilitating the adaptations to reduce vulnerability.

All the projects presented in this bright red zone 2, 3 or 4 will have been previously a search for implantation outside the flood zone or, failing that, in a zone of less risk.

#### II -10-1 - Occupations and land use prohibited

Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (with the exception of various tanks and fixed tanks authorized: see common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except

those easily moved, or waterproof and stowed.

**Embankments and platforms** other than those <u>strictly necessary</u> for the construction of works, installations and constructions (including their access) authorized below (II-10-2).

Modular building installation, kiosk or equivalent, whatever the intended use (trade, tertiary activity, public equipment, agriculture, habitat, outdoor activity...), except in case of temporary necessity related to the respect of another regulation or to the norms (necessity duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-10-2

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II - 10-2 - Occupancies and uses of the land likely to be authorized under reserve of prescriptions

II - 10-2.1 - Management of the existing and modification projects of the existing

A - COMMON PROVISIONS

Are authorized:

**Maintenance and day-to-day management,** in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-10-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or

very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction,** seeking to reduce vulnerability and without increasing the issues. The extension is authorized under the conditions defined below according to the destination of the building.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities are resistant to current and that vulnerable equipment is located above reference or be waterproof.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation...).

#### 159頁

Large buildings: concerns any <u>extension</u> project of any kind whatsoever building, including the largest facade <u>after works</u> (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

Note: for projects also concerned by an <u>authorization or a declaration under the law on Water</u>, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- fences with maximum 3 wires stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Fencing parts above the flood level may be "full" (in order to preserving land from the view of others), since the lower parts of the fence (at least 0.50 meter in all cases and according to the Medium flood hazard) will preserve the flow of water in case of flood (see above prescriptions).
- Tolerance: a wall with a maximum height of 60 cm with barbacans (topped or not with a fence), on one side of the field, may be allowed. Similarly, a wall with barbacans may be allowed on both sides of a "lunch car park".
- Other types of fences may be allowed only on production of a study prerequisite demonstrating the hydraulic transparency and the resistance to flooding.

• By exception for reasons of security of public institutions, other types fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, the client engages his responsibility. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

160 頁 B - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

**Rehabilitation (rehabilitation of housing) of premises formerly of dwellings**, with or without creation of only one additional dwelling, provided that <u>all habitable floors</u> are located above the reference flood.

The extension of existing dwellings, provided that the habitable floors created are located above the flood level. In case of major constraints, when the existing habitable floor is in below

the reference dimension, the extension under the reference dimension will be possible within the limit of 20  $m^2$  and this only once during the period of validity of the PPR.

The extension of an existing building for the creation of a single additional dwelling from approval of the PPR, provided that the habitable floors are located above the elevation reference. Where applicable, the construction shall comply with the requirement for large dimension (see common provisions).

The increase of the living space of an existing dwelling, by change of destination or partial assignment of an existing room on the date of approval of the PPR, without creation of housing additional space, provided that the habitable floors created are located above the elevation reference, that the existing room is attached and / or integrated or not existing housing.

The creation of only one additional dwelling, from the approval of the PPR by a change of destination or assignment:

- a portion of an existing building on the date of approval of the PPR and already containing a dwelling,
- an existing building on the date of approval of the PPR, near an existing dwelling, and provided that habitable floors are located above the reference elevation.

Extension or creation of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the PPR approval date, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multi-family building). Products pollutants and vulnerable and / or expensive goods will be located above the reference easily movable.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except dwelling, unauthorized, for breeding or animal sanctuary see below), subject to from:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (see provisions municipalities).
- The hydraulic transparency of the construction will be sought.

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The change of destination or assignment of existing buildings for livestock activity (or animal sanctuary) subject to:

• place above the reference level floors created to accommodate animals, property vulnerable and / or expensive, polluting or toxic products and effluents.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

• place vulnerable and / or expensive goods and products above the reference pollutants or toxic,

• ensure the hydraulic transparency of the construction and its resistance to flooding. The requirement for large buildings will be respected (see common provisions).

#### The extension of buildings intended for breeding (or animal shelter) subject to:

• place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The hydraulic transparency of the construction will be sought.

The extension of greenhouses provided that the realization of the structure makes it possible to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

The extension of platforms (without building) intended to place vulnerable goods above the baseline, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

The extension of irrigation networks. Vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The extension of existing water reservoirs for agricultural use, created by scouring, provided that the extension does not create additional embankments; the cuttings resulting from the extension of reservoirs must be evacuated outside the flood zone.

**Tree and / or hedgerow planting** (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

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**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

The change of destination or assignment of existing buildings, with or without extension, giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by constructing a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, for low-risk and non-polluting activities on the ground floor, above the flood others, subject to:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- comply with the requirement for large buildings (see provisions Commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of

pollution of the whole establishment, with reference to the Flood Safety Plan.

The extension of any installation intended for the production of energy provided that the equipment vulnerable are located above the reference dimension or are watertight and that the installation is designed to withstand the reference flood.

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**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school .... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

The extension, development / redevelopment of an existing land-type property landscaped campsite, residential leisure park, holiday village classified as light accommodation..., including included by change of destination or existing building designation nearby, subject to:

- not to increase the capacity of accommodation in a flood zone,
- always favor non-flood zones or, if not, areas of least risk for the implementation of hosting solutions,
- to implement hosting solutions without foundations (distinct from the notion of anchor), removable, transportable or towable,
- not to introduce new types of accommodation that could aggravate the vulnerability of the site,
- design the installation procedures for the installations to limit the risk of ice jams (example: limitation of the number of columns for structures on stilts),
- design the installation procedures for the installations to enable them to resist the flood (choice of non-water-sensitive materials, dimensioning of the size and anchoring to the ground in function of the structure, the water level and the currents in the event of a reference flood),
- the total footprint of all the buildings of the service buildings (reception, sanitary facilities, technical rooms, common room, ..., excluding caretaker's accommodation), as of the approval of the PPR, will be limited to the strictest necessary to the activity and to 400 m <sup>2</sup> maximum,
- comply with the requirement for large buildings (see provisions Commons)
- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- carry out a *Flood Safety Plan* defining the measures to improve the safety of people and reducing the vulnerability of goods,

- carry out the work by improving the safety of people throughout the site and by minimizing vulnerability of assets, with reference to *the Security Plan Flood*.
- Awnings and removable terraces are allowed.

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- For <u>highly vulnerable institutions</u> (see Annex 1), <u>do not increase capacity accommodation</u> in a flood zone,
- place above the benchmark the accommodation floors that would be created in existing building,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation.
- Canopies and removable terraces are allowed.

With the exception of very vulnerable establishments (including camping), the creation or extension establishments only by change of destination or assignment and for temporary accommodation, provided that the created habitable floors are located above of the reference flood rating. In creation as in extension, a PSI will be realized defining the measures to reduce the vulnerability and the risk of pollution of the entire installation. For extensions, the work will be an opportunity to reduce the vulnerability of the site.

### 164 頁 F - <u>OUTDOOR ACTIVITIES</u> (in collective or private use) Are authorized:

# The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, subject to:

 in collective use, the accompanying premises are authorized: the total footprint of the accompanying premises will be limited to the minimum necessary for the activity and 200 m<sup>2</sup> maximum,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's game in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

#### G - COLLECTIVE EQUIPMENT AND PUBLIC SERVICES (AND

<u>ASSIMILATED</u> (projects necessary for the proper functioning of a community, the services of the State, whose preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

### Are authorized:

#### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

### The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### Extension, rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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#### Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of buildings public service (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to flood risk (examples: library, archives), to place the floors created above the rating of reference;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products.

# Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge ....) under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for the creation of stations treatment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### Change of destination or assignment of existing buildings for the creation of facilities storage and / or sorting of waste subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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# The change of destination or assignment of existing buildings for the creation of centers landfill of inert waste including essential technical installations and rooms under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,

• carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

Change of destination or assignment of existing buildings for creation transport infrastructure, surface parking, silos or elevations, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of motorhome subject to placing vulnerable and / or expensive goods above the reference and polluting or toxic products, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **urban** subject anchor to resist the reference flood.

Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of waterways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a Flood Safety Plan defining the measures for joint reduction of vulnerability,

hydraulic impacts and the risk of pollution of the existing,

• to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

#### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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# The extension of landfills of inert waste including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,

- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The extension of transport infrastructure and car parks (<u>excluding parking-silos or car parks</u> in elevation), subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works outside highly urbanized sectors, provided that the project selected does not presents

no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

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# The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions Commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, that the facility be designed to resist the reference flood, and subject to the production of a preliminary hydraulic study (to adapt according to the project) if the project is close to urban or built-up areas (within 100 meters) so to justify measures taken to limit the increased risk for the neighborhood (existing and future).

#### The extension of cemeteries, with or without columbarium, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- carry out a study to evaluate the environment of the site notably the proximity possible point of capture (public or private) of water intended for consumption -, the impact of this implementation in terms of health risks and the measures envisaged to limit these risks.

#### 169頁

#### II - 10-2.2 - New buildings and installations likely to be authorized subject to prescriptions

<u>Information</u>: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

#### A - COMMON PROVISIONS

#### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relationship to current, layout and size of openings, barbacans, flood resistance to limit risk jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for <u>extensions or</u> new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on water</u>, data and information from this study can also be valued.

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Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced posts (spacing of about 2 meters or plus for deep recessed poles, 3 meters or more for wider posts requiring ground fixation),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or with an airy structure (grid, grid, openwork wood, barrier, ....) of total height limited to 2 meters of height, with spaced posts (spacing of about 2 meters or more for fine posts recessed, 3 meters or more for wider posts requiring ground anchoring), designed to resist the flood.
- Fencing parts above the flood level may be "full" (to preserve a field of view of others), since the lower parts of the fence (at least 0.50 meters in all the cases and according to the Medium flood hazard) will preserve the flow of water in case of flood (see above requirements).
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed. Similarly, a wall with barbacans can be authorized on both sides of a "lunch car park".

- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- By exception for reasons of safety of public institutions, other types of fences may be authorized, depending on the specific security needs of the institutions.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (*note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).* 

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

#### **B** - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u>

#### Are authorized:

The creation of a single dwelling, provided the habitable floors are located above the reference rating. If necessary, the construction must respect the prescription concerning large buildings (see common provisions).

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and

/ or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and 10 m<sup>2</sup> private by lodging for a collective building. When an individual dwelling is provided with a the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). The pollutants and vulnerable and / or expensive goods will be located above the reference or will be easily moved.

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The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

On land with existing dwelling, **private pools buried**, **semi-buried or above ground**, **discoveries**, **inside an existing building and / or outside**, <u>except in the immediate vicinity of dikes</u>, with a flood-proof or above-shore water filtration device reference, as well as a device for disconnecting the electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage) <u>Excluding trading activity</u>: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The creation of agricultural buildings other than those intended for breeding or animal sanctuaries (see below) or to housing (see section B -Habitat) subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or otherwise in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants
- design the building to ensure its hydraulic transparency and resistance for the reference flood,
- where applicable, comply with the requirement for large buildings (see common provisions).

The creation of farm buildings intended for breeding (or animal sanctuary), subject to:

- place above the reference level floors created to accommodate animals, property vulnerable and / or expensive, polluting or toxic products and effluents,
- and to ensure the hydraulic transparency of the construction as well as its resistance to flood.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

#### The creation of greenhouses provided that:

- the construction of the structure makes it possible to limit the risk of ice jams (resistance to flooding) and facilitates the flow of water in case of flood (openings, orientation, ...);
- depending on their level of vulnerability, any heating equipment is located above the reference rating.

Greenhouses may be equipped with photovoltaic panels provided that these and equipment associates are located above the reference level.

The creation of platforms (without building) to place vulnerable goods over the coast reference, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

The creation of irrigation networks: vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The creation of water reservoirs for agricultural use, created by scouring and carried out without embankments; the excavation resulting from the creation of reservoirs will have to be evacuated outside the flood zone.

**Tree and hedge plantings** (and their possible protective devices), with the exception of poplars within 20 m of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

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The cutting and felling of trees, subject to a minimum of on-site storage to avoid the risks of ice jams. In the absence of removal in the shortest possible time, the storage of cut timber is allowed under reserve to limit the impact on the flow of water (orientation of the stores) and stow it so as to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management)

Are authorized:

<u>Only in existing ZACs dedicated to activities and / or mixed</u>, demolition (total or partial) - reconstruction for the improvement or creation of industrial, commercial, craft or tertiary domain subject to:

- not hosting accommodation,
- position low-risk, non-polluting activities on the ground floor, others above the coastline flood
- limit the footprint to the most restrictive condition between:
  - \* 30% more compared to the existing
  - \* and total footprint of buildings <50% of the total area of the land unit,

• where applicable, comply with the requirement for large buildings (see municipalities).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be implemented to define joint reduction measures of vulnerability, hydraulic impacts and the risk of pollution of the existing. The work will be done by minimizing the vulnerability and risk of pollution of the entire site, reference to *the Flood Safety Plan*.

The creation of any facility intended for the production of renewable energy provided that the equipment vulnerable locations are located above the reference dimension or are watertight, whether the facility is designed to resist the reference flood.

The creation of underground tanks (or tanks) and retention basins intended to collect water from rain runoff. The hydraulic transparency of the structures will be sought. The system of collection and rainwater treatment must be maintained in order to ensure perfectly and at all times its functions, in particular capping. For buried tanks (or tanks), the device must be ballasted; moreover, the emptying, the cleaning and disinfection of these structures after a flood are mandatory when the recovered water is used then inside buildings, and are highly recommended for other uses.

#### E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... Except bed and breakfast: see heading B - Housing and premises annexes)

None.

### F - OUTDOOR ACTIVITIES (in collective or private use)

Are authorized:

The creation of outdoor recreation activities, green spaces, play areas and plains and sports fields not covered, subject to:

- in collective use, the support premises are authorized: the total footprint of the premises
  of support will be limited to the strict minimum necessary to the activity and to 200 m<sup>2</sup>
  maximum,
- place above the reference grade vulnerable and / or costly goods and pollutants or toxic
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,
- Minimize light and / or dismountable facilities for activities nautical, fishing, walking, sport (pontoons, huts, tackles, lookouts ...) and under provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of technical premises of accompaniment within the limits of the strictly necessary to the activity and within the limit of 200 m<sup>2</sup> of total footprint for all technical support rooms.

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G - <u>COLLECTIVE EQUIPMENT AND PUBLIC (AND ASSIMILATED)</u> SERVICES (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. <u>Except accommodation</u>: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

#### The creation of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see common provisions).

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### The creation of treatment plants, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The creation of storage facilities and / or waste sorting subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The creation of inert waste landfills including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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#### The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The creation of transport infrastructure and car parks, surface parking, silos or elevations, under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The creation of motorhome stops subject to placing the property above the reference vulnerable and / or expensive and polluting or toxic products, with the exception of those that are waterproof.

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect <u>highly urbanized sites</u>, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference flood.

The creation of dikes outside highly urbanized areas, provided that the project retained does

not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment is located above the reference dimension or is watertight, that the facility is designed to withstand the reference flood, and subject to the production of a survey hydraulic system (to be adapted according to the project) if the project is close to urban or built-up less than 100 meters) to justify measures taken to limit the increased risk for the neighborhood (existing and future).

#### The creation of cemeteries, with or without columbarium, subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or,

failing that, in a zone of less risk, conduct a study to evaluate the site environment - including the possible proximity of a point capture (public or private) of water intended for consumption - the impact of this implementation in terms of health risks and the measures envisaged to limit these risks.

#### 175 頁

Chapter II - 11: Measures applicable in blue and dark blue zones, 1 (urban center), screen 2 (parts of ZAC dedicated to activities), trunks 3 (equipment sectors) or trunks 4 (other urbanized sectors)

#### Definition of the blue and dark blue zones, all frames:

The blue and dark blue areas correspond to:

- areas exposed to a low hazard of the Garonne and tributaries (Blue) and areas exposed to average hazard of the Garonne and tributaries (dark blue);

- The frames allow to distinguish the different types of urbanized areas; given the levels of low and medium contingencies, the regulation is the same for these 4 sectors on the Garonne and the framed 1 (center urban) on tributaries.

The settlement of these areas aims to allow normal operation, urban renewal and the measured development of these sectors without increasing their vulnerability.

Even if the regulation of the blue and dark blue zones allows constructions, a search implantation outside flood zone is always preferred, or failing this in a zone of less risk.

### II -11-1 - <u>Occupations and land use prohibited</u> Are forbidden:

Creation or change of destination or assignment (likely to increase vulnerability) premises or rooms below the level of the natural ground (basements, cellars...).

Storage under the reference level of polluting or toxic products, in particular in cans and nonfixed containers, and in particular toxic products, dangerous substances or preparations for environment, products reacting with water and hydrocarbons, as mentioned in the nomenclature of installations classified as environmental protection (with the exception of various tanks and fixed tanks authorized: see common provisions).

The positioning of vulnerable and / or expensive assets below the reference rating, except those easily moved, or waterproof and stowed.

Embankments and platforms other than those strictly necessary for the construction of works,

installations and constructions (including their access) authorized below (II-11-2).

**Modular building installation, kiosk or equivalent**, whatever the intended use (trade, tertiary activity, public equipment, agriculture, housing, outdoor activity...), except in case temporary necessity related to the respect of another regulation or to standards (duly justified), and of a demonstrated impossibility of planting it outside the flood zone or, failing that, in a zone of less risk. The duration of implantation will be mentioned and justified precisely; this duration will have to be strictly respected (except new, duly motivated requirements). For the entire implementation period, the client will undertake to evacuate the installations as soon as a flood risk is announced. Dispositions however, specific provisions are provided in the BLUE zone for headings D and G.

All works, constructions, installations and arrangements of any kind whatsoever except those referred to in II-11-2

#### 176頁

II - 11-2 - Occupations and uses of the soil likely to be authorized under reserve of prescriptions

II - 11-2.1 - Management of the existing and modification projects of the existing

### A - COMMON PROVISIONS

Are authorized:

Maintenance and day-to-day management, in the existing volume, including the facilities and internal renovations, facade treatments and roof repairs *(the creation of housing or activity new is regulated in Ch. II-11-2.2).* 

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relative to the current, layout and size of the openings, barbicans, resistance to the flood to limit the risk of ice jams....

The work of putting out of water of people and goods, to reduce vulnerability, by development or reconstruction of the existing disaster (as detailed below), without creation of housing or very vulnerable facilities (see list and PSI appendices). *Extension is allowed under the conditions defined below according to the destination of the building.* 

The upgrading and compliance work, seeking maximum reduction of vulnerability and hydraulic impacts: for example on stilts, on open crawlspace..., unless impossible to demonstrate by the owner in a technical notice. *Standards or regulatory texts justifying the necessity of the work will be attached to the file.* 

**Post-disaster reconstruction,** seeking to reduce vulnerability and without increasing the issues. The extension is authorized under the conditions defined below according to the destination of the building.

The demolition of existing buildings.

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities are resistant to current and that vulnerable equipment is located above reference or be waterproof.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height implantation, ...).

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Large buildings: concerns any extension project of any kind whatsoever building, including

the largest facade <u>after works</u> (facade in the sense of the longest length of right-of-way the flood zone) is greater than 50 meters and is located near urban areas or buildings (distance to neighboring buildings of less than 100 meters, for existing buildings and future urbanization). Any designer, project leader, architect..., must think about his project in terms of risk for himself <u>but also</u> for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on water</u>, data and information from this study can also be valued.

Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

- maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more for wider posts requiring a ground attachment),
- and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,
- and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.
- Fencing parts above the flood level may be "full" (in order to preserving land from the view of others), since the lower parts of the fence (at least 0.50 meter in all cases and according to the Medium flood hazard) will preserve the flow of water in case of flood (see above prescriptions).
- Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed. Similarly, a wall with barbacans can be allowed on both sides of a "lunch car park".
- Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.
- As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12, will be implemented as far as possible in the projects extension and interior fittings.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

178 頁 B - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

**Rehabilitation (rehabilitation of housing) of premises formerly of dwellings**, with or without creation of additional dwelling (s), provided that <u>all habitable floors</u> are located above the reference flood.

The extension of existing dwellings, provided that the habitable floors created are located above the flood level. In case of major constraints, when the existing habitable floor is in below the reference dimension, the extension under the reference dimension will be possible within the limit of 20 m<sup>2</sup> and this only once during the period of validity of the PPR.

The extension of an existing building for the creation of additional dwelling (s), subject to that habitable floors are located above the reference elevation. Where appropriate, the construction shall comply with the requirement for large buildings (see municipalities).

The increase of the living space of existing dwelling (s), by change of destination or partial assignment of premises existing at the date of approval of the PPR, provided that the floors dwellings are located above the reference elevation, that the existing space is attached to it and / or integrated or not to existing housing.

The creation of additional accommodation (s), by change of destination or assignment of an **existing building**, provided that the habitable floors are located above the elevation reference.

**Extension or creation of closed premises** accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. As of the PPR approval date, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multi-family building). Products pollutants and vulnerable and / or expensive goods will be located above the reference easily movable.

**Extension or creation of open premises** accessory to existing dwellings (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of the floods and the flow of the water, and remain open later for maintain the hydraulic transparency.

Private pools buried, semi-buried or above ground, discovered, inside a building existing and / or outside, except in the immediate vicinity of dikes, including a filtration device flood-proof waters or above the reference coast, as well as a cut-off device for electrical network. Security fences are allowed.

**C** - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading D - Industry, trade, crafts, tertiary)

#### Are authorized:

The change of destination or assignment of existing buildings, *with or without extension*, for agricultural use (except breeding, animal shelter and dwelling, not authorized), subject to:

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- comply with the requirement for large buildings (see provisions municipalities).
- The hydraulic transparency of the construction will be sought

#### 179 頁

The change of destination or assignment of existing buildings for livestock activity (or animal sanctuary) subject to:

• place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The hydraulic transparency of the construction will be sought.

The extension of agricultural buildings other than those intended for animal husbandry (or animal refuge) or housing subject to:

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- ensure the hydraulic transparency of the construction and its resistance to flooding.

The requirement for large buildings will be respected (see common provisions).

#### The extension of buildings intended for breeding (or animal shelter) subject to:

• place above the reference level floors created to accommodate animals, vulnerable and / or expensive goods, polluting or toxic products and effluents.

The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The hydraulic transparency of the construction will be sought.

The extension of greenhouses provided that the realization of the structure makes it possible

to limit the risk of ice jams (flood resistance) and facilitates the flow of water in case of flood (openings, orientation...). Depending on their level of vulnerability, any heating equipment will be located above the reference rating. Greenhouses may be equipped with photovoltaic panels provided that these and related equipment are located above the reference dimension.

The extension of platforms (without building) intended to place vulnerable goods above the baseline, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

**The extension of irrigation networks**. Vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The extension of existing water reservoirs for agricultural use, created by scouring, provided that the extension does not create additional embankments; the cuttings resulting from the extension of reservoirs must be evacuated outside the flood zone.

**Tree and / or hedgerow planting** (and any protective devices), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood

#### 180頁

D - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the state services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... <u>Excluding accommodation</u>: see heading E - Accommodation with night reception and collective management) Are authorized:

The change of destination or assignment of existing buildings, with or without extension,

giving rise to the creation of industries, shops, crafts or tertiary activities not included in Annex 1 (Highly Vulnerable Institutions), for low-risk and non-polluting activities on the ground floor. Pavement, above flood level for others, subject to:

- place above the reference level vulnerable and / or expensive goods, pollutants or toxic,
- comply with the requirement for large buildings (in case of extension: see common provisions),
- carry out, for sensitive establishments (listed in Annex 2), a *Flood Safety Plan* defining the measures for reducing the vulnerability and the risk of pollution of all installation,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan*.

The development of the activity of an existing establishment, either by extension of an existing building, by redevelopment, change of destination or assignment of an existing building located nearby, either by constructing a building in the immediate vicinity of existing buildings (with the exception of special constraints in the file), with the exception of quarries and concrete plants, for low-risk and non-polluting activities on the ground floor, above the flood others, subject to:

- not to increase the storage capacity of highly vulnerable establishments (as Annex 1),
- place toxic or pollutant products above the reference flood or in an enclosure retention resistant to this flood,
- comply with the requirement for large buildings (see provisions commons)
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- achieve, for sensitive institutions (listed in Annex 2) and highly vulnerable (listed in Annex 1), a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole establishment, with reference to *the Flood Safety Plan* when it exists.

The extension of any installation intended for the production of energy provided that the equipment vulnerable are located above the reference dimension or are watertight and that the installation is designed to withstand the reference flood.

Only in the 1, 2, 3 or 4 halftone BLUE zone, the modular building installation, kiosk or equivalent, subject to proper design and anchorage to withstand the reference flood.

<u>Only in the BLEU zone 1, 2, 3 or 4,</u> the temporary installation (fair, promotions, event punctual...) of modular construction, kiosk or equivalent, subject to impossibility demonstrated to implant it outside the flood zone or, failing that, in a zone of less risk. The duration implementation will be mentioned and justified precisely; this duration must be strictly observed (except new, duly motivated requirements). For the entire implementation period, the contracting authority will commit to evacuate the facilities immediately upon the announcement of a flood risk.

#### 181 頁

**E** - <u>ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT</u> (of which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school.... <u>Except bed and breakfast</u>: see heading B - Housing and premises annexes) **Are authorized**:

The extension, development / redevelopment of an existing land-type property landscaped campsite, residential leisure park, holiday village classified as light accommodation..., including by change of destination or existing building designation nearby, subject to:

- not to increase the capacity of accommodation in a flood zone,
- always favor non-flood zones or, if not, areas of least risk for the implementation of hosting solutions,
- to implement hosting solutions without foundations (distinct from the notion of anchor), removable, transportable or towable,
- not to introduce new types of accommodation that could increase the vulnerability of the site,
- design the installation procedures for the installations to limit the risk of ice jams (example: limitation of the number of columns for structures on stilts),
- design the installation procedures for the installations to enable them to resist the flood (choice of non-water-sensitive materials, dimensioning of the size and anchoring to the ground in function of the structure, the water level and the currents in the event of a reference flood),
- the total footprint of all the buildings of the service buildings (reception, sanitary facilities, technical rooms, common room, ..., excluding caretaker's accommodation), as of the approval of the PPR, will be limited to the strictest necessary to the activity and to 400 m <sup>2</sup> maximum,
- comply with the requirement for large buildings (see provisions commons)

- place vulnerable and / or expensive goods above the reference pollutants or toxic,
- carry out a *Flood Safety Plan* defining the measures to improve the safety of people and reducing the vulnerability of goods,
- carry out the work by improving the safety of people throughout the site and by minimizing vulnerability of assets, with reference to *the Security Plan Flood*.
- Awnings and removable terraces are allowed.

For activities other than campground, recreational park, holiday village classified in light accommodation... the development, extension, development / redevelopment of an existing establishment, including by change of destination or assignment of building (s) existing building (s) nearby, subject to:

- For <u>highly vulnerable institutions</u> (see Annex 1), <u>do not increase capacity accommodation</u> in a flood zone,
- place above the benchmark the floors of accommodation that would be created,
- place toxic or polluting products as well as vulnerable goods above the flood of reference or in a retention chamber resistant to this flood,
- take the necessary steps to stop the materials that would be washed away by the flood reference (sizing fences, storage in a closed enclosure...),
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and the risk of pollution of the entire installation.
- Canopies and removable terraces are allowed.

With the exception of very vulnerable establishments (including camping), the creation or extension establishments only by change of destination or assignment and for temporary accommodation, provided that the created habitable floors are located above of the reference flood rating. In creation as in extension, a PSI will be realized defining the measures to reduce the vulnerability and the risk of pollution of the entire installation. For extensions, the work will be an opportunity to reduce the vulnerability of the site.

#### 182頁

F- <u>OUTDOOR ACTIVITIES</u> (in collective or private use) Are authorized:

The extension, development of outdoor recreational activities, green spaces, areas and plains games and sports fields not covered, subject to:

• in collective use, the accompanying premises are authorized: the total footprint of the

accompanying premises will be limited to the minimum necessary for the activity and 400 m<sup>2</sup> maximum,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- preserve the flow of water in case of flood.
- to limit as much as possible the light and / or dismountable installations allowing the practice of nautical activities, fishing, walking, sport (pontoons, huts, tackle, lookouts) and provided that these facilities do not constitute an obstacle to the flow of water.

### G - COLLECTIVE EQUIPMENT AND SERVICES PUBLIC (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

#### The extension of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

### The extension of buildings, equipment, and facilities dedicated to civil security, defense or protection of public order subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a Flood Safety Plan defining measures to reduce vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

#### Extension, rehabilitation of treatment plants subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or failing that, in a zone of lower risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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#### Expansion of waste treatment facilities subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# The change of destination or assignment of existing buildings for the creation of buildings public service (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to risk flood (examples: library, archives), to place the floors created above the reference rating;
- For other buildings, place vulnerable assets above the reference rating and / or expensive and polluting or toxic products.

# Change of destination or assignment of existing buildings for the creation of facilities strictly dedicated to flood relief (boathouses, buildings that can serve as refuge....) under reserve of:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for station creation treatment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

# Change of destination or assignment of existing buildings for the creation of facilities storage and / or sorting of waste subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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# Change of destination or assignment of existing buildings for center creation landfill of inert waste, subject to:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

### The change of destination or assignment of existing buildings for the creation of networks and technical equipment, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# Change of destination or assignment of existing buildings for creation transport infrastructure, surface parking, silos or elevations, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of motorhome subject to placing vulnerable and / or expensive goods above the reference and polluting or toxic products, with the exception of those that are watertight.

The change of destination or assignment of existing buildings for the creation of any installation intended for the production of renewable energy.

The change of destination or assignment of existing buildings for the creation of furniture **Urban** subject anchor to resist the reference flood.

Change of destination or assignment of existing buildings for the creation of facilities necessary for the operation and management of water ways, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The change of destination or assignment of existing buildings for the extension of an activity existing in the vicinity, subject to reducing the vulnerability of the site.

#### The extension of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

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The extension of landfills of inert waste including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of ' water treatment plants for human consumption provided that:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

#### The extension of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

The extension of transport infrastructure and car parks, surface parking, silos or elevations, under reserve of:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The extension of motorhome stops subject to placing above the reference vulnerable and / or expensive goods and polluting or toxic products, with the exception of waterproof.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works ensuring the protection of <u>highly urbanized sites</u>, provided that the selected project to limit the hydraulic impacts upstream and downstream of these structures. Unless constrained

In particular, the structures will be dimensioned to provide protection against the reference flood.

The linear extension of the dikes or the elevation of the existing dikes, and their comfort, for works outside highly urbanized sectors, provided that the project selected does not presents no significant hydraulic impacts upstream and downstream of works on urbanized areas **and that it participates in the coherent management of an existing protection system**, as service in charge of the control of hydraulic structures. Unless otherwise required, the works will be sized to provide at least the same protection as existing structures in the protection.

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The extension of open public halls provided that the structure is resistant to flooding, and subject to preserve and / or improve its hydraulic transparency.

The extension of buildings and structures necessary for the operation and management of a lane of water, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- comply with the requirement for large buildings (see provisions commons)
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The extension of any installation intended for the production of energy provided that the equipment vulnerable are located above the reference dimension or are watertight and that the installation is designed to withstand the reference flood.

#### The extension of cemeteries, with or without columbarium, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- carry out a study to evaluate the environment of the site notably the proximity possible point of capture (public or private) of water intended for consumption -, the impact of this implementation in terms of health risks and the measures envisaged to limit these

risks.

Only in the 1, 2, 3 or 4 halftone BLUE zone, the modular building installation, kiosk or equivalent, subject to proper design and anchorage to withstand the reference flood.

<u>Only in the BLEU zone 1, 2, 3 or 4</u>, the temporary installation (fair, promotions, event punctual, ...) of modular construction, kiosk or equivalent, subject to impossibility demonstrated to implant it outside the flood zone or, failing that, in a zone of less risk. The duration implementation will be mentioned and justified precisely; this duration must be strictly observed (except new, duly motivated requirements). For the entire implementation period, the contracting authority will commit to evacuate the facilities immediately upon the announcement of a flood risk.

### 187 頁 *II - 11-2.2 - New buildings and installations likely to be authorized subject to prescriptions*

Information: The projects authorized by the Flood Risk Prevention Plan regulations are often also subject to other regulation (s): town planning, water law, installations classified for the protection of the environment (ICPE), establishments receiving the public (ERP)...

#### A - COMMON PROVISIONS

#### Are authorized:

The creation and / or extension of any authorized building under the conditions defined below, under reserve to limit its impact on the flow of water in case of flood: orientation of the building by relationship to current, layout and size of openings, barbacans, flood resistance to limit risk jams....

The installation of wind turbines, photovoltaic panels or any other equipment intended for the renewable energy production - and associated equipment - (Excluding parks dedicated to production renewable energy: see heading D - Industry, trade, crafts, tertiary sector), provided that the facilities resist the flow, facilitate the flow of water in case of flood and that the equipment vulnerable are located above the reference dimension or are watertight.

The charging station installation for an electric vehicle, subject to taking all possible provisions to ensure the resistance of the installation to the flood (anchorage, circuit breaker, height

implantation, ...).

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Tanks and various fixed tanks subject to being located above the flood reference or to be protected against the effects of the reference flood: stowage, ballast, contained in a waterproof enclosure...

Large buildings: concerns any project including the largest facade (facade within the meaning of the greatest length of influence on the flood zone) is greater than 50 meters and that its location is close to urban or built-up areas (distance to neighboring buildings less than 100 meters, for existing buildings and future urbanization areas). The concept of big building dimension applies to any construction project, of any nature whatsoever, for extensions or new constructions.

Any designer, project leader, architect..., must think about his project in terms of risk for himself but also for others and thus limit as much as possible the consequences of its implantation in flood.

Therefore, for this type of project, <u>a study will have to be carried out</u> to present the biases of the projects designed to limit the impacts and increase the risk for the neighborhood; this study will build on as needed on hydraulic expertise or modeling, depending on the issues involved, urbanization (current and future), the level of hazard, ... present in the sector, and will present in particular the evolutions of the project to take into account its environment. Indeed, the research department in charge of the presentation will be force of proposal with regard to the project.

<u>Note</u>: for projects also concerned by an <u>authorization or a declaration under the law on water</u>, data and information from this study can also be valued.

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Fences and barriers, subject to ensuring the hydraulic transparency and resistance to raw:

• maximum 3-wire fences stacked with spaced poles (spacing of about 2 meters or more for

deep posts, 3 meters or more for wider posts requiring a ground attachment),

• and / or vegetable hedges whose height should be limited to 2 meters maximum, regularly maintained to allow the free flow of water in case of flood,

• and / or aerated structure (grid, mesh, openwork wood, barrier, ....) of total height limited to 2 meters high, with spaced poles (spacing of about 2 meters or more for deep posts, 3 meters or more, for wider posts requiring attachment to ground), designed to withstand flooding.

• Fencing parts above the flood level may be "full" (in order to preserving land from the view of others), since the lower parts of the fence (at least 0.50 meter in all cases and according to the Medium flood hazard) will preserve the flow of water in case of flood (see above prescriptions).

• Tolerance: a low wall with a maximum height of 60 cm with barbacans (topped or not with a roasting), on one side of the field, may be allowed. Similarly, a wall with barbacans can be allowed on both sides of a "lunch car park".

• Other types of fences may be allowed only upon production of a preliminary study demonstrating hydraulic transparency and flood resistance.

• As an exception for reasons of security of public institutions, other types of fences may be authorized, depending on the specific needs of the establishments in terms of security.

Tree and / or hedgerow planting (*and any protective devices*), with the exception of poplar plantations within 20 meters of the banks, and subject to regular maintenance for to preserve the free flow of water in case of flood.

Cuttings from authorized works and developments must be evacuated outside the area flood.

This Regulation imposes a rating for **floors with vulnerable properties and / or expensive**. The floor height will depend on the specific vulnerability of each activity, the property vulnerable and / or expensive to be located above the flood elevation or be easily moved or to be waterproof. It is up to the developer to define these properties according to the nature of his activity, possibly in consultation with its insurer (note: in the event of a claim, the insurer is not obliged to compensate for damage to vulnerable and / or expensive property that would not have been imposed by the PPR).

The technical requirements **for construction rules** to reduce vulnerability and defined in Chapter II - 12 will be obligatorily implemented, under the responsibility of the master works and the project manager.

Some projects are not subject to any formality under the Urban Planning Code but must nevertheless respect the PPR (Articles L421-6 and L421-8). In all cases, **the client engages his responsibility**. In case of non-compliance with the PPR, he is exposed to various sanctions (criminal, third party, refusal of compensation...).

### **B** - <u>HABITAT</u> (including gite and B & B) <u>AND ANNEXES</u> Are authorized:

The creation of individual dwelling (s), provided that the habitable floors are located above the reference rating. If applicable, the building (s) must meet the requirement concerning large buildings (see common provisions).

Demolition (total or partial) -reconstruction for the improvement or creation of dwellings individually or in groups, provided that:

• all habitable floors are located above the flood level, where applicable, the requirement for large buildings (see common provisions) will be respected

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Demolition (total or partial) -reconstruction for the improvement or creation of collective housing, provided that:

- all habitable floors are located above the flood level,
- a *Flood Safety Plan is drawn up*, defining the measures for joint reduction of the vulnerability, hydraulic impacts and the risk of pollution of the existing,
- that the works are carried out by reducing as much as possible the vulnerability and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*.

Where applicable, the requirement for large buildings (see common provisions) will be respected.

The creation or extension of closed premises accessory to existing dwellings (buildings completely closed type garage, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling. From the date of approval of the PPR, the total footprint of all these premises created shall not exceed 40 m<sup>2</sup> per dwelling, individual or grouped, and  $10m^2$  private by lodging for a collective building. When an individual dwelling is provided with the ground floor, located under the habitat, its footprint must be taken into account in the 40 m<sup>2</sup> of authorized premises (and in the 10 m<sup>2</sup> per housing unit for a multifamily building). The pollutants and vulnerable and / or expensive goods will be located above

the reference or will be easily moved.

The creation or extension of open premises accessory to existing homes (garage type, shed, garden shed, technical room...), whether contiguous and / or integrated or not to the existing dwelling; the construction, in its design (dimensions, orientation, barbican...), must preserve as much as possible the field of expansion of floods and remain open later to maintain transparency hydraulic.

The creation of light shelters in allotment gardens, within the limit of  $5 \text{ m}^2$  per shelter.

On land with existing dwelling, **private pools buried**, **semi-buried or above ground**, **discoveries**, **inside an existing building and / or outside**, <u>except in the immediate vicinity of dikes</u>, with a flood-proof or above-shore water filtration device reference, as well as a device for disconnecting the electrical network. Security fences are allowed.

C - <u>AGRICULTURE</u> (production, packaging, storage. <u>Excluding trading activity</u>: see heading
 D - Industry, trade, crafts, tertiary)
 Are authorized:

The creation of agricultural buildings other than those intended for breeding, animal shelter or habitation (see section B -Habitat) subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or at defect in zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants
- design the building to ensure its hydraulic transparency and its resistance to the reference flood,
- where applicable, comply with the requirement for large buildings (see common provisions).

# The creation of farm buildings intended for breeding (or animal sanctuary), subject to:

 place the created floors above the reference dimension to accommodate animals, property vulnerable and / or expensive, polluting or toxic products and effluents,

• and to ensure the hydraulic transparency of the construction and its resistance to flooding. The prior completion of a *Flood Safety Plan will* make it possible to define measures to reduce the vulnerability and the risk of pollution of the entire installation to be implemented, mainly the occasion of the extension work. The requirement for large buildings will be respected (see common provisions).

The creation of greenhouses provided that:

- the realization of the structure makes it possible to limit the risk of ice jams (resistance to the flood) and facilitates the flow of water in case of flood (openings, orientation, ...);
- Depending on their level of vulnerability, any heating equipment may be located above the reference rating.

Greenhouses may be equipped with photovoltaic panels provided that these and equipment associates are located above the reference level.

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The creation of platforms (without building) to place vulnerable goods over the coast reference, subject to the completion of a study or hydraulic expertise (to be adapted according to the project, the stakes, the current and future urbanization, the level of hazard... present on the sector) explaining the minimization of impacts within a radius of less than 100 meters for as is the case for large buildings.

**The creation of irrigation networks**: vulnerable and / or expensive equipment will be out of water or waterproof. The networks will resist scouring.

The creation of water reservoirs for agricultural use, created by scouring and carried out without embankments; the excavation resulting from the creation of reservoirs will have to be evacuated outside the flood zone.

Tree and hedge plantings (and their possible protective devices), with the exception of poplars within 20 m of the banks, and subject to regular maintenance to preserve the free flow of water in case of flood.

**Cutting and felling of trees**, subject to a minimum of on-site storage to avoid the risk of ice jams. In the absence of a removal in the shortest possible time, the storage of wood cut is allowed subject to limiting the impact on the flow of water (orientation of the steres) and stow it to withstand the current during a reference flood.

**D** - <u>INDUSTRY, COMMERCE, CRAFTS, TERTIARY</u> (commercial service or not, public or private, not strictly necessary for the functioning of the State services or a community, including public or private meeting places, meeting rooms, shows, museums, places of worship, covered sports fields, ... Excluding accommodation: see heading E - Accommodation

with night reception and collective management) Are authorized:

The creation of any facility or activity subject to:

- position low-risk, non-polluting activities on the ground floor; above the flood level,
- where applicable, comply with the requirement for large buildings (see common provisions).

For Authorized Sensitive Establishments (see Appendix 2), a Flood Safety Plan will be to define the joint reduction measures of vulnerability, hydraulic impacts and the risk of pollution of the existing. The work will be carried out by minimizing vulnerability and the risk of pollution of the entire site, with reference to *the Flood Safety Plan*.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment are located above the reference dimension or are watertight and that the installation is designed to withstand the reference flood.

The creation of underground tanks (or tanks) and retention ponds to collect water rain runoff. The hydraulic transparency of the structures will be sought. The device collection and treatment of rainwater must be maintained to ensure perfectly and at all times its functions, particularly clipping. For buried tanks (or tanks), the device must imperatively to be weighted; in addition, the emptying, cleaning and disinfection of these structures after are required when the recovered water is then used indoors, and is strongly recommended for other uses.

Only in the 1, 2, 3 or 4 halftone BLUE zone, the modular building installation, kiosk or equivalent, subject to proper design and anchorage to withstand the reference flood.

<u>Only in the BLEU zone 1, 2, 3 or 4</u>, the temporary installation (fair, promotions, event punctual, ...) of modular construction, kiosk or equivalent, subject to impossibility demonstrated to implant it outside the flood zone or, failing that, in a zone of less risk. The duration implementation will be mentioned and justified precisely; this duration must be strictly observed (except new, duly motivated requirements). For the entire implementation period, the contracting authority will commit to evacuate the facilities immediately upon the announcement of a flood risk.

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# E - ACCOMMODATION WITH OVERNIGHT AND COLLECTIVE MANAGEMENT (of

which hotels, campsites, holiday centers and residences, retirement homes, hospitals, boarding school, .... Except bed and breakfast: see heading B - Housing and premises annexes) Are authorized:

With the exception of very vulnerable institutions, the establishment of institutions with night collective management, subject to:

- position the habitable floors above the flood level,
- place vulnerable and / or expensive goods and pollutants above the reference or toxic,
- where applicable, comply with the requirement for large buildings (see common provisions).
- carry out a *Flood Safety Plan* defining measures to reduce vulnerability and risk of pollution of the entire installation.

## F - OUTDOOR ACTIVITIES (in collective or private use)

#### Are authorized:

# The creation of outdoor recreation activities, green spaces, play areas and plains and land not covered, subject to:

- in collective use, the support premises are authorized: the total footprint of the premises
  of support will be limited to the strictest necessary for the activity and to 400 m<sup>2</sup>
  maximum,
- place vulnerable and / or expensive goods and pollutants above the reference or toxic,
- anchor accompanying facilities such as sports furniture or children's games in order to resist the reference flood,
- to preserve the flow of water in case of flood,
- Minimize light and / or dismountable facilities for activities nautical, fishing, walking, sport (pontoons, huts, tackles, lookouts ...) and under provided that these facilities do not constitute an obstacle to the flow of water.

For the only projects in <u>collective use</u>, the demolition (total or partial) -reconstruction of premises accompanying techniques within the limits of the strictly necessary to the activity and within the limit of 400 m<sup>2</sup> total footprint for all technical support rooms.

# G - COLLECTIVE EQUIPMENT AND SERVICES PUBLIC (AND

**ASSIMILATED)** (Projects necessary for the proper functioning of a community, the services of the State, whose Preservation and / or a rapid resumption of activity after a flood is

essential. Except accommodation: see heading E - Accommodation with night reception and collective management)

#### Are authorized:

## The creation of public service buildings (and similar) subject to:

- For services requiring a rapid recovery of activity after the crisis (nursery, school and canteen, employment center, town hall, etc.) or with particular vulnerability to flood risk (examples: library, archives), to place the floors created above the reference dimension;
- For other buildings, place vulnerable assets and / or expensive and polluting or toxic products;
- The requirement for large buildings will be respected (see provisions municipalities).

The creation of facilities dedicated strictly to rescue in case of flood (boat sheds, buildings that can serve as a shelter ....) subject to:

- carry out a preliminary analysis examining alternative solutions outside the flood zone or at defect in zone of less risk,
- place vulnerable and / or expensive goods and polluting products above the reference or toxic, with the exception of those that are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a Flood Safety Plan defining measures to reduce the vulnerability of the existing,
- carry out the work by reducing as much as possible the vulnerability of the entire site, with reference to *Flood Safety Plan*.

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## The creation of treatment plants, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- place the operating organs and sludge storage facilities above from the reference dimension or in a sealed enclosure,
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

## The creation of storage facilities and / or waste sorting subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of inert waste landfills including facilities and premises essential techniques subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

## The creation of networks and their associated technical equipment subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those that are watertight.

# The creation of transport infrastructure and car parks, surface parking, silos or elevations, under reserve of:

• carry out a preliminary analysis examining alternative solutions outside the zone flood risk

or, failing that, in a zone of less risk,

- take all measures to reduce the vulnerability of the structures,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- carry out a study or hydraulic expertise (to be adapted according to the project, the stakes, current and future urbanization, the level of hazard, etc., present in the sector) the minimization of impacts, both in terms of pollution and hydraulic impacts,
- comply with the requirement for large buildings (see provisions municipalities).

The creation of motorhome stops subject to placing the property above the reference vulnerable and / or expensive and polluting or toxic products, with the exception of those that are waterproof.

The installation of urban furniture, subject to anchoring in order to withstand the flood of reference.

The creation of open public halls provided that the structure is resistant to flooding, and subject to preserve its hydraulic transparency.

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The creation of buildings and structures necessary for the operation and management of a lane of water, and subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- place vulnerable and / or expensive goods and products above the reference pollutants or toxic, with the exception of those which are watertight,
- where applicable, comply with the requirement for large buildings (see common provisions),
- carry out a *Flood Safety Plan* defining the measures for joint reduction of vulnerability, hydraulic impacts and the risk of pollution of the existing,
- to carry out the work by reducing as much as possible the vulnerability and the risk of pollution of the whole site, with reference to *the Flood Safety Plan*.

The creation of dikes to protect <u>highly urbanized sites</u>, provided that the project selected will limit the hydraulic impacts upstream and downstream of the structures. Unless constrained in particular, the structures will be dimensioned to provide protection against the reference

flood.

The creation of dikes <u>outside highly urbanized areas</u>, provided that the project retained does not present significant hydraulic impacts upstream and downstream of the works on sectors urban areas and that it participates in the coherent management of an existing protection system, according to of the service in charge of the control of the hydraulic works. Unless otherwise required, works will be sized to provide at least the same protection as existing protection system.

The creation of any facility for the production of renewable energy provided that the vulnerable equipment are located above the reference dimension or are watertight and that the installation is designed to withstand the reference flood.

The creation of cemeteries, with or without columbarium, subject to:

- carry out a preliminary analysis examining alternative solutions outside the zone flood risk or, failing that, in a zone of less risk,
- carry out a study to evaluate the environment of the site notably the proximity possible point of capture (public or private) of water intended for consumption -, the impact of this implementation in terms of health risks and the measures envisaged to limit these risks.

Only in the 1, 2, 3 or 4 halftone BLUE zone, the modular building installation, kiosk or equivalent, subject to proper design and anchorage to withstand the reference flood.

<u>Only in the BLEU zone 1, 2, 3 or 4</u>, the temporary installation (fair, promotions, event punctual...) of modular construction, kiosk or equivalent, subject to impossibility demonstrated to implant it outside the flood zone or, failing that, in a zone of less risk. The duration implementation will be mentioned and justified precisely; this duration must be strictly observed (except new, duly motivated requirements). For the entire implementation period, the contracting authority will commit to evacuate the facilities immediately upon the announcement of a flood risk.

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Chapter II - 12: Technical requirements

These requirements are applicable to new constructions authorized, whatever the zone of the PPR, and strongly recommended for all other types of projects.

They are worth building rules in the sense of the code of construction and housing. The master is committed to implementing them.

They aim to reduce the importance and cost of damage and facilitate a return to normal life following a disaster.

Their non-compliance, in addition to constituting an offense, may justify non-compensation of damage caused in case of disaster (article L125-6 of the insurance code).

Building foundations must be designed to withstand scour, settling or localized erosions.

Floors and structures below the building reference must be dimensioned to withstand the hydrostatic pressures corresponding to the reference flood.

Foundations, walls, and parts of the structure below the reference dimension shall have a base waterproof to about twenty centimeters above this dimension to avoid capillary rise. Structural materials particularly sensitive to water are prohibited (binders, plasters ...) below the rating of reference.

Joinery and any building components below the reference dimension must be made in nonwater-sensitive materials (rotproof wood species, metals treated with water-repellent or anticorrosive, PVC...).

The floor and wall coverings as well as the thermal and sound insulation located below the rating of reference must be performed using non-water-sensitive materials.

Connections to technical networks (water, gas, electricity, telephone) must be placed at least 20 cm above the reference dimension, and for parts that are below this level, be made tight. Potential feeding of a building part (garage) below this level must be isolated by means of a cut-off device located above the reference dimension.

Sanitation in case of existing public network:

• the drainage outlets of the sanitary facilities must be at least 20 cm above the reference rating; below this level they may be admitted, provided they are equipped with a shutter

preventing the infiltration of water into the network in case of submersion,

• the connection to the public network must be watertight (pipe, junction box and buffer) and be equipped with a non-return device (flapper).

Individual sanitation: skeptical pits must imperatively be ballasted; a refurbishment (emptying, cleaning, disinfection) will be systematically performed after each flood.

The heating networks must be equipped with a hydrophobic thermal protection.

Sensitive equipment (boiler, domestic hot water production, elevator machinery, VMC...) are installed above the reference dimension.

For buried rainwater tanks and tanks, the emptying, cleaning and disinfection of these works after a flood are obligatory when the recovered waters are then used inside the buildings and strongly recommended for other uses. These books must imperatively be ballasted.

Tanks, and any receptacles containing pollutants, dangerous or water-sensitive (hydrocarbons, gases, liquid fertilizers, pesticides ...) must:

- be located above the reference dimension,
- be protected against the effects of the reference flood (stowage and weighting or use of a loudspeaker waterproof).

Sealing devices for openings (cofferdams) must allow protection up to one meter of water.

A gravity or pumping system is installed for floors below the reference grade.

The crawl space is designed to reduce water retention (ventilation, flat and slightly inclined ground...) or drainable. This crawl space will be untransformable. It must also be accessible either by trapdoor in the floor (0.60 mx 0.60 m), either through a side door and allow circulation over its entire surface (no partitioning, ceiling height> 1 m).

# 195 頁 TITLE III: PREVENTION, PROTECTION AND BACKUP

The regulatory obligations arising from the existence of a PPR in the municipality are recalled in the Title I (planning documents, preventive information, Municipal Plan of Protection, Document Information Center on Major Risks, Tenant Buyer Information)

The following obligations are specific to this PPR.

#### Chapter III - 1: Collective measures

#### Flood forecasting:

On the Garonne, the State organizes a device for forecasting, alerting and transmitting information on floods. These provisions are recorded in the Flood Information Regulation (RIC) of the Service de Flood Forecasting (SPC) and in the Departmental Flood Warning and Regulation (RDVIC).

On the main tributaries, it is recommended to the communes or groupings of communes to internally or externally, a flood forecast adapted to the characteristics of watersheds. These devices will be accompanied by an alert to people potentially affected by flooding.

The State is responsible for the planning and the coherence of the various existing devices (Decree 2005-28 of 12 January 2005 and Decree of 15 February 2005).

#### Maintenance of watercourses:

On the river public domain of the Garonne, the State is in charge of the maintenance work strictly essential to maintain the flow of water.

The maintenance of non-state watercourses is regularly carried out by riparian owners (in application of Article L215-14 of the Environment Code) or by trade unions or EPCIs having this competence, with the aim of avoiding the creation of ice jams. In particular the initial section of the rivers will be maintained. Proper monitoring and maintenance will be provided immediately upstream of the structures minimal structuring in the spring to ensure the free flow of water (removal of jams). The new GEMAPI competence (Aquatic Environment Management and Flood Prevention) is assigned to the communal block later than 1st January 2018.

#### Protection:

Decree 2015-526 of May 12, 2015 defines three classes of works (A, B and C). These provisions are codified in the Environmental Code (Articles L211-3III and R214-113 to 117). The monitoring and maintenance of existing dikes will be regularly carried out in application of these provisions.

The creation of dikes is reserved for urbanized areas, in application of the provisions of the SDAGE and the PGRI.

The new GEMAPI competence (Aquatic Environment Management and Flood Prevention) is assigned to the communal block later than 1st January 2018.

#### Rain runoff:

Regular monitoring and maintenance of ditches and storm drainage systems are carried out by the municipalities or the unions having this competence. Their initial section will be kept at a minimum. The provisions of the RAIP Sewerage Regulation will be implemented (infiltration and retention of rainwater).

# 196 頁 Chapter III - 2: Individual measures

#### Peoples' security:

- The *Flood Safety Plan (see Appendix 3)* includes the definition of the instructions specific to the alert, evacuation and security in case of flood. These instructions are defined in coherence with the Plan Communal Backup.

Its implementation *is obligatory (see Title IV) within 5 years from the approval of the PPR for sensitive institutions (see Annex 2) and very vulnerable (see Annex 1).* It is recommended for everything other type of activity in flood zone.

With regard to dwellings, it is recommended that individuals make a Family Plan for the implementation of Security (PFMS – *http://www.mementodumaire.net/wp-content/uploads/2012/06/Pfms.pdf*) retailer particular information on the risk of flooding and actions to be implemented in case of flood.

## Polluting or toxic products:

- **polluting or toxic products,** in particular in containers and non-fixed containers, and in particular toxic substances, substances or preparations dangerous for the environment, products which react with water and hydrocarbons, will be stored above the reference grade.

- **Tanks**, as well as any container containing polluting, dangerous or water-sensitive products (hydrocarbons, gases, liquid fertilizers, pesticides ...) must:

- be located above the reference dimension,
- be protected against the effects of the reference flood (stowage and ballast or use of a waterproof enclosure).

- In addition, in case of flood, the **objects and floating materials** will be stored above the coast of reference or attached, to limit the creation of ice jams.

# Maintenance of watercourses:

On the river public domain of the Garonne, the State is in charge of the maintenance work strictly essential to maintain the flow of water.

The maintenance of non-state watercourses is regularly carried out by riparian owners (in application of Article L215-14 of the Environment Code) or by trade unions or EPCIs having this competence, with the aim of avoiding the creation of ice jams. In particular the initial section of the rivers will be maintained. Proper monitoring and maintenance will be provided immediately upstream of the structures minimal structuring in the spring to ensure the free flow of water (removal of jams).

#### Agricultural practices:

It is recommended:

- conserve existing woods and hedges, especially at the level of ruptures of slope;

- reforest or grass slope failure areas;

- plant new hedges perpendicular to the slope;

- work the soil perpendicular to the slope whenever possible;

- rework the soil immediately after the corn harvest and do not leave a packed soil that has lost any infiltration capacity;

- generate a soil cover between the crop and the next crop;

- promote the maintenance or creation of closed soil coverings such as grasslands or the setting up of fallow;

- Seasonally use tunnels and agricultural shelters.

# 197 頁 TITLE IV: MEASURES FOR REDUCING VULNERABILITY EXISTING GOODS AND ACTIVITIES Chapter IV - 1 – Requirements

The organizations and managers listed below will be required to complete a **Safety Plan Flooding** in a **period of 5 years** from the date of approval of PPR Garonne Agen.

This measure applies even in the absence of any development or extension period.

This plan will be transmitted:

- the department prefect for the network operators,
- to the **prefect of the department as** well as **to the mayor of the municipality concerned** for the ICPE and the ERP,
- to the mayor of the municipality concerned for the other establishments.

This plan aims to define the measures to be taken to reduce the vulnerability of activities (buildings, networks, equipment, storage, exploitation...) at the risk of flooding, and to facilitate the return to normal after the flood; for the establishments listed in b- and c-, it also includes (cf III-2) instructions specific to alerting, evacuation and security in case of flood.

# Networks and constructions concerned:

# a - Strategic Network Managers (equipment required to maintain conditions normal lives and the safety of the population served):

- electricity and gas distribution networks
- drinking water distribution networks
- transport infrastructure (roads, railways, etc.)
- telecommunication facilities and networks (telephone, internet, cable, etc.)
- wastewater networks

# b - Establishments and sensitive installations: .....

- pumping stations and drinking water treatment
- wastewater treatment plants
- hotels with more than 50 rooms
- grouped or collective housing complexes of more than 50 dwellings whose manager is clearly identified
- farms subject to declaration or authorization under ICPE
- educational institutions, nursery, drop-in centers,

• companies with more than 50 employees

## c - Highly vulnerable institutions and facilities: .....

c1 - Establishments providing night accommodation for non-autonomous or mobilityimpaired persons scaled down

Among the ERP:

- boarding schools,

- institutions hosting minors with accommodation (summer camps, ...),

- care facilities with accommodation (hospitals, clinics, retirement homes medicalized...) Unclassified establishments ERP:

- penitentiary institutions

c2 - Establishments storing substances or preparations which are toxic or dangerous for the environment or reacting to contact with water, subject to this declaration or authorization according to the ICPE nomenclature

c3 - Establishments storing hydrocarbons, subject to authorization under the ICPE nomenclature

c4 - Rescue centers, except for facilities dedicated to rescue in case of flood

c5 - Campgrounds, Residential Park Leisure, holiday villages classified in light accommodations, licensed family vacation homes

The content of the Flood Safety Plan is detailed in Appendix 3

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## Chapter IV - 2 - Recommendations

IV - 2.1 Establishments and activities

It is recommended that managers of institutions or activities not mentioned in IV-1 above, carry out a Flood Safety Plan (PSI) with reference to Annex 3.

The realization of this plan is particularly appropriate in case of redevelopment or extension of buildings or activity.

## IV - 2-2 Residential buildings

It is recommended to carry out the work allowing:

- the security of the inhabitants,

- damage reduction,

- the reduction of the time of return in the dwelling.

The prevention work to be carried out will be chosen from the following:

- \* installation of temporary sealing devices (including cofferdams);
- \* permanent clogging of waterways (cracks, networks);
- \* elimination of residual waters;
- \* realization of reinforced concrete floors;
- \* repair of distribution and doubling partitions;
- \* replacement of thermal and acoustic insulators;
- \* protection of climatic engineering equipment;
- \* replacement of floor coverings;
- \* replacement of interior joinery;
- \* replacement of exterior joinery and installation of door grilles;
- \* redistribution / modification of electrical circuits;
- \* put out water distribution boards and boxes;
- \* prevention of damage to EP-EU networks;
- \* creation / development of a refuge area;
- \* prevention of damage to the oil tanks;
- \* protection of sanitary vacuum.

The work to be done will be chosen according to:

\* the hazard: it should be noted that the implementation of the first three types of work is not relevant when the water level in the event of flooding is greater than 1 meter (that is, outside the low hazard area at average) or when the duration of the flood is greater than 48 hours;

\* the objective of the prevention work (the safety of the inhabitants, the reduction of the damages; reduction of the time of return in the dwelling);

\* the context of intervention (flood prevention, post-crisis rehabilitation, improvement thermal; structural rehabilitation; upgrade to building standards; routine maintenance).

If necessary, a <u>preliminary diagnosis</u> will be made; it is possible to refer to the following documents:

- \* "Building Vulnerability Assessment Guide for Floods", DGUHC 2005 Update day in 2007;
- \* "The building facing the flood: diagnose its vulnerability", CEPRI Methodological Guide 2010 and its aide memoire on the vulnerability of the works.

The selection (with the help of a professional) of the most relevant preventive work can be

done in relying on the sheets of the <u>"Reference document for flood prevention works in the</u> habitat existing ", - METL and MEDE - 2012.

(these documents can be downloaded from the Prim-net website)

The realization of this type of work is particularly opportune during a rehabilitation project or extension.

# PPR Garonne of the Agenais Flood risk

# Annex 1

# Highly vulnerable institutions under this PPR, presenting a strong stake for public safety and sanitation

The institutions listed in this appendix are those with the strongest challenges for safety and sanitation in exceptional floods:

- $\checkmark$  or because their occupants would be exposed to particular hazards,
- $\checkmark$  either because they would be likely to mobilize important means of relief,
- ✓ because of the risks they would pose to the environment,
- ✓ either because their paralysis would compromise the organization of the relief or the return to a life normal.

The creation of such establishments is therefore prohibited by the PPR regardless of the zone. Institutions existing measures will have to take specific preventive measures as defined in Annex 3.

# 1 - Establishments providing night accommodation for non-autonomous persons or persons with reduced mobility

A - Among the ERP:

- boarding schools,
- establishments hosting minors with accommodation vacation...),
- care facilities with accommodation (hospitals, clinics, nursing homes medical retirement...).

# B - Among the non-classified ERP establishments:

• penitentiary establishments.

2 - Establishments storing substances or preparations that are toxic or dangerous for the environment or reacting on contact with water, subject as such to a declaration or authorization according to the nomenclature ICPE

3 - Establishments storing hydrocarbons, subject to authorization under the nomenclature

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#### ICPE

4 - Rescue centers, except installations dedicated to rescue in case of flood

5 - Campgrounds, Leisure Residential Park, holiday villages classified as accommodation light, approved family holiday homes

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# PPR Garonne of the Agenais Flood risk

# <u>Annex 2</u> Sensitive institutions under this PPR

1. pumping stations and drinking water treatment

2. treatment plants

- 3. hotels with more than 50 rooms
- 4. housing of more than 50 dwellings, grouped or collective, whose manager is clearly identified: creative projects and existing ensembles managed in a collective or common
- 5. non-medical residences for the elderly
- 6. farms subject to declaration or authorization under ICPE
- 7. educational institutions, nurseries, day-care centers, recreation centers, ...
- 8. companies employing more than 50 employees
- 9. care facilities without accommodation

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# PPR Garonne of the Agenais Flood risk

# Annex 3

# Guide to writing a Flood Safety Plan (PSI) prescribed by the Risk Prevention Plan (PPR) Flood Party

#### Summary

#### Scope and objectives

- a An PSI is prescribed by the PPR regulation (Titles II, III and IV)
- b The objectives of PSI
- c The links between the Municipal Protection Plan (PCS) and the flood safety plans

# First step: the inventory

- a Are the properties located in a flood zone?
- b Can people or property be submerged?
- c Summary of the information to be collected to carry out the inventory of fixtures

# Second step: the diagnosis

- a To achieve the objectives of PSI
- b What vulnerability?

# Third step: the measures to be taken to ensure the safety of persons and reduce the vulnerability of goods

- a The safety of people
  - 1 Establishments with accommodation
  - 2 The collective or group housing
  - 3 Institutions Receiving Public (ERP)
  - 4 Other establishments
- b The vulnerability of goods
  - 1. General
  - 2 Special measures concerning the vulnerable parts of buildings
  - 3 Farms
- c Communication channels and networks

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## Step Four: The organization to deal with a flood

- a Vigilance
- b Evacuation and / or closure
- c The return

# Step Five: The Action Plan

- a Record of useful information
- b Initial diagnosis
- c Organization to deal with a flood

- d Organizational measures
- e Works
- f Insurance file

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# Scope and objectives of a PSI

# a - An PSI is prescribed by the PPR regulation

Parties to the Regulation concerned:

# In Title II: On the occasion of certain projects

# In case of creation of equipment or establishment of type:

- Breeding
- Gravel pit
- Wastewater treatment plant
- Building, equipment and installation dedicated to rescue in case of flood
- Waste treatment, storage and / or sorting facility
- Inert waste landfill
- Building and works necessary for the operation of the waterway

In case of extension of existing equipment or establishment or creation of equipment or establishment by change of destination or assignment of existing buildings:

- Sensitive establishments and installations (Annex 2 of the Regulation):
  - Pumping station and drinking water treatment
  - Wastewater treatment plant
  - Hotel with more than 50 rooms
  - Housing complex of more than 50 dwellings, grouped or collective, including the manager is clearly identified
  - Non-medical residence for the elderly
  - Livestock subject to declaration or authorization under ICPE
  - Educational institution, nursery, day-care center, leisure center...
  - Company employing more than 50 employees
  - Care facility without accommodation

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- Highly vulnerable institutions and facilities (Annex 1 of the Regulation):

- Institution providing overnight accommodation for non-autonomous persons or reduced mobility

- \* Among the ERP:
- boarding schools,
- establishments hosting minors with accommodation (colonies holiday...),
- care establishments with accommodation (hospitals, clinics, nursing homes...).
- \* Unclassified ERP establishments:
- penitentiary institutions

- Institution storing toxic or dangerous substances and preparations for the environment or reacting to contact with water, subject in this respect to declaration or authorization according to the ICPE nomenclature

- Establishment storing hydrocarbons, subject to this authorization the ICPE nomenclature

- Rescue center, except for flood relief

- Campsite, Residential Park Recreation, holiday village classified in light accommodation, approved family holiday home

- Career
- Building, equipment and installation dedicated to rescue in case of flood
- Waste treatment, storage and / or sorting facility
- Inert waste landfill
- Building and works necessary for the operation of the waterway
- Concrete or asphalt mixing plant

- Livestock building

#### In Title III: Prevention, Protection, Safeguarding

For all highly vulnerable institutions (Annex 1 of the Regulation) and all sensitive institutions (Annex 2 of the Regulation) for which the elaboration of a PSI is prescribed by Titles II and

IV, the latter must define the occupant warning measures with the PCS of the municipality.

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# In Title IV: For certain existing equipment and establishments, development of the PSI in 5 years from the approval of the PPR:

# <u>Strategic Network Managers</u> (equipment needed to maintain conditions normal lives and safety of the population served):

- electricity and gas distribution networks
- drinking water distribution networks
- transport infrastructure (roads, railways...)
- telecommunication installations and networks (telephone, internet, cable, etc.)
- wastewater networks

## Establishments and sensitive facilities:

- pumping stations and drinking water treatment
- treatment plants
- hotels with more than 50 rooms
- housing complexes of more than 50 dwellings, grouped or collective, the

manager is clearly identified

- non-medical residences for the elderly
- farms subject to declaration or authorization under the ICPE
- educational institutions, nurseries, day-care centers
- companies with more than 50 people

## Highly vulnerable institutions and facilities:

- Establishments providing night accommodation for non-self-employed persons or reduced mobility

- \* Among the ERP:
- boarding schools,
- establishments hosting minors with accommodation (colonies holiday...)
- care establishments with accommodation (hospitals, clinics, nursing homes...)
- \* Unclassified ERP establishments:
- penitentiary institutions

- Establishments storing toxic or dangerous substances and preparations for the environment or reacting to contact with water, subject in this respect to declaration or authorization according to the ICPE nomenclature
- Establishments storing hydrocarbons subject to authorization under this the ICPE nomenclature
- Rescue centers, except dedicated flood relief facilities
- Campgrounds, Residential Park Recreation, classified holiday villages in light accommodation, approved family holiday homes

For all other equipment or facilities, the development of a Flood Safety Plan is strongly recommended, especially for any extension project or work on a building.

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#### b - The objectives of the PSI:

Objective 1

\* Inform the leaders and staff of an establishment of its positioning in zone to flood risk

# **Objective 2:**

\* On the existing: take advantage of work to be done (extension...) to define the measures to ensure the safety of the staff of the establishment

\* For any establishment creation: design and carry out the project in order to ensure the security of the staff of the establishment

#### Objective 3:

- \* On the existing: take advantage of work to be done (extension...) to reduce the vulnerability of the establishment (structure and activity)
- \* For any establishment creation: design and carry out the project in order to limit it to maximum vulnerability to risk (structure and activity)

According to the reason for which the ISP is prescribed (project new, extension, non-project) and the nature of activity (nature and number of persons concerned, nature of the activity carried out), these objectives will be variously developed.

#### c - The links between the Municipal Plan of Protection (PCS) and Flood Safety Plans (PSI)

The Municipal Plan of Protection (PCS), created by the law of modernization of the civil security of the 13 August 2004, must, in the municipalities covered by an approved PPR, be drawn up under the responsibility of the mayor, who holds the police powers, who is in charge of ensuring the security of the population under the conditions laid down in the general code of local authorities. To this end, it will take steps to manage the crisis and may, if necessary, appeal to the prefect representative of the state in the department.

**Flood Safety Plans (PSI)** are part of the preventive measures that a PPR can impose or recommend. Their development, which concerns a particular site, is the responsibility of owners or managers of the property concerned.

These two documents therefore do not have the same status and do not refer to the same object, however they have many things in common:

- both relate to security measures, one by collective measures to the scale of the commune, the other by more individual and localized measures;
- they are complementary and are intended to enrich one another.

It is therefore essential to ensure that both documents are compatible with each other.

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#### First step: the inventory

#### a- Are the properties located in a flood zone?

- Consult with the town hall the maps of the flood zone appearing in the Plan of Prevention of the Flood risk (PPR).
- If the properties are in a flood zone, then the development of a Safety Plan Flood makes sense.
- In the opposite case, although the site is not directly exposed, however, wondering about the consequences of an exceptional flood for the continuation of activities: travel (home-work, deliveries ...), network operations (electricity, drinking water, wastewater, roads, telephone ...). The communal plan of backup must provide useful information about it.
- Be careful: behind a dike the area remains flooded. The flood frequency is certainly weaker,

because of the presence of the structure, but the risk of rupture or submersion cannot be dismissed. This is why the PPR considers that the levels of floods are the same on both sides of the dikes.

# b- Can people or property be submerged?

- Determine the elevation of the reference flood in the area (**Highest Known Waters or PHEC**). This information can be found in the Flood Risk Prevention Plan (PPRI) available at the town hall.
- Know the altitude of the different floors, especially the floor of the first floor an existing surveyor or to be commissioned).
- Deduce the height of water above the floors where people, property vulnerable, dangerous or polluting products. Check that sensitive organs are out of water or watertight: electricity meters, appliances, tank vents fuels, ...
- Make markings or markers to visualize and memorize flood levels.

## c- Summary of the information to be collected to establish the state places:

## At the mayor:

Consult the PPR, maps (floodplain extent, elevations - NGF-elevations of the flood corresponding to the PHEC, current zones and high water depths) and note the planned in this sector by the PPR regulation.

Note the indications provided by the PCS concerning the operation of networks, electricity, water, roads...

Evaluate flood forecasting times (to be able to anticipate).

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## At the Departmental Direction of the Territories (DDT):

Hazard mapping for the reference flood (PHEC) is available in format digital (MAPINFO tables) including:

- the limit of the flood zone,
- the classes of hazards according to the height of the water and the currents,
- NGF ratings of the water level

## Within the company:

- building plan (s) or infrastructures, electrical networks, computer...

- possibly one (or several) file (s) of compensation during a previous flood,
- old photos...

# From a surveyor:

If the information is not available accurately, have a lift (in NGF meter) determine the altitude of the characteristic points: floors, appliances or equipment sensitive, product storage, access to public roads. Eventually, note the altitude (in NGF meters) of the field or in the immediate vicinity (this information is not always available).

# On the website vigicrues ( https://www.vigicrues.gouv.fr/ ):

This site makes it possible to follow the evolution of the heights of water at the Agen scale (data compared at the zero of this scale).

It is recommended to make the link with the reality of the level of the watercourse, at low water, in a "normal" situation, for a frequent flood, in order to become familiar with the meaning of these heights, and to memorize them, to facilitate an anticipation in case of more important flooding.

The site thus displays three flood levels.

# 209 頁 Second step: the diagnosis

# a - To achieve the objectives of the PSI:

Objective 1: a- Carry out a diagnosis on the flood risk (levels, flood frequencies, regulation, ...);

b- Communicate and display this information in the establishment

Objective 2: \* On the existing, staff security:

a- Make a diagnosis (number of people, addresses, responsibilities, distribution in the offices, ....)

b- Design and implement the project to reduce vulnerability for all staff of the structure

c- Write personnel management procedures, when the flood is announced, during the flood, after the flood

d- Communicate and display this information in the institution

\* For any creation of establishment, security of the personnel:

a- Design and implement the project to ensure the safety of all personnel of the structure (number of people, addresses, responsibilities, distribution in the offices....)

b- Write personnel management procedures, when the flood is announced, during the flood, after the flood

c- Communicate and display this information in the institution

#### Objective 3: \* On the existing, vulnerability of the establishment (structure and activity):

A- Structure of the frame:

a- Make a diagnosis (materials used, levels, networks....)

b- Design and implement the project to reduce vulnerability for the entire structure and not aggravate the risk for the neighborhood (materials, design)

B - Activity of the establishment:

a- Carry out a diagnosis (stored products, sensitive to water, pollutants, key stages of the activity....)

b- Design and implement the project to reduce the vulnerability for the activity (limit the period of non-activity, list the actions likely to allow a fast recovery of the activity, ...)c- Communicate and display this information in the institution

#### \* For any creation, vulnerability of the establishment (structure and activity):

#### A- Structure of the frame:

a- Design and implement the project to reduce vulnerability for the entire structure and not aggravate the risk for the neighborhood (materials used, levels, networks, design...)

B- Activity of the establishment:

a- Design and implement the project to limit the vulnerability for the activity (limit the period of non activity, list the actions likely to allow a rapid recovery of the activity, storage of products, according to their sensitivity to water, their polluting nature, etc.)
b- Communicate and display this information in the establishment

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#### b - What vulnerability?

At this stage, it is about taking the exact measure of the stakes.

• Given the level reached by the reference flood, evaluate briefly the vulnerability for:

- people: does a safe level exist and / or can we evacuate places easily before the arrival of water?
- goods: are they expensive, sensitive to water? Can we move them, raise them, protect them ? Identify sensitive equipment exposed to risk.
- polluting substances: quantities, toxicity? Can we move them, to raise, to protect them?
- buildings: are they designed to withstand floods (materials insensitive to immersion, evacuation networks equipped with anti-return devices, electrical circuits out of water ...)?
- Do the access roads allow evacuation?
- How long does it take to react? Are flood evolutions predictable? Will we have time to move to intervene?
- What may be the duration of the flood, its probability of occurrence (in the sector considered)?
- Is the site exposed to special risks leading to precautions? Reinforced?
  - risk of breakage of a dike nearby (about 100m)
  - current zone or high water level
- Check the terms of insurance contracts for the risk of flooding as well as the amount of insured property (underestimation would lead to lower compensation).

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# Third step: the measures to be taken to ensure the safety of people and reduce vulnerability of goods

a- The safety of people

#### 1 - Establishments with accommodation

**Evacuation** to a safe place before the rising water is the best solution; respect for this is the instructions of the town hall. The evacuation cannot be improvised, it must be prepared. It is necessary where to go, when to leave to make the trip safely after putting the goods in the shelter before departure and gather the most valuable papers and valuables. All this needs to

be exercised in order to assess all the difficulties and the time needed to preparation. It is prudent, moreover, in flood places occupied by people, to dispose of a **refuge** where to go easily to be protected from water (for a corresponding flood PHEC).

Keeping people on the spot, however, is only a last resort it's hard to stay in a flooded place, even out of the water, but possibly without electricity, without heating, without drinking water, without possibility to use toilet.

# In all cases, the occupants of a room must be able to signal their presence to the rescue and escape routes for safe evacuation by boat or helicopter: balcony, roof window.

Concerning **institutions housing a vulnerable public,** the lack of autonomy of the public welcomed imposes a thorough search for solutions by testing several hypotheses:

- scheduled evacuation to different secure sites defined in advance;
- On-site maintenance of occupants by ensuring their safety and the maintenance of services offered;
- mixed solution: evacuation with maintenance of a minimum service.

The means necessary to maintain a minimum or normal service must be precisely evaluated (available staff, access, network operation...). It is recommended test this scenario with the municipality (see PCS).

It is also important to check the possibility of ensuring, in all circumstances, the safety fire.

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## 2 - Institutions Receiving Public (ERP)

One of the key issues for **ERP** is to define when to close down access and evacuate the premises. This decision will preferably be taken in relation to the common (see PCS).

## 3 - The collective or group housing

For existing habitat, the main issues concern the safety of people:

- check that no housing is floodable; if this is not the case make the arrangements useful for designing safe spaces to put people at safety;
- ensure access to relief during floods;

• provide for collective evacuation measures, in conjunction with the municipality.

**For new operations** the project must, from the outset, be designed taking into account the risk of flooding. Two priorities must be sought: the safety of people and the Reducing the effects of a flood on property:

- habitable floors must imperatively be located above the coast of the flood reference ;
- the site must be evacuable; failing this, it must be accessible to help, including possible in the event of a flood corresponding to the PHECs;
- internal networks must be insensitive to floods;
- Floodable materials and equipment must be able to withstand without damage an immersion.

# 4 - Other establishments

The main challenge will be to ensure the safety of staff.

For this it will be necessary to be able to contact the staff to inform them of the possible closure of the establishment. This possible closure should be sufficiently anticipated for avoid as much as possible the movements in the flood zone.

It will also be necessary to be able to inform the deliverymen, external service providers, etc...

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#### b- The vulnerability of goods

#### 1. General

The list of properties potentially affected by a flood corresponding to the PHEC has been established at the end of the diagnosis.

It is necessary to identify in this list the goods which present a financial value, the objects fearing humidity, pollutants or goods that would complicate the return to the environment. Normal if they were damaged by flooding.

Archives, important documents (accounting, customer files...), stocks (especially of finished products) and the production tools should obviously not be neglected in this analysis.

Production companies are very vulnerable to flood risk, especially if the activity is interrupt for several months after a flood (a frequent cause of bankruptcy).

As far as possible, solutions should be sought to out of reach of water and moisture these goods <u>permanently</u>. For the goods that we cannot or we do not want to move so permanent, priority should be given to costly goods and dangerous products that will have to be moved in the event of a crisis.

The **organizational measures** are less expensive and faster to realize that perennial works; they may initially allow a good reduction of the vulnerability of the activity. However, they must be precisely defined in advance (places of possible storage, personal and necessary vehicles...) by associating the personnel who would be involved and without underestimating the time required for their implementation. This must obviously be sufficiently anticipated in case of crisis.

The following measures can be taken to reduce the vulnerability of **buildings** are proposed. However, it is not possible in this guide to develop reduction measures vulnerability specific to each type of activity or production.

Useful documentation can be found on different sites:

- www.prim.net
- www.cepri

It is recommended to establish a **list of professionals** (specialists in electricity, gas... preferably out of the flood zone) that could intervene after the crisis to repair the damage and restore the site.

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## 2 - Specific measures concerning the vulnerable parts of buildings

The aim is to adapt the premises and equipment to the flood, at the construction stage then during improvement work: raising the floors above the reference flood where possible, failing to provide a refuge level out of water, replacement of vulnerable materials by their waterrepellent equivalents, adaptation of electrical networks and sanitation, etc ... A construction professional can make a diagnosis and estimate the cost of the work.

#### • Wastewater evacuations:

After a diagnosis of the installation and consultation of the local supply dealer and water treatment, install a check valve at the outlets of the evacuations wastewater (blackwater, greywater) to prevent the return of these waters within the building.

#### • Walls:

Some materials do not resist immersion such as non-gypsum board water repellents or water-absorbing thermal insulation products. It is important to do suitable choices, during construction or during major repairs, for the parties below the highest water level.

#### • Floor and wall coverings:

Avoid vulnerable materials (carpet, PVC, floating floors). The tiles and the *traditional parquet floors* are preferred on the ground. On walls, paints and coatings plastics are difficult to remove which complicates the drying of the partitions; the papers the advantage of being easy to peel off, to allow faster drying walls.

# • Openings, joinery:

Joineries can suffer deformations or even in some cases a rupture by the force of water. The choice of materials is essential: PVC, aluminum, treated steel. Provide foam or rubber joints. Do not neglect baseboards. Privilege manual or electric disengaged controls for garage doors and shutters rolling. Depending on the case, it is also possible to set up cofferdams (to limit the penetration of water into the building) or door grilles (to avoid intrusions).

Caution on cofferdams: the obstruction of the openings of a building must be limited to low water levels. Beyond a meter, the pressures exerted on the walls may rupture and collapse.

#### • Electrical installations:

The electricity grid is a passage for water during the flood, but also constitutes a place where water and moisture can stay. The control cabinet must be installed above the level of the Highest Known Waters (PHEC) and electrical conduits follow a descending path from the ceiling to the ground so as to favor the flow of water in case of flood. The outlets can be put back to a height compatible with their setting out of water and with normal use (in cases currents a height of 1m 20). It will also be possible to install a divisional security specific to the floodable portion of the power grid.

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#### • Heating:

After a flood, the heating equipment needs to be restored as a priority because they

largely contribute to the drying of buildings. Check the stowage of fuel tanks and gas, gas cylinders and any object likely to be carried away by water as well as that the out of water parts of the tanks in communication with the air. Move the generators, the boiler in parts deemed out of water or at least in height but permanently. Electric heat emitters are very vulnerable to the water. We will privilege the connection of the radiators by adapted sockets. The taken will be placed as high as possible. The radiators will be easily removable to be moved to a storage area out of water. In risk areas, forbid integrated heating systems whose resistors are buried.

#### • Polluting or dangerous substances:

Fuel oil that spreads in a building, including a home, can lead to demolition (impossible to clean). One tank can damage many houses and make the soil permanently unsuitable for any crop. It is therefore essential to prevent these dangerous products (fuels, household products, fertilizers, paints, toxic waste ....) to aggravate the consequences of the flood. The solutions consist, first, to avoid the storage of these products in a flood zone. If not, their storage must be made permanently above the level of the highest known waters or in perfectly sealed and irremovable speakers.

#### 3 - Farms

The remoteness of the different sites of a holding constitutes a handicap which cannot be overcome by making permanent arrangements to reduce vulnerability: livestock, pollutants and vulnerable goods, transfer of the headquarters of the exploitation outside the flood zone. All these measures must be considered and each creation or building layout should be an opportunity to look for solutions to preserve flood risk.

#### C - Communication channels and networks

The law of 13 August 2004 (modernization of civil security) requires service providers intended for the public (sanitation, production or distribution of water, electricity, gas, electronic communications) to provide the measures necessary to maintain the satisfaction priority needs of the population during crisis situations.

The implementing decree of 28 September 2007 specifies that they must in particular take all measures to protect their facilities against foreseeable risks and develop an internal plan crisis which, among other things, makes it possible to mitigate the most serious consequences of failures installations.

The neutralization of various public services such as roads, electricity supply, sanitation, telephone..., contributes to the aggravation of the crisis during floods. It is therefore necessary for network operators to achieve:

- a diagnosis of network operation in the event of floods, diagnosis to be communicated authorities in charge of security to take into account in the organization of plans rescue;
- finding solutions to reduce the vulnerability of the network or its adaptation for allow its use during floods;
- an action plan to restore the operation of the service as quickly as possible after the flood.

The telecommunication network is necessary especially for the exchange of information between the flood warning service, the prefecture, the emergency services, ...

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For sensitive or priority networks, the identification of floodplains, classified by ascending order according to their submersion rating, may form the basis of actions whose flow is defined beforehand.

The delegating public authority and the network operators must define from which period of flood return there will be a beginning of network failure, identifying the territories, populations and related issues.

The continuity of the service will be ensured as much as possible by using means of substitution (use of generators, mesh networks...).

The ISP should be established taking into account the measures envisaged by the managers of the other networks on which they depend (e.g.: power supply for water abstraction)

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# Fourth step: the organization to do facing a flood

It breaks down into 3 stages that must be prepared:

- vigilance,
- evacuation and / or closure,
- the return.

## a - Vigilance

The announcement of a rise in water is the trigger for operational implementation plan. This period is mainly devoted to monitoring the evolution of the flood. Do not hesitate to go to information with:

- the interlocutors such as the town hall,
- the website of vigilance raw, to consult regularly (www.vigicrues.gouv.fr),
- the answering machine or the information voice server,
- media (radios, ...).

This period of vigilance is essential because decisions with far-reaching consequences are likely to be taken during this one. It is important to avoid putting actions in place for nothing, or worse to fall behind in their implementation.

At the end of this period it will be necessary either to return to the normal state if the recession begins, or to take the decision to start preparations before evacuation if the rising waters continue.

It is dangerous to move in flooded areas, most of the victims were surprised by the waters while driving. It is therefore not necessary to travel with the assurance of being able to do so safely and strictly respecting the instructions of the authorities.

This shows that all arrangements must be made, cold, to avoid a Hazardous movement when a threat of flood occurs: permanent out of water people, sensitive equipment, pollutants and vulnerable goods or expensive...

#### b - Evacuation and / or closure

It is necessary at this stage to prepare to leave. The rising waters are confirmed and the hypothesis of a flood of the sector cannot be dismissed. Without delay, the sheltering of persons and property must be organized in accordance with a previously developed scenario the object of repetitions (the preparation time is therefore evaluated). Time management is essential to avoid being surprised by the arrival of the flood. While remaining attentive to the evolution of the flood and the instructions given by the town hall, it is necessary to proceed with the various operations prior to evacuation and / or closure, in the order of priority that has been defined.

The evacuation must be done imperatively as soon as the order is given by the authorities (town

hall, prefecture, emergency services). It is highly recommended as soon as the town hall informs of a possible evacuation need and can be anticipated. However, in this case, care must be taken not to evacuate without warning the municipality.

#### Respect the current instructions of the authorities (itineraries in particular).

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#### c - The return

Like the evacuation phase, the time of return has **many dangers** that it is imperative to take into account:

- Drowning in holes, explosion due to a gas leak, collapse of the walls, plastering, floors, hanging furniture, falling on slippery floors, products pollutants, epidemic, electrocution...

- Flood water represents a very serious health hazard. She may have gone through a sewage treatment plant, a slurry tank, sewers..., have carried animals dead ...

The return to the premises to see any damage must be done after receiving official authorization from local authorities.

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#### Step Five: The Action Plan

Following the four previous steps, a list of the arrangements to be made and the work to be done can be established. The purpose of the action plan is to set **realistic priorities** and to organize **different scenarios** to be ready in case of major flood.

The action plan may in particular provide, inter alia, for measures to:

- to define an internal crisis management plan aimed at organizing the alert, the rescue and the technical and human resources internal and external to this management (to be established at from the elements contained in the Municipal Plan of Backup),
- to evacuate and / or shelter people, creating if necessary a refuge area;
- to prevent the floating of objects and to limit pollution (putting out of water or stowage of tanks of hydrocarbons, light constructions, ...);
- to secure and guarantee as much as possible the supply of fluids and energy;
- to decide on organizational measures to reduce the vulnerability of the establishment;
- to define the work to reduce the vulnerability of the activity and buildings, with a technical and economic description of the proposed measures and a justification for the choice of

selected measures;

- formalize a timetable for implementing the planned actions;
- to deploy a communication and awareness plan aimed at informing the staff and possibly the public of the risk and the provisions foreseen in the crisis management plan (For example, the communication plan may include the setting up of posters with safety instructions, staff awareness actions, exercises evacuation, ...).

It will include in particular, in addition to the elements indicated in the preceding paragraphs: the **identification of the actors and their respective roles**, the inventory of the intervention material and available substitution, the necessary interventions to restore the service or activity.

It will also be appropriate to include **exercises** to implement the measures organization of the action plan.

It can usefully be formalized by a **set of cards**, which should be <u>regularly updated day</u>, <u>known</u> and accessible by all actors involved in their implementation.

# a - Record of useful information

Non-exhaustive list of useful information, some of which are only available when the stream is the subject of a flood announcement:

- phone number of the town hall
- official radio capable of broadcasting reliable information
- flood forecast service site (vigicrue)
- site of the services of the State (prefecture, DDT, ...)
- emergency services phone
- reference flood scale; height of the main historical floods on this scale

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# b - Initial diagnosis

The information collected during the diagnosis and specific to the establishment:

- situation with respect to the flood zone
- Flood elevations corresponding to PHECs and different floors
- water heights above floors and natural terrain
- flood sensitive equipment
- cut access roads

- instructions provided by the Municipal Protection Plan
- flood forecasting times
- presence of a refuge zone (out of water) in the premises
- exposed people and property in the event of floods corresponding to PHECs
- situation with regard to insurance

### c - Organization to deal with a flood

The "who does what" during:

- the period of vigilance: careful monitoring of the flood, to be ready,
- the preparation then the evacuation and / or the closing: gather the different useful kits for the future, safeguarding measures to be taken, elevation of goods, organization of evacuation,
- the organization of the return: the alternative accommodation, the approaches with the insurances, Refurbishment.

This part of the document as well as the following (d) must be particularly easy to access.

#### d - Organizational measures

# Make a list of the actions to be carried out and an order of priority.

The necessary means, human and material, must be precisely defined; the time to put implementation of each action should not be underestimated.

# e - Works

# Draw up a list of work to be done and an order of priority. Each modification important building must be an opportunity to reduce vulnerability:

- creation / development of a refuge area, displacement of vulnerable equipment, waterproof protections, replacement of water-sensitive materials, installation of valves, etc.

## f - Insurance file

Make the diagnosis of the different contracts: check that they are adapted and that the amount of the goods assured is the reality (any underestimation leads to a reduction in the same proportions).

Gather all the parts which, in case of disaster, are necessary for the compensation.

# PPR Garonne of the Agenais Flood risk

#### Annex 4

#### Advice sheet for bank stability and for plantations

#### A- Stability of the banks:

Even if it is not regulated by this PPR, bank instability is a phenomenon that can cause major disorders. For preventive and / or curative purposes to avoid any aggravation, it is advised of:

• <u>Monitor the eventual evolution of phenomena.</u> Particular attention should be paid to instability indices:

- \* Appearance or evolution of a flow on the slope of the bank;
- \* Appearance or evolution of a depression at the head of the bank;
- \* Cracking of land or buildings.

• <u>Regularly maintain riparian vegetation (stream edge vegetation)</u>. The latter plays an essential role in maintaining the banks by protecting them from erosion and stabilizing them face different processes involved. Its good maintenance allows a better stabilization of the banks. It also requires a judicious choice of species to be implanted during a possible landscaping (prefer species with a dense root system, guarantee of a better stabilization ...), as well as their position within the bank (avoid to plant large trees easily uprooted at the head of the bank for example; the poplars and acacias are to be proscribed because of their root system mapping). Use phytosanitary products are forbidden on the banks of rivers.

In particular, following a flood, special attention will be paid to the removal of possible ice jams.

#### • Regularly monitor the networks (to ensure proper operation and tightness).

These measures can also usefully be implemented on the banks of the tributaries of the Garonne, on the whole of the line beyond the confluence zone.

B- Plantations (Source SMEAG):

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In some bare areas, it may be desirable to plant to improve shoreline stability of the banks, quality of the landscape and the natural environment.

Native species adapted to the ecological conditions of the site are preferred. Certain species must necessarily be avoided: species destabilizing the banks, acidifying the waters and especially invasive species competing with native species.

Tree species and shrubs adapted to the banks of the Garonne		
Position	Trees	Shrubs
Slope and bank top	Pedunculate and pubescent oak	Hazel
	White willow (behind the slope)	Blackthorn
	Cherry	Privet
	Charm	Viburnum
	Lime	Charcoal
	Country maple	Purulent Nerprun
	Common ash (fraxinus excelsior)	Dogwood
	and oxyphyl	Hawthorn
	(Angustifolia)	Black elderberry
	Alder glutinous (Alnus glutinosa)	Willow shrubs: willow marsault,
	Field elm and smooth	willow willow, willow headsets
	Walnut	
Foot of bank	Goat willow	Shrub willow: draped willow,
	Glutinous alder (= vergne)	purple willow

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## Choose your plants:

It is recommended to choose bare-rooted seedlings so that they can best adapt to their new medium and quickly develop deep roots.

## Technical recommendations

Each plant is put in place using hand tools by opening a hole approximately 30 x 30 x 30 cm in which his root hair, resized if necessary, is arranged then covered with earth moderately packed forming a slight bowl. The neck of the plant should never be buried and its part must be erected vertically. The praline of the roots is desirable, watering is imperative. The plants will be protected from game and rodents (stakes and sheaths, especially for trees

shrubs are more resistant to grazing).

The plants will be planted in areas favorable to their recovery: avoid too draining places or very stony for example.

# Other plantations

On low areas forming frequently flooded benches, another set of type of vegetation: helophyte plants. They are low plants, adapted to frequent floods. These are water irises, phragmites (small reeds), baldinger (Phalrais), rushes, fescue nutmeg (cyperus) or sedges.

Unwanted species on the banks Trees and shrubs		
	specific stands and prevents the arrival of herbaceous	
	plants.	
Maple negundo	Naturalized tree forming stands mono-specific to the	
	detriment of the species native of the riverine.	
Ailante (varnish from Japan)	Escaped species from the parks, too invasive than	
	Robinia. To forbid.	
Resinous	Often unstable, their needles acidify the water.	
Hybrid poplars (except	Very colonizing and unstable, except native black	
black poplar)	poplars. To plant indented.	
Buddléia or tree to butterfly	Shrub escaped from the gardens, very invasive, do not	
	plant.	
	Herbaceous plants	
Bamboos	Bamboos smother the other essences and develop a	
	network of rhyzomes that does not do not stabilize the	
	banks. To forbid.	
Cane of provence	Kind of big reed that invades the banks in a way	
	comparable to bamboo.	
Knotty of Japan	This very invasive species is very difficult to eradicate	
	and eliminate all other vegetation.	
And also: Pampas grass, Ameri	can grape (or Judea vine, poisonous), Cape Senegal, Balsam	
of the Himalayas.		

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