

ARTICLE 6

RESOURCE PROTECTION STANDARDS

Table of Contents

Article History		3
SECTION 6.01	PURPOSE	4
SECTION 6.02	WETLANDS	4
6.02.01	Purpose and Intent	4
6.02.02	Applicability and Requirements	4
6.02.03	Exemptions	5
SECTION 6.03	WATERFRONT DEVELOPMENT	7
6.03.01	Purpose and Intent	7
6.03.02	Applicability and Definitions	7
6.03.03	Surface Water Protection Requirements	8
SECTION 6.04	HABITAT OF ENDANGERED OR THREATENED SPECIES	12
6.04.01	Habitat Protection and Density Bonuses	12
6.04.02	Endangered Species, Threatened Species, or Species of Special Concern	12
6.04.03	Manatee Protection Plan	12
6.04.04	Development adjacent to Ocala National Forest, Greenways and other wildlife or resource conservation and preservation areas	12
SECTION 6.05	FLOOD HAZARD MANAGEMENT AND FLOODPLAIN PROTECTION	13
6.05.01	Title	13
6.05.02	Scope	13
6.05.03	Intent	13
6.05.04	Coordination with the <i>Florida Building Code</i>	14
6.05.05	Warning	14
6.05.06	Disclaimer of Liability	14
6.05.07	APPLICABILITY	14
6.05.08	DUTIES AND POWERS OF THE FLOODPLAIN ADMINISTRATOR	16
6.05.09	PERMITS	19
6.05.10	SITE PLANS AND CONSTRUCTION DOCUMENTS	21
6.05.11	INSPECTIONS	23
6.05.12	VARIANCES AND APPEALS	24
6.05.13	VIOLATIONS	27
6.05.14	DEFINITIONS	27
6.05.15	BUILDINGS AND STRUCTURES	33
6.05.16	SUBDIVISIONS	34
6.05.17	SITE IMPROVEMENTS, UTILITIES AND LIMITATIONS	35

6.05.18	MANUFACTURED HOMES	36
6.05.19	RECREATIONAL VEHICLES AND PARK TRAILERS	37
6.05.20	TANKS	38
6.05.21	OTHER DEVELOPMENT	39
SECTION 6.06	POTABLE WATER WELL FIELD PROTECTION	39
6.06.01	Purpose and Intent	39
6.06.02	Establishment of Well Field Protection Zone	40
6.06.03	Development Restrictions within the Well Field Protection Zone	40
SECTION 6.07	GROUNDWATER RECHARGE AREAS	44
6.07.01	Purpose and Intent	44
6.07.02	Applicability	44
6.07.03	Establishment of Aquifer Protection Zone	44
6.07.04	Development Restrictions within the Zone of Protection:	45
6.07.05	Development Approval	46
6.07.06	Exemptions	46
APPENDIX VI		47
TABLES		48
TABLE 6.1	MEANDERED WATER BODIES	49
TABLE 6.2	FLOODWAY DATA FOR PUTNAM COUNTY	50
MAPS		59
Map 1	Wetlands	60
Map 2	Lands of Interest	61
Map 3	Floodplain	62
Map 4	wellheads	63
Map 5	Floridan Aquifer Recharge Areas	64

Article History								
Article	Description	Adoption of Entire Article	Adoption of Sections	Date of Adoption	Date Filed	Effective Date	Date of Repeal	Ordinance No.
6	Resource Protection Standards	XX		02/12/02	03/14/02	03/14/02		2002-06
6	Septage Spreading			12/14/04	12/19/04	01/03/05		2004-37
6	Amendment Flood Hazard Management		6.05	09/11/07	09/18/07	09/18/07		2007-24A
6	FIRM		6.05	12/13/11	12/16/11	12/16/11		2011-31
6	Flood Hazard Management Protection		6.05	08/27/13	09/02/13	08/27/13		2013-16
6	Wetlands		6.02 thru 6.07	09/24/13	09/26/13	09/24/13		2013-24
6	Define Modular Homes & Elevation Requirements		6.05.14.4 6.05.15.2	7/25/2017				2017-19
6	Requires Frames of Manufactured homes placed, replaced or substantially improved to be above the Base Flood Elevation		6.05.18.05 6.05.18.06	12/11/2018				2018-28

**ARTICLE 6
RESOURCE PROTECTION STANDARDS**

SECTION 6.01 PURPOSE

The purpose of this Article is to implement the resource protection requirements of the Putnam County Comprehensive Plan. Additional resource protection standards shall be provided in Article 7 of this Code in the sections governing storm water management and sewage disposal. This Article is intended to protect resources identified as important to the public health, safety and welfare by establishing areas of a development site that must be protected from harmful effects of development. A developer should apply the provisions of this Article to a proposed development site before any other development design work is done. Application of the provisions of this Article will divide a proposed development site into areas that may be developed and areas that must generally be left free of development activity. The proposed development should then be designed to fit within the areas that may be developed. The setbacks and buffers required by this Article are meant to work in concert with standard zoning district setback and buffering requirements, and where the resource protection standards differ from the zoning district requirements with regard to setbacks and buffers, the more restrictive standards (i.e. larger setback) shall apply.

SECTION 6.02 WETLANDS

6.02.01 -- Purpose and Intent

It is the purpose and intent of this Section to provide for the protection, maintenance, enhancement and utilization of wetlands within Putnam County in accordance with the adopted Putnam County Comprehensive Plan, while recognizing the rights of individual property owners to use their lands in a reasonable manner, as well as the importance of wetland ecosystems to flood control, waste assimilation, water purification and recharge, and wildlife habitat and the rights of all citizens to protect Putnam County's wetland ecosystems to insure that they serve these needed functions. Nothing within Section 6.02 replaces or supersedes the jurisdiction and regulations of the Florida Department of Environmental Protection ("DEP"), the St. John's River Water Management District ("SJRWMD") or the Suwannee River Water Management District ("SRWMD"). Property owners are responsible for obtaining appropriate permits from these agencies, where required.

6.02.02 -- Applicability and Requirements

Development of any property in a wetland or within twenty-five (25) feet of a wetland shall be subject to the following:

- a. Wetland impacts shall first be avoided to the maximum extent possible. Structures and other site improvements, including accessory uses, shall be setback at least 25 feet from these wetlands, except for those uses described in section 6.02.03 of this Code.

- b. Proposed developments shall establish a 25-foot buffer of native vegetation adjacent to wetlands to provide filtration of storm water pollutants. In addition, if the development is or will be serviced by an onsite septic system, it must comply with the requirements of the Florida Department of Health or the Florida Department of Environmental Protection (FDEP), as applicable.
- c. Where a wetland is adjacent to or an integral part of a water body as described section 6.03 of this code, then the more restrictive provisions of either 6.02 or 6.03, including setback and buffering requirements, shall apply. For example, development of a property with wetlands adjacent to a water body will be required to meet the 50-foot setback requirements in Section 6.03; however, if the adjacent wetlands extend 50 or more feet from the water body, the minimum 25-foot wetland buffering requirements in paragraphs a and b of this subsection shall still apply, and the development will be set back 75 or more feet from the water body.
- d. All applicable state and federal regulations for wetland permitting and mitigation must be met.
- e. Transfer of density from wetlands to the upland portion of a site shall be permitted through approval of an appropriate Planned Unit Development (PUD) application or an appropriate Article10 development agreement and by establishing flexibility in the lot area requirements in the various zoning districts established in this Code in order to insure that development occurs outside of the wetlands and the 25-foot buffer. The wetland area will be included in calculating the gross density applicable to a property.
- f. Wetland protection shall be considered when the County evaluates a variance request for a setback modification that would move development away from wetlands.
- g. When creating a new parcel or subdividing or cutting out a portion of an existing parcel, each newly created lot or parcel shall contain sufficient uplands to allow the property to be developed under the existing zoning without encroachment on the wetlands or the 25 foot buffer and without need of a variance. Transfer of density from the wetlands to uplands, in accordance with paragraph e above, may be allowed in order to permit the creation of new parcels or lots that, except for the presence of wetlands, are permissible under this Code.

6.02.03 -- Exemptions

- a. Activities that may be exempted from this Section are as follows:
 - 1. Residential lots of record existing on or before the adoption of the comprehensive plan on December 19, 1991 at 5:00 p.m. which do not contain sufficient uplands or area to permit development of a residence without encroaching into wetlands, or the required 50-foot or 25-foot vegetated buffers, may be developed with one residential dwelling. Encroachments into wetlands or buffer areas pursuant to this section shall be minimized.

2. Resource-based recreational facilities such as trails, boardwalks, piers, and boat ramps.
 3. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shell fishing operations.
 4. General Agriculture consistent with State and Federal law and following currently accepted best management practices.
 5. Silviculture consistent with State and Federal law and following currently accepted best management practices.
 6. Essential public services, as those are defined in section 6.03.03 below.
 7. Any emergency activity that is immediately necessary for the protection and preservation of life or property or for the protection or preservation of a natural resource.
 - (a) Within three (3) days after the commencement of an emergency activity which otherwise would be treated as a regulated activity under this Section, the person chiefly responsible for undertaking such emergency activity shall send a written statement to the Department of Public Works generally describing the actions taken and setting forth the pertinent facts regarding the nature of the emergency, including an explanation of the life, property or resource such activity was designed to protect or preserve.
 - (b) Within three (3) days of receiving notice of the emergency activity, the Public Works Director shall make a written determination regarding whether the activity was the result of an emergency or, where it is determined that the impacted wetlands fall within the jurisdiction of the FDEP or SJRWMD, advise the appropriate State agency of the action in writing.
 - (c) Should the Public Works Director determine that the activity taken on wetlands under the County jurisdiction and such actions were not the result of an emergency situation, the person undertaking the activity may be subject to an enforcement action under this Code, and the Public Works Director shall report the activity to the appropriate state and federal agencies. Where the Public Works Director determines that there was an emergency situation, he may require the property owner to mitigate some or all of the wetland impacts.
- b. Additional activities that may be exempted from this Section are set forth in paragraphs 1 through 4 below. However, where the exemptions identified in paragraphs 1 through 4 are based on acreage or size thresholds, they shall not apply and are expressly omitted as exceptions to this Code:

1. All activity exempt from regulation by the FDEP under Chapter 403, Florida Statutes, including any applicable agency rules.
 2. All activity exempt from regulation by the USACOE as authorized by section 404, Clean Water Act or Section 10, River and Harbor Act.
 3. All activity exempt from regulation by the St. Johns River Water Management District pursuant to Rule 40C-4, Florida Administrative Code.
 4. All activity exempt from regulation by the Suwannee River Water Management District pursuant to Rule 40B-4, Florida Administrative Code.
- c. All exceptions in this Section are allowed only when the proposed use is otherwise permissible under all other applicable laws and ordinances of this County; site characteristics are such that wetland impacts cannot be avoided; the impacts are limited to the minimum necessary to allow the permitted use of the property; and the site development or use complies with FDEP, USACOE, Florida Department of Health and any applicable Water Management District regulations for permitting and mitigation.

SECTION 6.03 WATERFRONT DEVELOPMENT

6.03.01 -- Purpose and Intent

In order to maintain surface water quality and reduce nutrient loading in lakes, rivers, creeks, streams and estuaries (hereinafter referred to collectively as “water body”), this Section is enacted as a measure to protect the public health and welfare by requiring that new structures be setback a reasonable distance from surface waters, and by requiring retention of vegetated shorelines.

6.03.02 -- Applicability and Definitions

The regulations set forth in this Section, shall apply to all water bodies within the unincorporated areas of Putnam County, Florida. For purposes of this Section:

- a. Shoreline means the land or water along the edge of a body of water that is 50 feet upland from the ordinary high-water line.
- b. Shoreline Vegetation means vegetation that grows within the shoreline area; included are terrestrial and aquatic plants associated with wetlands and both emergent (plants growing above the water surface) and non-emergent (vegetation below the water surface).
- c. Water body is defined to include rivers, lakes, creeks or pond beds and any other permanently or historically water-covered land that occurs naturally at the intended site,

up to the mean high water level. Maintained drainage ditches and retention ponds are not considered water bodies.

6.03.03 -- Surface Water Protection Requirements

All development within 500 feet of the Ordinary High Water Line (OHWL) of a water body shall comply with the following requirements:

- a. Lots that are created after December 19, 1991 that are adjacent to a water body must have at a minimum 100 feet of frontage along the water body in order to be eligible for permits. Lots created before December 19, 1991, shall meet the requirements of the applicable laws and ordinances at the time of creation.
- b. New waterfront development shall be reviewed to insure that they do not degrade ambient water quality of adjacent waters. The developer or property owner shall submit his proposed development to Putnam County Public Works for review and approval of the storm water management plans prior to issuance of any building permits.
- c. Where the development includes an on-site sewage system, such as a septic tank, the system must meet the design standards set forth by the Florida Department of Health or the Florida Department of Environmental Protection (FDEP), as applicable, and the following criteria:
 1. The system shall be set back a minimum of 100 feet from the mean or ordinary high water line.
 2. The wall of a retaining dam of any effluent ponds must be at least three (3) feet in elevation above the mean high water mark. Subject to approval by the Florida Department of Environmental Protection ("FDEP"), exceptions may be made upon the recommendation of the Putnam County Public Works Department and approval of the Board of County Commissioners. Effluent ponds shall be prohibited in an area of special flood hazard except as provided in Section 6.05 below.
 3. It shall be unlawful for any person, firm, corporation or utility to allow raw or treated sewage to be discharged directly into a water body or a tributary connected to such water body. No permits shall be issued that will allow such discharge to occur unless authorized by the Florida Department of Environmental Protection (FDEP).
- d. Structures, including accessory structures, shall be set back a minimum of fifty (50) feet from the water body, and a vegetated upland buffer or filter using native plants shall be preserved, restored or installed for any waterfront development. The buffer strip shall provide for sheet flow of the surface runoff, and shall be a minimum of 50 feet in width, except as follows:

1. 15 feet in areas of less than four and one-half percent slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.
2. 25 feet in areas of four and one-half percent or greater slope where the vegetation is ground cover species or mixed woody (trees and shrubs) and ground cover species.
3. 30 feet in areas of less than four and one-half percent slope where the vegetation is only woody species (trees and shrubs).
4. 50 feet in areas of four and one-half percent or greater slope where the vegetation is only woody species (trees and shrubs).

Where there are associated wetlands, the 25-foot vegetative buffer requirements of section 6.02.02.b shall apply.

- e. Underground storage tanks are prohibited within 100 feet of the mean or ordinary water line and the installation of aboveground or belowground storage tanks within 500 feet of a water body must be approved by the Florida Department of Health or the Florida Department of Environmental Protection, as applicable.
- f. Except for those uses described in paragraphs 1 through 5 below, no development activity shall be undertaken within buffers required by this Section 6.03. The uses described in paragraphs 1 through 5 below will be allowed only when the proposed use is otherwise permitted under all other applicable laws and ordinances of this County; when the site characteristics are such that impacts cannot be avoided; and when the impacts are limited to the minimum necessary to allow the permitted use of the property. Any permit issued shall be conditioned upon compliance with any applicable State and/or Federal permitting requirements.
 1. Resource-based recreational facilities such as trails, boardwalks, piers and boat ramps.
 2. Water dependent components of commercial development such as port facilities, marinas, fish camps, and commercial fishing and shell fishing operations.
 3. General Agriculture consistent with State and Federal law and following currently accepted best management practices.
 4. Silviculture consistent with State and Federal law and following currently accepted best management practices.

5. Essential public services, which includes the following:
 - (a) Emergency repairs on public or private projects necessary for the preservation of life, health, or property where taken to implement and accomplish the beneficial purposes of this Section.
 - (b) Maintenance of public or privately owned portions of a structural storm water or drainage control system that does not constitute major construction or rebuilding.
 - (c) Activities undertaken by Federal, State, Regional and Local agencies of government.
 - (d) Utility crossings.
 - (e) Mosquito control activities performed by the State or the County.
 - (f) Scenic, historic, wildlife, or scientific preserves.
 - (g) Developing a "Wetlands Storm Water Discharge Facility" or "Treatment Wetland" in accordance with state permits received under Chapter 62-25, Florida Administrative Code.
- g. Minimization of Impacts: Activities that are allowed in the shoreline buffers required by this Section shall be designed, constructed, maintained and undertaken in a way that minimizes the adverse effects on the beneficial functions of the affected shoreline protection zone.
- h. Design Standards for Water Dependent Uses. In addition to any other applicable design standards, uses that can be carried out only on, in or adjacent to water bodies shall be subject to the following:
 1. Marinas, fish camps, ports, commercial docks or moorings and other appropriate water dependent uses (hereinafter collectively referred to as "marinas") shall post the following signs where they are readily visible to all users of the development:
 - (a) Regulations pertaining to handling and disposal of waste, sewage, or toxic materials.
 - (b) Regulations prohibiting the use of vessel toilets while moored unless these toilets are self-contained or have an approved treatment device.
 - (c) Regulations prohibiting the disposal of fish or shellfish cleaning wastes, scrap-fish, viscera, or unused bait in or near the development.

- (d) Appropriate messages relating to local ecological concerns, e.g., manatee protection.
2. A marina shall include public boat launch facilities unless the applicant can demonstrate that providing such facilities is not feasible or it is determined by the County that the ramp would be excessively damaging to the aquatic environment.
The intent of this requirement is to combine destructive activities to a minimal number of sites along the shoreline. Providing a boat ramp at the already-disturbed marina site may be preferable to disturbing another site along the shoreline to provide the ramp.
 3. Marinas shall have adequate rest-room facilities in compliance with Florida Department of Health regulations.
 4. Adequate garbage receptacles shall be provided and maintained by the marina operator at several locations convenient to users.
 5. Any dredging shall be conducted at times of minimum biological activity to avoid fish migration and spawning, and other cycles and activities of wildlife.
 6. If dredging changes the littoral drift processes and causes adjacent shores to erode, the developer shall periodically replenish these shores with the appropriate quantity and quality of aggregate in accordance with appropriate permits obtained from federal, state or regional levels of government.
 7. Where wet moorage is offered for boats that have on-board sewage holding facilities or where other recreational vehicles (RVs) are allowed to stay overnight, then the developer or owner of the moorage or RV sites shall provide pump-out, holding, or treatment facilities for sewage and other wastes, including bilge, contained on vessels and vehicles. The facilities shall be conveniently available to all vessels and vehicles.
- i. Limitations on Clearing:
1. When applying for a building permit, a property owner who desires to clear more than twenty-five (25) feet or twenty five percent (25%) of shoreline must demonstrate compliance with all other setback and buffering requirements of this section. Any permit issued shall be conditioned upon compliance with any applicable State and/or Federal permitting requirements.
 2. A property owner whose shoreline was cleared prior to the adoption of this code in accordance with federal, state and local regulations existing prior to the adoption of this code may not need to obtain a permit as required by this subsection, if the clearing is continuously maintained.

SECTION 6.04 HABITAT OF ENDANGERED OR THREATENED SPECIES

6.04.01 -- Habitat Protection and Density Bonuses

Impacts to habitat of endangered or threatened species shall first be avoided and disturbance of such habitats shall not be allowed where an otherwise permissible development can occur without impacting such habitat.

- a. The County may require transfer of densities in order to prevent or minimize a development's impacts to habitat of endangered or threatened species.
- b. Developments that result in the protection of significant wildlife habitat and vegetative communities that warrant protection shall be eligible for density bonuses in accordance with the requirements contained in Article 7 of this Code.
- c. Protection of habitat for endangered and threatened species shall be considered when the County evaluates a variance request for a setback modification that would move development away from the habitat.

6.04.02 – Endangered Species, Threatened Species, or Species of Special Concern

Future development of property in Putnam County known to serve as a habitat for plant or animal species listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC), Florida Department of Environmental Protection, or the Florida Department of Agriculture as endangered, threatened or as species of special concern, shall comply with the management and permitting criteria of the USFWS and the FFWCC.

6.04.03 -- Manatee Protection Plan

The County shall post informational signage regarding manatees at all county owned and maintained public boat ramps.

6.04.04 -- Development adjacent to Ocala National Forest, Greenways and other wildlife or resource conservation and preservation areas

In the process of reviewing site plans, the County shall assess the compatibility of land use activities and development on parcels adjacent to the Ocala National Forest, established greenways, as well as other wildlife management areas, state or private preserves or other Federal, State or local natural resource protection, conservation and environmentally sensitive areas and conservation easements. The County may require additional buffering and setbacks between the proposed use and the protected area. In establishing such buffering, the reviewing board or Staff member will look at the nature and quality of the protected area; the type of use (i.e. residential, agricultural, commercial, industrial, or mining); the proximity of the use to the protected area; the intensity, size and duration of the use; other adjacent land uses;

and the use's potential for impacting the protected area.

SECTION 6.05 FLOOD HAZARD MANAGEMENT AND FLOODPLAIN PROTECTION

6.05.01 Title

These regulations shall be known as the *Floodplain Management Ordinance* of Putnam County, Florida, hereinafter referred to as “this section” or “this ordinance”.

6.05.02 Scope

The provisions of this section shall apply to all development that is wholly within or partially within any flood hazard area, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, improvement, replacement, repair, relocation or demolition of buildings, structures, and facilities that are exempt from the *Florida Building Code*; placement, installation, or replacement of manufactured homes and manufactured buildings; installation or replacement of tanks; placement of recreational vehicles; installation of swimming pools; and any other development.

6.05.03 Intent

The purposes of this ordinance and the flood load and flood resistant construction requirements of the *Florida Building Code* are to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas to:

- a. Minimize unnecessary disruption of commerce, access and public service during times of flooding;
- b. Require the use of appropriate construction practices in order to prevent or minimize future flood damage;
- c. Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential;
- d. Manage the alteration of flood hazard areas, watercourses, and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain;
- e. Minimize damage to public and private facilities and utilities;
- f. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas;
- g. Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events; and
- h. Meet the requirements of the National Flood Insurance Program for community participation as set forth in the Title 44 Code of Federal Regulations, Section 59.22.

6.05.04 Coordination with the *Florida Building Code*

This section is intended to be administered and enforced in conjunction with the *Florida Building Code*. Where cited, ASCE 24 refers to the edition of the standard that is referenced by the *Florida Building Code*.

6.05.05 Warning

The degree of flood protection required by this section and the *Florida Building Code*, as amended by this community, is considered the minimum reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. This section does not imply that land outside of mapped special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage. The flood hazard areas and base flood elevations contained in the Flood Insurance Study and shown on Flood Insurance Rate Maps and the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60 may be revised by the Federal Emergency Management Agency, requiring this community to revise these regulations to remain eligible for participation in the National Flood Insurance Program. No guaranty of vested use, existing use, or future use is implied or expressed by compliance with this section.

6.05.06 Disclaimer of Liability

This section shall not create liability on the part of Board of County Commissioners of Putnam County, Florida or by any officer or employee thereof for any flood damage that results from reliance on this section or any administrative decision lawfully made thereunder.

6.05.07 APPLICABILITY

6.05.07.01 General

Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

6.05.07.02 Areas to which this ordinance applies

This section shall apply to all flood hazard areas within Putnam County, Florida, as established in Section 6.05.07.03 of the Putnam County Land Development Code.

6.05.07.03 Basis for establishing flood hazard areas

The Flood Insurance Study for Putnam County, Florida and Incorporated Areas dated February 2, 2012, and all subsequent amendments and revisions, and the accompanying Flood Insurance Rate Maps (FIRM), and all subsequent amendments and revisions to such maps, are adopted by reference as a part of this ordinance and shall serve as the minimum

basis for establishing flood hazard areas. Studies and maps that establish flood hazard areas are on file at the Department of Planning and Development Services, 2509 Crill Avenue, Suite 300, Palatka, Florida.

6.05.07.04 Submission of additional data to establish flood hazard areas

To establish flood hazard areas and base flood elevations, pursuant to Section 6.05.10 of the Putnam County Land Development Code, the Floodplain Administrator may require submission of additional data. Where field surveyed topography prepared by a Florida licensed professional surveyor or digital topography accepted by the community indicates that ground elevations:

- a. Are below the closest applicable base flood elevation, even in areas not delineated as a special flood hazard area on a FIRM, the area shall be considered as flood hazard area and subject to the requirements of this section and, as applicable, the requirements of the *Florida Building Code*.
- b. Are above the closest applicable base flood elevation, the area shall be regulated as special flood hazard area unless the applicant obtains a Letter of Map Change that removes the area from the special flood hazard area.

6.05.07.05 Other laws

The provisions of this section shall not be deemed to nullify any provisions of local, state or federal law.

6.05.07.06 Abrogation and greater restrictions

This section supersedes any ordinance in effect for management of development in flood hazard areas. However, it is not intended to repeal or abrogate any existing ordinances including but not limited to land development regulations, zoning ordinances, stormwater management regulations, or the *Florida Building Code*. In the event of a conflict between this ordinance and any other ordinance, the more restrictive shall govern. This section shall not impair any deed restriction, covenant or easement, but any land that is subject to such interests shall also be governed by this section.

6.05.07.07 Interpretation.

In the interpretation and application of this section, all provisions shall be:

- a. Considered as minimum requirements;
- b. Liberally construed in favor of the governing body; and
- c. Deemed neither to limit nor repeal any other powers granted under state statutes.

6.05.08 DUTIES AND POWERS OF THE FLOODPLAIN ADMINISTRATOR

6.05.08.01 Designation

The Building Official is designated as the Floodplain Administrator. The Floodplain Administrator may delegate performance of certain duties to other employees.

6.05.08.02 General

The Floodplain Administrator is authorized and directed to administer and enforce the provisions of this section. The Floodplain Administrator shall have the authority to render interpretations of this ordinance consistent with the intent and purpose of this section and may establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies, and procedures shall not have the effect of waiving requirements specifically provided in this section without the granting of a variance pursuant to Section 6.05.12 of the Putnam County Land Development Code.

6.05.08.03 Applications and permits

The Floodplain Administrator, in coordination with other pertinent offices of the community, shall:

- a. Review applications and plans to determine whether proposed new development will be located in flood hazard areas;
- b. Review applications for modification of any existing development in flood hazard areas for compliance with the requirements of this section;
- c. Interpret flood hazard area boundaries where such interpretation is necessary to determine the exact location of boundaries; a person contesting the determination shall have the opportunity to appeal the interpretation;
- d. Provide available flood elevation and flood hazard information;
- e. Determine whether additional flood hazard data shall be obtained from other sources or shall be developed by an applicant;
- f. Review applications to determine whether proposed development will be reasonably safe from flooding;
- g. Issue floodplain development permits or approvals for development other than buildings and structures that are subject to the *Florida Building Code*, including buildings, structures and facilities exempt from the *Florida Building Code*, when compliance with this section is demonstrated, or disapprove the same in the event of noncompliance; and
- h. Coordinate with and provide comments to the Building Official to assure that applications, plan reviews, and inspections for buildings and structures in flood hazard areas comply with the applicable provisions of this section.

6.05.08.04 Substantial improvements and substantial damage determinations

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

- a. Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;
- b. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
- c. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and
- d. Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the *Florida Building Code* and this section is required.

6.05.08.05 Modifications of the strict application of the requirements of the *Florida Building Code*

The Floodplain Administrator shall review requests submitted to the Building Official that seek approval to modify the strict application of the flood load and flood resistant construction requirements of the *Florida Building Code* to determine whether such requests require the granting of a variance pursuant to Section 6.05.12 of the Putnam County Land Development Code.

6.05.08.06 Notices and orders

The Floodplain Administrator shall coordinate with appropriate local agencies for the issuance of all necessary notices or orders to ensure compliance with this section.

6.05.08.07 Inspections

The Floodplain Administrator shall make the required inspections as specified in Section 6.05.11 of the Putnam County Land Development Code for development that is not subject to the *Florida Building Code*, including buildings, structures and facilities exempt from the *Florida*

Building Code. The Floodplain Administrator shall inspect flood hazard areas to determine if development is undertaken without issuance of a permit.

6.05.08.08 Other duties of the Floodplain Administrator

The Floodplain Administrator shall have other duties, including but not limited to:

- a. Establish, in coordination with the Building Official, procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to Section 6.05.08.04 of the Putnam County Land Development Code;
- b. Require that applicants proposing alteration of a watercourse notify adjacent communities and the Florida Division of Emergency Management, State Floodplain Management Office, and submit copies of such notifications to the Federal Emergency Management Agency (FEMA);
- c. Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps if the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available;
- d. Review required design certifications and documentation of elevations specified by this ordinance and the *Florida Building Code* and this ordinance to determine that such certifications and documentations are complete; and
- e. Notify the Federal Emergency Management Agency when the corporate boundaries of Putnam County, Florida are modified.

6.05.08.09 Floodplain management records

Regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of this section and the flood resistant construction requirements of the *Florida Building Code*, including Flood Insurance Rate Maps; Letters of Change; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required design certifications and documentation of elevations specified by the *Florida Building Code* and this section; notifications to adjacent communities, FEMA, and the state related to alterations of watercourses; assurances that the flood carrying capacity of altered watercourses will be maintained; documentation related to appeals and variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to this section and the flood resistant construction requirements of the *Florida Building Code*. These records shall be available for public inspection at Department of Planning and Development Services, 2509 Crill Avenue, Suite 300, Palatka, Florida.

6.05.09 PERMITS

6.05.09.01 Permits required

Any owner or owner's authorized agent (hereinafter "applicant") who intends to undertake any development activity within the scope of this section, including buildings, structures and facilities exempt from the *Florida Building Code*, which is wholly within or partially within any flood hazard area shall first make application to the Floodplain Administrator, and the Building Official if applicable, and shall obtain the required permit(s) and approval(s). No such permit or approval shall be issued until compliance with the requirements of this ordinance and all other applicable codes and regulations has been satisfied.

6.05.09.02 Floodplain development permits or approvals

Floodplain development permits or approvals shall be issued pursuant to this section for any development activities not subject to the requirements of the *Florida Building Code*, including buildings, structures and facilities exempt from the *Florida Building Code*. Depending on the nature and extent of proposed development that includes a building or structure, the Floodplain Administrator may determine that a floodplain development permit or approval is required in addition to a building permit.

6.05.09.03 Buildings, structures and facilities exempt from the *Florida Building Code*

Pursuant to the requirements of federal regulation for participation in the National Flood Insurance Program (44 C.F.R. Sections 59 and 60), floodplain development permits or approvals shall be required for the following buildings, structures and facilities that are exempt from the *Florida Building Code* and any further exemptions provided by law, which are subject to the requirements of this section:

- a. Railroads and ancillary facilities associated with the railroad.
- b. Nonresidential farm buildings on farms, as provided in section 604.50, F.S.
- c. Temporary buildings or sheds used exclusively for construction purposes.
- d. Mobile or modular structures used as temporary offices.
- e. Those structures or facilities of electric utilities, as defined in section 366.02, F.S., which are directly involved in the generation, transmission, or distribution of electricity.
- f. Chickees constructed by the Miccosukee Tribe of Indians of Florida or the Seminole Tribe of Florida. As used in this paragraph, the term "chickee" means an open-sided wooden hut that has a thatched roof of palm or palmetto or other traditional materials, and that does not incorporate any electrical, plumbing, or other non-wood features.
- g. Family mausoleums not exceeding 250 square feet in area which are prefabricated and assembled on site or preassembled and delivered on site and have walls, roofs, and a floor constructed of granite, marble, or reinforced concrete.

- h. Temporary housing provided by the Department of Corrections to any prisoner in the state correctional system.
- i. Structures identified in section 553.73(10)(k), F.S., are not exempt from the *Florida Building Code* if such structures are located in flood hazard areas established on Flood Insurance Rate Maps

6.05.09.04 Application for a permit or approval

To obtain a floodplain development permit or approval the applicant shall first file an application in writing on a form furnished by the community. The information provided shall:

- a. Identify and describe the development to be covered by the permit or approval.
- b. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitively locate the site.
- c. Indicate the use and occupancy for which the proposed development is intended.
- d. Be accompanied by a site plan or construction documents as specified in section 6.05.10 of this ordinance.
- e. State the valuation of the proposed work.
- f. Be signed by the applicant or the applicant's authorized agent.
- g. Give such other data and information as required by the Floodplain Administrator.

6.05.09.05 Validity of permit or approval

The issuance of a floodplain development permit or approval pursuant to this section shall not be construed to be a permit for, or approval of, any violation of this section, the *Florida Building Codes*, or any other ordinance of this community. The issuance of permits based on submitted applications, construction documents, and information shall not prevent the Floodplain Administrator from requiring the correction of errors and omissions.

6.05.09.06 Expiration

A floodplain development permit or approval shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions for periods of not more than 180 days each shall be requested in writing and justifiable cause shall be demonstrated.

6.05.09.07 Suspension or revocation

The Floodplain Administrator is authorized to suspend or revoke a floodplain development permit or approval if the permit was issued in error, on the basis of incorrect, inaccurate or incomplete information, or in violation of this section or any other ordinance, regulation or

requirement of this community.

6.05.09.08 Other permits required

Floodplain development permits and building permits shall include a condition that all other applicable state or federal permits be obtained before commencement of the permitted development, including but not limited to the following:

- a. The St. Johns River Water Management District; section 373.036, F.S.
- b. Florida Department of Health for onsite sewage treatment and disposal systems; section 381.0065, F.S. and Chapter 64E-6, F.A.C.
- c. Florida Department of Environmental Protection for activities subject to the Joint Coastal Permit; section 161.055, F.S.
- d. Florida Department of Environmental Protection for activities that affect wetlands and alter surface water flows, in conjunction with the U.S. Army Corps of Engineers; Section 404 of the Clean Water Act.
- e. Federal permits and approvals.

6.05.10 SITE PLANS AND CONSTRUCTION DOCUMENTS

6.05.10.01 Information for development in flood hazard areas

The site plan or construction documents for any development subject to the requirements of this section shall be drawn to scale and shall include, as applicable to the proposed development:

- a. Delineation of flood hazard areas, floodway boundaries and flood zone(s), base flood elevation(s), and ground elevations if necessary for review of the proposed development.
- b. Where flood hazard areas, base flood elevations, or floodway data are not included on the FIRM or in the Flood Insurance Study, they shall be established in accordance with Section 6.05.10.02(b) or (c) of the Putnam County Land Development Code.
- c. Where the parcel on which the proposed development will take place will have more than 50 lots or is larger than 5 acres and the base flood elevations are not included on the FIRM or in the Flood Insurance Study, such elevations shall be established in accordance with Section 6.05.10.02(a) of the Putnam County Land Development Code.
- d. Location of the proposed activity and proposed structures, and locations of existing buildings and structures.
- e. Location, extent, amount, and proposed final grades of any filling, grading, or excavation.
- f. Where the placement of fill is proposed, the amount, type, and source of fill material; compaction specifications; a description of the intended purpose of the fill areas; and evidence that the proposed fill areas are the minimum necessary to achieve the intended purpose.

- g. Existing and proposed alignment of any proposed alteration of a watercourse.

The Floodplain Administrator is authorized to waive the submission of site plans, construction documents, and other data that are required by this section but that are not required to be prepared by a registered design professional if it is found that the nature of the proposed development is such that the review of such submissions is not necessary to ascertain compliance with this section.

6.05.10.02 Information in flood hazard areas without base flood elevations (approximate Zone A)

Where flood hazard areas are delineated on the FIRM and base flood elevation data have not been provided, the Floodplain Administrator shall:

- a. Require the applicant to include base flood elevation data prepared in accordance with currently accepted engineering practices; or
- b. Obtain, review, and provide to applicants base flood elevation and floodway data available from a federal or state agency or other source or require the applicant to obtain and use base flood elevation and floodway data available from a federal or state agency or other source; or
- c. Where base flood elevation and floodway data are not available from another source, where the available data are deemed by the Floodplain Administrator to not reasonably reflect flooding conditions, or where the available data are known to be scientifically or technically incorrect or otherwise inadequate:
 - 1. Require the applicant to include base flood elevation data prepared in accordance with currently accepted engineering practices; or
 - 2. Specify that the base flood elevation is two (2) feet above the highest adjacent grade at the location of the development, provided there is no evidence indicating flood depths have been or may be greater than two (2) feet.
- d. Where the base flood elevation data are to be used to support a Letter of Map Change from FEMA, advise the applicant that the analyses shall be prepared by a Florida licensed engineer in a format required by FEMA, and that it shall be the responsibility of the applicant to satisfy the submittal requirements and pay the processing fees.

6.05.10.03 Additional analyses and certifications

As applicable to the location and nature of the proposed development activity, and in addition to the requirements of this section, the applicant shall have the following analyses signed and sealed by a Florida licensed engineer for submission with the site plan and construction documents:

- a. For development activities proposed to be located in a regulatory floodway, a floodway encroachment analysis that demonstrates that the encroachment of the proposed development will not cause any increase in base flood elevations; where the applicant

proposes to undertake development activities that do increase base flood elevations, the applicant shall submit such analysis to FEMA as specified in Section 6.05.10.04 of the Putnam County Land Development Code and shall submit the Conditional Letter of Map Revision, if issued by FEMA, with the site plan and construction documents.

- b. For development activities proposed to be located in a riverine flood hazard area for which base flood elevations are included in the Flood Insurance Study or on the FIRM and floodways have not been designated, a hydrologic and hydraulic analyses that demonstrates that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments, will not increase the base flood elevation more than one (1) foot at any point within the community. This requirement does not apply in isolated flood hazard areas not connected to a riverine flood hazard area or in flood hazard areas identified as Zone AO or Zone AH.
- c. For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices which demonstrates that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained in a manner which preserves the channel's flood-carrying capacity; the applicant shall submit the analysis to FEMA as specified in Section 6.05.10.04 of the Putnam County Land Development Code.

6.05.10.04 Submission of additional data

When additional hydrologic, hydraulic or other engineering data, studies, and additional analyses are submitted to support an application, the applicant has the right to seek a Letter of Map Change from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs, and to submit such data to FEMA for such purposes. The analyses shall be prepared by a Florida licensed engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant.

6.05.11 INSPECTIONS

6.05.11.01 General

Development for which a floodplain development permit or approval is required shall be subject to inspection.

6.05.11.02 Development other than buildings and structures

The Floodplain Administrator shall inspect all development to determine compliance with the requirements of this section and the conditions of issued floodplain development permits or approvals.

6.05.11.03 Buildings, structures and facilities exempt from the *Florida Building Code*

The Floodplain Administrator shall inspect buildings, structures and facilities exempt from the

Florida Building Code to determine compliance with the requirements of this section and the conditions of issued floodplain development permits or approvals.

6.05.11.04 Buildings, structures and facilities exempt from the *Florida Building Code*, lowest floor inspection

Upon placement of the lowest floor, including basement, and prior to further vertical construction, the owner of a building, structure or facility exempt from the *Florida Building Code*, or the owner's authorized agent, shall submit to the Floodplain Administrator:

- a. If a design flood elevation was used to determine the required elevation of the lowest floor, the certification of elevation of the lowest floor prepared and sealed by a Florida licensed professional surveyor; or
- b. If the elevation used to determine the required elevation of the lowest floor was determined in accordance with Section 6.05.10.02 (c)(2) of the Land Development Code, the documentation of height of the lowest floor above highest adjacent grade, prepared by the owner or the owner's authorized agent.

6.05.11.05 Buildings, structures and facilities exempt from the *Florida Building Code*, final inspection

As part of the final inspection, the owner or owner's authorized agent shall submit to the Floodplain Administrator a final certification of elevation of the lowest floor or final documentation of the height of the lowest floor above the highest adjacent grade; such certifications and documentations shall be prepared as specified in Section 6.05.11.04 of the Putnam County Land Development Code.

6.05.11.06 Manufactured homes

The Building Official shall inspect manufactured homes that are installed or replaced in flood hazard areas to determine compliance with the requirements of this section and the conditions of the issued permit. Upon placement of a manufactured home, certification of the elevation of the lowest floor shall be submitted to the Building Official.

6.05.12 VARIANCES AND APPEALS

6.05.12.01 General

The Zoning Board of Adjustment shall hear and decide on requests for appeals and requests for variances from the strict application of this ordinance. Pursuant to section 553.73(5), F.S., the Zoning Board of Adjustment shall hear and decide on requests for appeals and requests for variances from the strict application of the flood resistant construction requirements of the *Florida Building Code*.

6.05.12.02 Appeals

The Zoning Board of Adjustment shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the administration and enforcement of this ordinance. Any person aggrieved by the decision of Zoning Board of Adjustment may appeal such decision to the Circuit Court, as provided by Florida Statutes.

6.05.12.03 Limitations on authority to grant variances

The Zoning Board of Adjustment shall base its decisions on variances on technical justifications submitted by applicants, the considerations for issuance in Section 6.05.12.07 of the Land Development Code, the conditions of issuance set forth in Section 6.05.12.08 of the Putnam County Land Development Code, and the comments and recommendations of the Floodplain Administrator and the Building Official. The Zoning Board of Adjustment has the right to attach such conditions as it deems necessary to further the purposes and objectives of this section.

6.05.12.04 Restrictions in floodways

A variance shall not be issued for any proposed development in a floodway if any increase in base flood elevations would result, as evidenced by the applicable analyses and certifications required in Section 6.05.10.03 of the Putnam County Land Development Code.

6.05.12.05 Historic buildings

A variance is authorized to be issued for the repair, improvement, or rehabilitation of a historic building that is determined eligible for the exception to the flood resistant construction requirements of the *Florida Building Code, Existing Building*, Chapter 11 Historic Buildings, upon a determination that the proposed repair, improvement, or rehabilitation will not preclude the building's continued designation as a historic building and the variance is the minimum necessary to preserve the historic character and design of the building. If the proposed work precludes the building's continued designation as a historic building, a variance shall not be granted and the building and any repair, improvement, and rehabilitation shall be subject to the requirements of the *Florida Building Code*.

6.05.12.06 Functionally dependent uses

A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use, as defined in this section, provided the variance meets the requirements of Section 6.05.12.04 of the Putnam County Land Development Code, is the minimum necessary considering the flood hazard, and all due consideration has been given to use of methods and materials that minimize flood damage during occurrence of the base flood.

6.05.12.07 Considerations for issuance of variances

In reviewing requests for variances, the Zoning Board of Adjustment shall consider all technical evaluations, all relevant factors, all other applicable provisions of the *Florida Building Code*, this section, and the following:

- a. The danger that materials and debris may be swept onto other lands resulting in further injury or damage;
- b. The danger to life and property due to flooding or erosion damage;
- c. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners;
- d. The importance of the services provided by the proposed development to the community;
- e. The availability of alternate locations for the proposed development that are subject to lower risk of flooding or erosion;
- f. The compatibility of the proposed development with existing and anticipated development;
- g. The relationship of the proposed development to the comprehensive plan and floodplain management program for the area;
- h. The safety of access to the property in times of flooding for ordinary and emergency vehicles;
- i. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
- j. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

6.05.12.08 Conditions for issuance of variances

Variances shall be issued only upon:

- a. Submission by the applicant, of a showing of good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site limit compliance with any provision of this ordinance or the required elevation standards;
- b. Determination by the Zoning Board of Adjustment that:
 1. Failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable; increased costs to satisfy the requirements or inconvenience do not constitute hardship;
 2. The granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws and ordinances; and
 3. The variance is the minimum necessary, considering the flood hazard, to afford relief;
- c. Receipt of a signed statement by the applicant that the variance, if granted, shall be

recorded in the Office of the Clerk of the Court in such a manner that it appears in the chain of title of the affected parcel of land; and

- d. If the request is for a variance to allow construction of the lowest floor of a new building, or substantial improvement of a building, below the required elevation, a copy in the record of a written notice from the Floodplain Administrator to the applicant for the variance, specifying the difference between the base flood elevation and the proposed elevation of the lowest floor, stating that the cost of federal flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation (up to amounts as high as \$25 for \$100 of insurance coverage), and stating that construction below the base flood elevation increases risks to life and property.

6.05.13 VIOLATIONS

6.05.13.01 Violations. Any development that is not within the scope of the *Florida Building Code* but that is regulated by this section that is performed without an issued permit, that is in conflict with an issued permit, or that does not fully comply with this ordinance, shall be deemed a violation of this section. A building or structure without the documentation of elevation of the lowest floor, other required design certifications, or other evidence of compliance required by this section or the *Florida Building Code* is presumed to be a violation until such time as that documentation is provided.

6.05.13.02 Authority. For development that is not within the scope of the *Florida Building Code* but that is regulated by this ordinance and that is determined to be a violation, the Floodplain Administrator is authorized to serve notices of violation or stop work orders to owners of the property involved, to the owner's agent, or to the person or persons performing the work.

6.05.13.03 Unlawful continuance. Any person who shall continue any work after having been served with a notice of violation or a stop work order, except such work as that person is directed to perform to remove or remedy a violation or unsafe condition, shall be subject to penalties as prescribed by law.

6.05.14 DEFINITIONS

6.05.14.01 Scope

Unless otherwise expressly stated, the following words and terms shall, for the purposes of this ordinance, have the meanings shown in this section.

6.05.14.02 Terms defined in the *Florida Building Code*

Where terms are not defined in this ordinance and are defined in the *Florida Building Code*, such terms shall have the meanings ascribed to them in that code.

6.05.14.03 Terms not defined

Where terms are not defined in this section or the *Florida Building Code*, such terms shall have ordinarily accepted meanings such as the context implies.

6.05.14.04 Terms defined.

Alteration of a watercourse - A dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

Appeal- A request for a review of the Floodplain Administrator’s interpretation of any provision of this ordinance or a request for a variance.

ASCE 24- A standard titled *Flood Resistant Design and Construction* that is referenced by the *Florida Building Code*. ASCE 24 is developed and published by the American Society of Civil Engineers, Reston, VA.

Base flood- A flood having a 1-percent chance of being equaled or exceeded in any given year. [Also defined in FBC, B, Section 1612.2.] The base flood is commonly referred to as the “100-year flood” or the “1-percent-annual chance flood.”

Base flood elevation- The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the Flood Insurance Rate Map (FIRM). [Also defined in FBC, B, Section 1612.2.]

Basement- The portion of a building having its floor subgrade (below ground level) on all sides. [Also defined in FBC, B, Section 1612.2.]

Design flood- The flood associated with the greater of the following two areas: [Also defined in FBC, B, Section 1612.2.]

- a. Area with a floodplain subject to a 1-percent or greater chance of flooding in any year; or
- b. Area designated as a flood hazard area on the community’s flood hazard map, or otherwise legally designated.

Design flood elevation- The elevation of the “design flood,” including wave height, relative to the datum specified on the community’s legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building’s perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where the depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet. [Also defined in FBC, B, Section 1612.2.]

Development- Any man-made change to improved or unimproved real estate, including but

not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of equipment or materials, mining, dredging, filling, grading, paving, excavations, drilling operations or any other land disturbing activities.

Encroachment- The placement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

Existing building and existing structure- Any buildings and structures for which the “start of construction” commenced before September 16, 1981. [Also defined in FBC, B, Section 1612.2.]

Existing manufactured home park or subdivision- A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before September 16, 1981.

Expansion to an existing manufactured home park or subdivision- The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Federal Emergency Management Agency (FEMA)- The federal agency that, in addition to carrying out other functions, administers the National Flood Insurance Program.

FEMA P-85- A publication titled Protecting Manufactured Homes from Floods and Other Hazards: A Multi-Hazard Foundation and Installation Guide published by the Federal Emergency Management Agency, Washington, DC.

Flood or flooding- A general and temporary condition of partial or complete inundation of normally dry land from: [Also defined in FBC, B, Section 1612.2.]

- a. The overflow of inland or tidal waters.
- b. The unusual and rapid accumulation or runoff of surface waters from any source.

Flood damage-resistant materials- Any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair. [Also defined in FBC, B, Section 1612.2.]

Flood hazard area- The greater of the following two areas: [Also defined in FBC, B, Section 1612.2.]

- a. The area within a floodplain subject to a 1-percent or greater chance of flooding in any year.
- b. The area designated as a flood hazard area on the community’s flood hazard map, or

otherwise legally designated.

Flood Insurance Rate Map (FIRM)- The official map of the community on which the Federal Emergency Management Agency has delineated both special flood hazard areas and the risk premium zones applicable to the community. [Also defined in FBC, B, Section 1612.2.]

Flood Insurance Study (FIS)- The official report provided by the Federal Emergency Management Agency that contains the Flood Insurance Rate Map, the Flood Boundary and Floodway Map (if applicable), the water surface elevations of the base flood, and supporting technical data. [Also defined in FBC, B, Section 1612.2.]

Floodplain Administrator- The office or position designated and charged with the administration and enforcement of this ordinance (may be referred to as the Floodplain Manager).

Floodplain development permit or approval- An official document or certificate issued by the community, or other evidence of approval or concurrence, which authorizes performance of specific development activities that are located in flood hazard areas and that are determined to be compliant with this ordinance.

Floodway- The channel of a river or other riverine watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot. [Also defined in FBC, B, Section 1612.2.]

Floodway encroachment analysis- An engineering analysis of the impact that a proposed encroachment into a floodway is expected to have on the floodway boundaries and base flood elevations; the evaluation shall be prepared by a qualified Florida licensed engineer using standard engineering methods and models.

Florida Building Code- The family of codes adopted by the Florida Building Commission, including: *Florida Building Code, Building*; *Florida Building Code, Residential*; *Florida Building Code, Existing Building*; *Florida Building Code, Mechanical*; *Florida Building Code, Plumbing*; *Florida Building Code, Fuel Gas*.

Functionally dependent use- A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water, including only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities; the term does not include long-term storage or related manufacturing facilities.

Highest adjacent grade- The highest natural elevation of the ground surface prior to construction next to the proposed walls or foundation of a structure.

Historic structure- Any structure that is determined eligible for the exception to the flood hazard area requirements of the *Florida Building Code, Existing Building*, Chapter 11 Historic Buildings.

Letter of Map Change (LOMC)- An official determination issued by FEMA that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:

- a. Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.
- b. Letter of Map Revision (LOMR): A revision based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.
- c. Letter of Map Revision Based on Fill (LOMR-F): A determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.
- d. Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

Light-duty truck- As defined in 40 C.F.R. 86.082-2, any motor vehicle rated at 8,500 pounds Gross Vehicular Weight Rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of 45 square feet or less, which is:

- a. Designed primarily for purposes of transportation of property or is a derivation of such a vehicle, or
- b. Designed primarily for transportation of persons and has a capacity of more than 12 persons; or
- c. Available with special features enabling off-street or off-highway operation and use.

Lowest floor- The lowest floor of the lowest enclosed area of a building or structure, including basement, but excluding any unfinished or flood-resistant enclosure, other than a basement, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of the non-elevation requirements of the *Florida Building Code* or ASCE 24. [Also defined in FBC, B, Section 1612.2.]

Manufactured home- A structure, transportable in one or more sections, which is eight (8) feet or more in width and greater than four hundred (400) square feet, and which is built on a permanent, integral chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle" or "park trailer." [Also defined in 15C-1.0101, F.A.C.]

Manufactured home park or subdivision- A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Market value- The price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in this ordinance, the term refers to the market value of buildings and structures, excluding the land and other improvements on the parcel. Market value may be established by a qualified independent appraiser, Actual Cash Value (replacement cost depreciated for age and quality of construction), or tax assessment value adjusted to approximate market value by a factor provided by the Property Appraiser.

Modular Home- Any residential unit constructed to standards promulgated by the Florida Building Commission, away from the installation site, and which bears a Department of Business and Professional Regulation Insignia.

New construction- For the purposes of administration of this ordinance and the flood resistant construction requirements of the *Florida Building Code*, structures for which the "start of construction" commenced on or after September 16, 1981 and includes any subsequent improvements to such structures.

New manufactured home park or subdivision- A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after September 16, 1981.

Park trailer- A transportable unit which has a body width not exceeding fourteen (14) feet and which is built on a single chassis and is designed to provide seasonal or temporary living quarters when connected to utilities necessary for operation of installed fixtures and appliances. [Defined in section 320.01, F.S.]

Recreational vehicle- A vehicle, including a park trailer, which is: [See section 320.01, F.S.]

- a. Built on a single chassis;
- b. Four hundred (400) square feet or less when measured at the largest horizontal projection;
- c. Designed to be self-propelled or permanently towable by a light-duty truck; and
- d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special flood hazard area- An area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. Special flood hazard areas are shown on FIRMs as Zone A, AO, A1-A30, AE, A99, AH, V1-V30, VE or V. [Also defined in FBC, B Section 1612.2.]

Start of construction- The date of issuance for new construction and substantial improvements provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement is within 180 days of the date of the issuance. The actual start of construction means either the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns.

Permanent construction does not include land preparation (such as clearing, grading, or filling), the installation of streets or walkways, excavation for a basement, footings, piers, or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main buildings. For a substantial improvement, the actual "start of construction" means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building. [Also defined in FBC, B Section 1612.2.]

Substantial damage- Damage of any origin sustained by a building or structure whereby the cost of restoring the building or structure to its before-damaged condition would equal or exceed 50 percent of the market value of the building or structure before the damage occurred. [Also defined in FBC, B Section 1612.2.]

Substantial improvement- Any repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the structure has incurred "substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either: [Also defined in FBC, B, Section 1612.2.]

- a. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.

Variance- A grant of relief from the requirements of this ordinance, or the flood resistant construction requirements of the *Florida Building Code*, which permits construction in a manner that would not otherwise be permitted by this ordinance or the *Florida Building Code*.

Watercourse- A river, creek, stream, channel or other topographic feature in, on, through, or over which water flows at least periodically.

6.05.15 BUILDINGS AND STRUCTURES

6.05.15.01 Design and construction of buildings, structures and facilities exempt from the *Florida Building Code*

Pursuant to Section 6.05.09.03 of the Putnam County Land Development Code, buildings, structures, and facilities that are exempt from the *Florida Building Code*, including substantial improvement or repair of substantial damage of such buildings, structures and facilities, shall be designed and constructed in accordance with the flood load and flood resistant construction requirements of ASCE 24. Structures exempt from the *Florida Building Code* that are not walled and roofed buildings shall comply with the requirements of Section 6.05.21 of the Putnam County Land Development Code.

6.05.15.02 Elevation requirements for site built one and two family dwellings and modular homes installed off-frame

All site built one and two family dwellings and modular homes installed off-frame and located in flood hazard areas shall be constructed such that:

- a. Flood Zone A and AE with Base Flood Elevation-** The lowest floor of enclosed spaces is elevated to a minimum of one foot above the Base Flood Elevation. All construction below this required elevation must be of flood resistant materials.
- b. Flood Zone A with undetermined Base Flood Elevation-** The lowest floor of enclosed spaces is elevated to a minimum of three feet above the Highest Adjacent Grade. All construction below this required elevation must be of flood resistant materials.
- c. Enclosed areas permitted below the required elevation-** The lowest floor of enclosed areas used solely for parking of vehicles, building access, or storage may be constructed below the required elevation provided these areas are constructed with flood ventilation openings that comply with the Florida Building Code, Residential. All construction below the required elevation must be of flood resistant materials.

6.05.16 SUBDIVISIONS

6.05.16.01 Minimum requirements

Subdivision proposals, including proposals for manufactured home parks and subdivisions, shall be reviewed to determine that:

- a. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding;
- b. All public utilities and facilities such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage; and
- c. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwaters around and away from proposed structures.

6.05.16.02 Subdivision plats

Where any portion of proposed subdivisions, including manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:

- a. Delineation of flood hazard areas, floodway boundaries and flood zones, and design flood elevations, as appropriate, shall be shown on preliminary plats;
- b. Where the subdivision has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the base flood elevations determined in accordance with Section 6.05.10.02 (a) of the Putnam County Land Development Code; and
- c. Compliance with the site improvement and utilities requirements of Section 6.05.17 of the Putnam County Land Development Code.

6.05.17 SITE IMPROVEMENTS, UTILITIES AND LIMITATIONS

6.05.17.01 Minimum requirements

All proposed new development shall be reviewed to determine that:

- a. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding;
- b. All public utilities and facilities such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage; and
- c. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwaters around and away from proposed structures.

6.05.17.02 Sanitary sewage facilities

All new and replacement sanitary sewage facilities, private sewage treatment plants (including all pumping stations and collector systems), and on-site waste disposal systems shall be designed in accordance with the standards for onsite sewage treatment and disposal systems in Chapter 64E-6, F.A.C. and ASCE 24 Chapter 7 to minimize or eliminate infiltration of floodwaters into the facilities and discharge from the facilities into flood waters, and impairment of the facilities and systems.

6.05.17.03 Water supply facilities

All new and replacement water supply facilities shall be designed in accordance with the water well construction standards in Chapter 62-532.500, F.A.C. and ASCE 24 Chapter 7 to minimize or eliminate infiltration of floodwaters into the systems.

6.05.17.04 Limitations on sites in regulatory floodways

No development, including but not limited to site improvements, and land disturbing activity involving fill or regrading, shall be authorized in the regulatory floodway unless the floodway

encroachment analysis required in Section 6.05.10.03 (a) of the Putnam County Land Development Code demonstrates that the proposed development or land disturbing activity will not result in any increase in the base flood elevation.

6.05.17.05 Limitations on placement of fill.

Subject to the limitations of this ordinance, fill shall be designed to be stable under conditions of flooding including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and protection against flood-related erosion and scour. In addition to these requirements, if intended to support buildings and structures (Zone A only), fill shall comply with the requirements of the *Florida Building Code*.

6.05.18 MANUFACTURED HOMES

6.05.18.01 General

All manufactured homes installed in flood hazard areas shall be installed by an installer that is licensed pursuant to section 320.8249, F.S., and shall comply with the requirements of Chapter 15C-1, F.A.C. and the requirements of this section.

6.05.18.02 Foundations

All new manufactured homes and replacement manufactured homes installed in flood hazard areas shall be installed on permanent foundations that are:

- a. Consistent with the site and flood hazard limitations and design criteria and the recommended designs specified in FEMA P-85; or
- b. Engineered to account for the base flood conditions at the site.

6.05.18.03 Anchoring

All new manufactured homes and replacement manufactured homes shall be installed using methods and practices, which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse or lateral movement. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. This anchoring requirement is in addition to applicable state and local anchoring requirements for wind resistance.

6.05.18.04 Elevation

Manufactured homes that are placed, replaced, or substantially improved shall comply with

Section 6.05.18.05 or 6.05.18.06 of the Putnam County Land Development Code, as applicable.

6.05.18.05 General elevation requirement

Unless subject to the requirements of Section 6.05.18.06 of the Putnam County Land Development Code, all manufactured homes that are placed, replaced, or substantially improved on sites located: (a) outside of a manufactured home park or subdivision; (b) in a new manufactured home park or subdivision; (c) in an expansion to an existing manufactured home park or subdivision; or (d) in an existing manufactured home park or subdivision upon which a manufactured home has incurred "substantial damage" as the result of a flood, shall be elevated such that the bottom of the frame is at or above the Base Flood Elevation.

6.05.18.06 Elevation requirement for certain existing manufactured home parks and subdivisions

Manufactured homes that are not subject to Section 6.05.18.05 of the Putnam County Land Development Code, including manufactured homes that are placed, replaced, or substantially improved on sites located in an existing manufactured home park or subdivision, unless on a site where substantial damage as result of flooding has occurred, shall be elevated such that the:

- a. Bottom of the frame of the manufactured home is at or above the Base Flood Elevation.

6.05.18.07 Enclosures

Enclosed areas below elevated manufactured homes shall comply with the requirements of the *Florida Building Code, Residential* Section R322 for such enclosed areas.

6.05.18.08 Utility equipment

Utility equipment that serves manufactured homes, including electric, heating, ventilation, plumbing, and air conditioning equipment and other service facilities, shall comply with the requirements of the *Florida Building Code, Residential* Section R322.

6.05.19 RECREATIONAL VEHICLES AND PARK TRAILERS

6.05.19.01 Temporary placement

Recreational vehicles and park trailers placed temporarily in flood hazard areas shall:

- a. Be on the site for fewer than 180 consecutive days; or

- b. Be fully licensed and ready for highway use, which means the recreational vehicle or park model is on wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanent attachments such as additions, rooms, stairs, decks and porches.

6.05.19.02 Permanent placement

Recreational vehicles and park trailers that do not meet the limitations in Section 6.05.19.01 of the Putnam County Land Development Code for temporary placement shall meet the requirements of Section 6.05.18 of the Putnam County Land Development Code for manufactured homes.

6.05.20 TANKS

6.05.20.01 Underground tanks

Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty.

6.05.20.02 Above-ground tanks, not elevated

Above-ground tanks that do not meet the elevation requirements of Section 6.05.20.03 of the Putnam County Land Development Code shall be permitted in flood hazard areas provided the tanks are anchored or otherwise designed and constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty and the effects of flood-borne debris.

6.05.20.03 Above-ground tanks, elevated

Above-ground tanks in flood hazard areas shall be attached to, and elevated to or above, the design flood elevation on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area.

6.05.20.04 Tank inlets and vents

Tank inlets, fill openings, outlets and vents shall be:

- a. At or above the design flood elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and
- b. Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

6.05.21 OTHER DEVELOPMENT

6.05.21.01 General requirements for other development

All development, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in this section or the *Florida Building Code*, shall:

- a. Be located and constructed to minimize flood damage;
- b. Meet the limitations of Section 6.05.17.04 of the Putnam County Land Development Code if located in a regulated floodway;
- c. Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- d. Be constructed of flood damage-resistant materials; and
- e. Have mechanical, plumbing, and electrical systems above the design flood elevation, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.

6.05.21.02 Fences in regulated floodways

Fences in regulated floodways that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of Section 6.05.17.04 of the Putnam County Land Development Code.

6.05.21.03 Retaining walls, sidewalks and driveways in regulated floodways

Retaining walls and sidewalks and driveways that involve the placement of fill in regulated floodways shall meet the limitations of Section 6.05.17.04 of the Putnam County Land Development Code.

6.05.21.04 Roads and watercourse crossings in regulated floodways

Roads and watercourse crossings, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, that encroach into regulated floodways shall meet the limitations of Section 6.05.17.04 of the Putnam County Land Development Code. Alteration of a watercourse that is part of a road or watercourse crossing shall meet the requirements of Section 6.05.10.03 (c) of the Putnam County Land Development Code.

SECTION 6.06 POTABLE WATER WELL FIELD PROTECTION

6.06.01 -- Purpose and Intent

The purpose and intent of this Section is to safeguard potable water supplies by regulating the

storage, handling, use or production of hazardous substances around public potable water supply wells. It is also the intent and purpose of this Section to control development in and adjacent to designated wellheads to protect water supplies from potential contamination by regulating or, where appropriate, prohibiting polluting uses. The availability of adequate and dependable supplies of quality potable water for domestic, agricultural, and industrial use is of primary importance to the health, safety and welfare of the citizens of Putnam County. Thus, this Section sets forth standards protecting both the quantity and quality of the groundwater supply from public wellheads as defined herein. Specific setback and protection requirements for individual, private water wells shall be in accordance with Department of Health or Florida Department of Environmental Protection (FDEP) regulations, as applicable.

6.06.02 -- Establishment of Well Field Protection Zone

- a. A Well Field Protection Zone is hereby established, consisting of a 500-foot fixed radius around all wellheads of Community Water Systems, as defined by the Florida Department of Environmental Protection (FDEP), having 150 service connections or more within Putnam County in order to protect such well heads from adverse effects of development.
- b. For the purposes of this section, non-polluting land uses shall include recreational and conservation land uses and low-density residential land uses of no more than 1 dwelling unit per 5 acres. Non-polluting land uses shall be exempt from the development restrictions of Well Field Protection Zone. All other uses are presumed to be polluting land uses and therefore subject to the development restrictions in subsection 6.06.03.
- c. The County is hereby authorized to purchase property, through condemnation proceedings if necessary, within a Well Field Protection Zone and set it aside for such non-polluting land uses. Where possible, relocation of a polluting land use may occur through a transfer of density or a setback variance for a portion of the property outside of the Well Field Protection Zone.
- d. The underlying zoning in a Well Field Protection Zone shall not be up zoned to a land use designation that is more intense or dense than low-density residential, (no more than one dwelling unit per acre), either through the rezoning process or a Comprehensive Plan Amendment process.

6.06.03 -- Development Restrictions within the Well Field Protection Zone

- a. Where prohibition or relocation of a use, or the outright purchase of the property are not possible within a Well Field Protection Zone, any proposed or existing polluting land use shall be subject to the additional development restrictions and design standards set forth in subsection "b" below.
- b. New Development. In addition to any other applicable design and regulatory standards set forth in this Code, the following standards shall be applied to new development wholly or partially located within a Well Field Protection Zone

1. On-site sewage treatment.
 - (a) Any allowed or existing development within the well field protection zone must be connected to a municipal, county or investor-owned sewage system, if such a system is located or is planned to be located within one-half mile of the protection zone and the owner/operator can and does permit such connection.
 - (b) Subject to subparagraph (c) below, where connection to a municipal, county or investor-owned sewage system is not possible and the lot or parcel is of a sufficient size, the development shall install an individual sewage system approved by the Florida Department of Health or the Florida Department of Environmental Protection (FDEP), as applicable.
 - (c) Individual sewage systems (i.e. septic systems) are not permitted on lots or parcels less than one acre in size within a well head protection zone, unless there is a sufficient portion of the lot or parcel located outside of the well head protection zone to allow for installation of an on-site sewage disposal system outside the zone in accordance with the other requirements of this Code regarding on-site sewage disposal.
2. Residential land uses shall not be permitted in any wellhead protection zone unless they have a density of 1 dwelling unit per 5 acres or lower, or they are capable of connecting to a municipal, county or investor-owned sewage treatment system.
3. Storage Tanks. Subject to the limitations and prohibitions set forth in subparagraph c below, storage tanks storing hazardous waste or hazardous substances shall be permitted, designed and maintained in accordance with the permitting requirements and prohibitions of the FDEP and the County Fire Marshall.
 - (a) Tanks with storage capacity of less than 110 gallons shall be above ground and have appropriate secondary containment systems sufficient to contain 110% of the materials capable of being stored in the tanks.
 - (b) In the event that any storage tank within a wellhead protection zone is found to be leaking, the owner and/or operator shall immediately empty the remaining contents of the tank and the emptied product shall be transferred to approved product-tight holding tanks. The leak shall be reported to the FDEP and the County Emergency Services Department.
4. Storm water runoff. All development inside a Well Field Protection Zone, including parking facilities, shall construct or make use of an existing storm water

management system, which moves water runoff to retention or storage facilities outside of the Well Field Protection Zone. Storm water retention or storage is prohibited inside the Well Field Protection Zone. The costs of any improvements to an existing system made necessary by new uses or expansion of existing uses shall be borne by the applicant. In areas of greater sensitivity to development pressures, the Public Works Department may require more stringent design and construction standards for the storm water management system.

5. Injection and drainage wells of any kind are strictly prohibited within the Well Field Protection Zone.
 6. Solid waste landfills and hazardous waste storage facilities (except as provided in subparagraph c) are strictly prohibited in the Well Field Protection Zone.
 7. Non-residential uses that are allowed shall be limited to uses allowed under CPO and C-1 zoning. All other non-residential uses shall not be permitted within the Well Field Protection Zone, and any non-residential uses otherwise lawfully located inside the protection zone prior to the effective date of this Code shall be a non-conforming use.
- c. Hazardous Substances in a Well Field Protection Zone.
1. Storage of hazardous waste or substances that are not necessary and incidental to the on-going operations and maintenance of an existing and otherwise permissible use are prohibited.
 2. Hazardous substances necessary or incidental to the on-going operations and maintenance of an otherwise permissible use, including residential uses, must be distributed, sold and/or stored in self-contained packaging or storage vessels in accordance with the manufacturer's requirements, federal regulations or state regulations, whichever is more stringent. Leaking or broken packages or vessels containing hazardous materials shall be removed from the premises and stored in product-tight container outside of the Well Field Protection Zone.
 3. Where storage of hazardous waste or other substances is necessary and incidental to the on-going operations of a permitted use, the owner or operator shall store such wastes or substances on or over an impervious surface with sufficient containment to prevent such substances from entering the groundwater in the event of a spill or leak. Hazardous substances that are no longer in use or cease to be a necessary part of an allowed use shall be removed and disposed of in a lawful manner within 30 days of discontinued use. Hazardous waste generated by an allowed use shall be removed from the zone within thirty (30) days of being generated.
 4. Hazardous waste or substances that are not necessary and incidental to the on-going operations or maintenance of an existing use are prohibited.

5. Violation of the provisions of this Section or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a violation of this Code. Each day that the violation continues shall constitute a separate offense. Nothing contained herein shall prevent the County from taking such other lawful actions as are necessary to prevent or remedy any violation.
- d. Existing Activity
1. Any land use, other than a non-polluting use, located within five hundred (500) feet of a well serving the public will not be permitted to expand or to be substantially improved.
 2. Any new public water wellhead will be located at least five (500) feet from existing polluting land uses so that it does not cause an existing facility, activity or land use to become a nonconforming use under this Section.
- e. Exemptions. The following activities or uses are exempt from the provisions of this Section:
1. The continuous transportation of any hazardous waste through Well Field Protection Zone is exempt from the restrictions and prohibitions of this subsection, only when no other alternative route is reasonably available. Continuous transportation means the non-stop movement of hazardous substances by a mobile vehicle. It shall not be interpreted to mean the use of pipes, a waste transfer station or any other permanent or semi-permanent facility for transport or storage of hazardous waste within the protection zone; nor shall it be interpreted to allow the parking or temporary storage of hazardous waste within the protection zone.
 2. Agricultural and silvicultural uses, except that said uses shall comply with State and Federal law applicable to the application of pesticides and other chemicals related to agricultural and silvicultural uses. This exemption does not include the storage and treatment facilities of dairy farms or concentrated livestock feeding operations, which in all cases shall be located at least 300 feet from the public wellhead.
 3. The use of any hazardous substance solely as fuel in a vehicle fuel tank or as lubricant in a vehicle. This is not meant to expressly allow for refueling or lubricating operations within zone. It is only meant to permit the parking of such vehicles, where parking is otherwise allowed under this Code.
 4. Fire, police, emergency medical services, governmental emergency management center facilities, and public utilities.

5. Geotechnical boring.
6. Emergency equipment, including storage tanks, necessary to provide a continuous supply of emergency power, water, sewer and other services for the benefit of the public per Ch. 62-521.400(2) F.A.C.
7. Discharges to groundwater from FDEP approved remedial corrective actions for contaminated sites per Ch. 62-521.400(3) F.A.C.

SECTION 6.07 GROUNDWATER RECHARGE AREAS

6.07.01 -- Purpose and Intent

The availability of adequate and dependable supplies of potable quality water is of primary importance to the health, safety and welfare of the citizens of Putnam County. Therefore, standards are described and adopted in this Section with the intent of protecting both the quantity and quality of the groundwater supply. This is accomplished by prohibiting certain uses that threaten to pollute the Floridan aquifer and establishing limitations upon impervious surface coverage created by development. The term aquifer means an underground formation, or group of formations, or part of a formation, that is permeable enough to transmit and store usable quantities of water. It is the purpose of this Section to provide standards necessary to protect the recharge capabilities of areas of high aquifer recharge to the Floridan Aquifer and to minimize the risk of aquifer contamination from pollution. In Putnam County the top of the Floridan Aquifer is considered to be the top of the continuous limestone unit of the Hawthorn Formation where present or the top of the Ocala Limestone where the limestone unit of the Hawthorn Formation is absent.

6.07.02 -- Applicability

The requirements of this Section shall apply to all areas of high aquifer recharge to the Floridan Aquifer. Areas of high aquifer recharge include areas where recharge is more than 8 inches per year; as well as that portion of the County that falls within the Suwannee River Water Management District. Areas of high aquifer recharge shall be protected through prohibition of landfills, underground storage of toxic materials and locating of hazardous substances within such areas, as well as by additional regulations for permissible development.

6.07.03 -- Establishment of Aquifer Protection Zone

There is hereby established an Aquifer Protection Zone consisting of all property located in areas of high aquifer recharge to the Floridan Aquifer. All such primary aquifer recharge areas known to the County are identified on Map A-9 of the Putnam County Comprehensive Plan Map Series Site specific information provided in writing from a professional in an appropriate field of expertise for determination of recharge areas may be substituted when determining whether a given development lies within an area of high recharge.

6.07.04 -- Development Restrictions within the Zone of Protection:

- a. The following uses shall be strictly prohibited within areas of high recharge: auto salvage and junkyards, landfills, underground storage of toxic materials and hazardous waste sites.
- b. Development Standards: All development within the protection zones shall first be prohibited. Development allowed inside the recharge zone shall be designed, constructed and maintained using a method of capturing storm water run-off on site in a facility designed to retain the runoff and recharge the aquifer. A development will not be required to follow these additional standards if it has an impervious surface that is less than 35% of the total area of the development site.
- c. Hazardous Substances in an Aquifer Protection Zone.
 1. Storage of hazardous waste or substances that are not necessary and incidental to the on-going operations and maintenance of an existing and otherwise permissible use is prohibited.
 2. Hazardous substances necessary or incidental to the on-going operations and maintenance of an otherwise permissible use, including residential uses, must be distributed, sold and/or stored in self-contained packaging or storage vessels in accordance with the manufacturer's requirements, federal regulations or state regulations, whichever is more stringent. Leaking or broken packages or vessels containing hazardous materials shall be removed from the premises and stored in product-tight container outside of the Aquifer Protection Zone.
 3. Where storage of hazardous waste or other substances is necessary and incidental to the on-going operations of a permitted use, the owner or operator shall store such wastes or substances on or over an impervious surface with sufficient containment to prevent such substances from entering the groundwater in the event of a spill or leak. Hazardous substances that are no longer in use or cease to be a necessary part of an allowed use shall be removed and disposed of in a lawful manner within 30 days of discontinued use. Hazardous waste generated by an allowed use shall be removed from the zone within thirty (30) days of being generated.
 4. Hazardous waste or substances that are not necessary and incidental to the on-going operations or maintenance of an existing use are prohibited.
 5. Violation of the provisions of this Section or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a violation of this Code, Each day that the violation continues shall constitute a

separate offense. Nothing contained herein shall prevent the County from taking such other lawful actions as are necessary to prevent or remedy any violation.

- d. Transfer of density from the recharge area to the upland portion of a site shall be permitted through approval of an appropriate Planned Unit Development (PUD) application, an allowable Transfer of Development Units (TDU) or by establishing flexibility in the lot area requirements in the various zoning districts established in this Code in order to insure that development occurs outside of the recharge area. The recharge area will be included in calculating the gross density applicable to a property.
- e. Recharge protection shall be considered when the County evaluates a variance request for a setback modification that would move development away from an area of high recharge.

6.07.05 -- Development Approval

No permit shall be approved or certificate of occupancy issued until the Director of the Department of Public Works approves the storm water management facility required by this Section.

6.07.06 -- Exemptions

The following activities or uses are exempt from the provisions of this Section:

- a. The continuous transportation of any hazardous substance through an Aquifer Protection Zone. This exemption shall not be interpreted to exempt the use of pipes, a waste transfer station or any other permanent or semi-permanent facility used to transport hazardous substances within the protection zone, nor does it exempt temporary storage of hazardous substances within the protection zone.
- b. Agricultural and silvicultural uses, other than pig, poultry, cattle and dairy feedlots or farming operations that require a waste disposal permit from the DEP, are exempt. Except that such agriculture and silvaculture uses shall comply with State and Federal law applicable to the application of pesticides and other chemicals related to agriculture and silvaculture.
- c. The use of any hazardous substance solely as fuel in a vehicle fuel tank or as lubricant in a vehicle. This is meant only to allow a vehicle to park within an Aquifer Protection Zone. It does not allow for refueling or lubricating operations within the zone, unless otherwise allowed for in this Section.
- d. Fire, police, emergency medical services, governmental emergency management center facilities, and public utilities.
- e. Geotechnical boring.

APPENDIX VI

Tables

(Website has separate link for Figures)

Table 6.1 Meandered Water Bodies

Table 6.2 Floodway Data

TABLE 6.1**MEANDERED WATER BODIES**

	<u>Name</u>	<u>Location (Township, Range)</u>
1.	Lake Adaho	9S, 23E
2.	Lake Ashley	9S, 23E
3.	Boyd's Lake	9S, 24E
4.	Brantley Lake	9S, 23 & 24E
5.	Lake Broward	11S, 27E
6.	Lake Clearwater	9S, 24E
7.	Cowpens Lake	10S, 23E
8.	Crescent Lake	11, 12 & 13 S, 27 & 28E
9.	Lake George	13S, 26 & 27 E
10.	George's Lake	8S, 24 & 25 E
11.	Lake Goodson	9S, 23 E
12.	Goose Lake	9S, 23E
13.	Lake Grandin	9S, 24E
14.	Levy's Prairie Lake	10S, 24E
15.	Little Lake George	12S, 26E
16.	Lons Lake	9S, 23E
17.	Orange Grove Lake	9S, 24E
18.	Lake Rowan	9S, 23E
19.	Lake Suggs	9S, 23E
20.	Swan Lake	9S, 23E
21.	Wall Lake	9S, 23E
22.	St. John's River	
23.	Dunn's Creek	

TABLE 6.2 – FLOODWAY DATA FOR PUTNAM COUNTY¹

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE ²	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Acosta Creek								
A	150	246	1,045	1.4	6.4	2.1 ³	2.8	0.7
B	730	153	934	1.6	7.3	7.3	7.7	0.4
C	1,580	263	1,690	0.9	9.2	9.2	10.1	0.9
D	2,795	144	1,256	1.2	15.0	15.0	15.1	0.1
E	4,745	287	2,115	0.7	16.4	16.4	17.4	1.0
F	5,730	104	604	2.4	19.3	19.3	20.2	0.9
G	7,320	193	1,213	1.2	27.1	27.1	28.1	1.0
H	8,560	218	1,049	1.4	29.1	29.1	29.9	0.8
I	9,930	171	884	1.2	33.6	33.6	34.6	1.0
J	11,640	91	432	2.4	39.1	39.1	40.0	0.9
K	13,465	113	489	2.1	47.8	47.8	48.7	0.9
L	15,415	93	563	1.3	56.2	56.2	56.7	0.5
M	16,325	88	415	1.7	57.9	57.9	58.8	0.9

¹ Flood Insurance Study, Putnam County Florida (Unincorporated Areas), Federal Emergency Management Agency (August 16, 1994).

² Distance in feet from mouth.

³ Elevation computed without consideration of backwater effects from St. John's River

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE ⁴	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Etoniah Creek								
A	885	868	9,138	0.6	21.6	21.6	22.5	0.9
B	3,935	798	7,243	0.7	22.2	22.2	23.2	1.0
C	7,195	715	4,818	1.1	24.3	24.3	25.2	0.9
D	11,125	588	4,206	1.3	27.5	27.5	28.2	0.7
E	13,445	674	4,983	1.1	29.8	29.8	30.8	1.0
F	18,920	873	6,151	0.9	32.9	32.9	33.8	0.9
G	23,620	882	4,985	1.0	35.7	35.7	36.7	1.0
H	26,620	630	4,078	1.3	38.3	38.3	39.2	0.9
I	30,130	477	3,753	1.4	41.5	41.5	42.1	0.6
J	33,170	508	4,408	1.2	43.5	43.5	44.3	0.8
K	35,602	611	5,207	1.0	44.6	44.6	45.5	0.9
L	38,182	559	4,126	1.2	46.4	46.4	47.4	1.0
M	41,207	439	3,115	1.3	50.5	50.5	51.1	0.6
N	43,717	309	2,925	1.4	54.0	54.0	54.9	0.9
O	46,717	318	2,701	1.5	58.3	58.3	59.2	0.9

⁴ Distance in feet from Bardin Road

(Etoniah Creek Continued)								
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY FEET	WITH FLOODWAY NGVD	INCREASE
P	49,937	238	2,214	1.8	64.4	64.4	65.4	1.0
Q	51,332	115	1,028	3.7	67.6	67.6	68.2	0.6
R	55,567	178	1,980	1.9	74.6	74.6	75.4	0.8
S	58,137	159	2,155	1.7	76.7	76.7	77.4	0.7
T	61,747	291	2,942	1.2	78.7	78.7	79.5	0.8
U	65,927	264	1,891	1.9	81.2	81.2	82.1	0.9

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE ⁵	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH NAVIGATION	INCREASE
Falling Branch								
A	2,070	56	505	3.1	70.3	70.3	71.3	1.0
B	2,994	115	1,114	1.4	71.6	71.6	72.5	0.9
C	3,723	121	1,028	1.4	72.1	72.1	73.1	1.0
D	5,663	139	923	1.6	74.1	74.1	75.1	1.0
E	7,713	218	1,705	0.9	75.8	75.8	76.8	1.0
F	9,491	251	806	1.8	78.8	78.8	79.7	0.9
G	13,067	46	181	1.6	84.3	84.3	85.3	1.0
H	15,388	28	107	1.8	101.0	101.0	101.5	0.5

⁵Distance in feet from Etoniah Creek

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE ⁶	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH NAVIGATION	INCREASE
Simms Creek								
A	15,750	773	7,858	0.8	21.1	21.1	22.1	1.0
B	19,170	575	5,042	1.3	23.3	23.3	24.3	1.0
C	20,955	613	5,543	1.2	25.3	25.3	26.3	1.0
D	23,915	824	7,125	0.9	27.1	27.1	28.1	1.0
E	27,205	668	5,485	1.2	29.2	29.2	30.2	1.0
F	30,165	553	5,072	1.3	32.2	32.2	33.2	1.0
G	32,485	745	5,625	0.8	34.5	34.5	35.5	1.0
H	34,225	670	4,129	0.8	36.0	36.0	37.0	1.0
I	37,425	328	2,108	1.2	42.5	42.5	43.5	1.0
J	40,715	414	2,418	1.0	47.9	47.9	48.9	1.0
K	42,965	332	1,896	1.3	52.9	52.9	53.9	1.0
L	44,995	263	1,617	1.5	58.2	58.2	59.2	1.0
M	46,745	280	1,660	1.5	63.3	63.3	64.3	1.0

⁶Distance in feet from mouth

(Simms Creek Continued)								
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH NAVIGATION	INCREASE
N	48,545	193	1,259	2.0	67.4	67.4	68.3	0.9
O	50,970	246	1,671	1.2	72.5	72.5	73.5	1.0
P	53,300	188	1,184	1.7	77.4	77.4	78.4	1.0
Q	55,280	241	1,575	1.3	81.5	81.5	82.5	1.0
R	58,110	230	1,427	1.4	87.2	87.2	88.2	1.0

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE ⁷	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH NAVIGATION	INCREASE
Tributary 1-A to Simms Creek								
A	1,885	306	1,481	1.7	32.6	32.6	33.6	1.0
B	4,665	189	1,073	2.4	40.2	40.2	41.2	1.0
C	7,321	339	2,914	0.7	51.5	51.5	52.5	1.0
D	9,447	248	1,152	1.9	53.0	53.0	54.0	1.0
E	11,887	188	741	2.9	59.05	59.05	60.2	0.7
F	13,263	162	1,095	1.8	66.6	66.6	67.1	0.5
G	14,135	160	1,115	1.8	68.3	68.3	69.3	1.0
H	15,813	145	1,332	1.5	75.0	75.0	75.9	0.9
I	17,363	144	966	1.2	77.5	77.5	78.5	1.0
J	19,976	164	673	1.8	84.5	84.5	85.5	1.0
K	22,327	169	648	1.4	94.6	94.6	95.3	0.7
L	23,302	301	818	1.1	96.9	96.9	97.2	0.3
M	24,802	419	760	1.2	101.0	101.0	102.0	1.0
N	26,402	330	992	0.9	103.7	103.7	104.6	0.9
Tributary 1-A to Simms Creek								
A	1,390	121	619	1.4	78.3	78.3	79.3	1.0
B	4,665	516	1,526	0.5	89.6	89.6	90.6	1.0
C	6,190	248	770	0.9	90.7	90.7	91.7	1.0
D	8,070	148	298	1.0	99.7	99.7	100.7	1.0

⁷Distance from Mouth

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH NAVIGATION	INCREASE
Tributary 2 to Simms Creek								
A	4,878	219	1,217	1.4	49.1	49.1	50.0	0.9
B	6,588	174	891	2.0	53.8	53.8	54.8	1.0
C	10,650	174	826	1.6	67.1	67.1	67.9	0.8
D	12,675	179	747	1.7	73.1	73.1	74.1	1.0
E	15,825	152	743	1.7	84.5	84.5	85.5	1.0
F	17,929	163	823	1.1	94.1	94.1	95.1	1.0
G	20,679	214	975	1.0	97.6	97.6	98.6	1.0
H	23,029	224	858	1.1	100.8	100.8	101.7	0.9
I	25,317	350	1,254	0.6	104.5	104.5	105.5	1.0
J	26,317	438	1,529	0.5	104.8	104.8	105.8	1.0

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION IN FEET NVGD			
CROSS SECTION	DISTANCE ⁸	WIDTH (FEET)	SECTION AREA (SQ. FT)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY ⁹	WITH NAVIGATION	INCREASE
Dunns Creek								
A	5,592	420	5,653	2.9	6.3	1.5	2.5	1.0
B	11,032	396	6,198	2.7	6.3	2.3	3.1	0.8
C	16,357	325	5,510	3.0	6.3	2.9	3.7	0.8
D	21,847	291	5,155	3.2	6.3	3.6	4.3	0.7
E	24,667	328	6,398	2.6	6.3	4.0	4.7	0.7
F	29,442	349	6,577	2.5	6.3	4.3	5.0	0.7

⁸Distance in feet from mouth

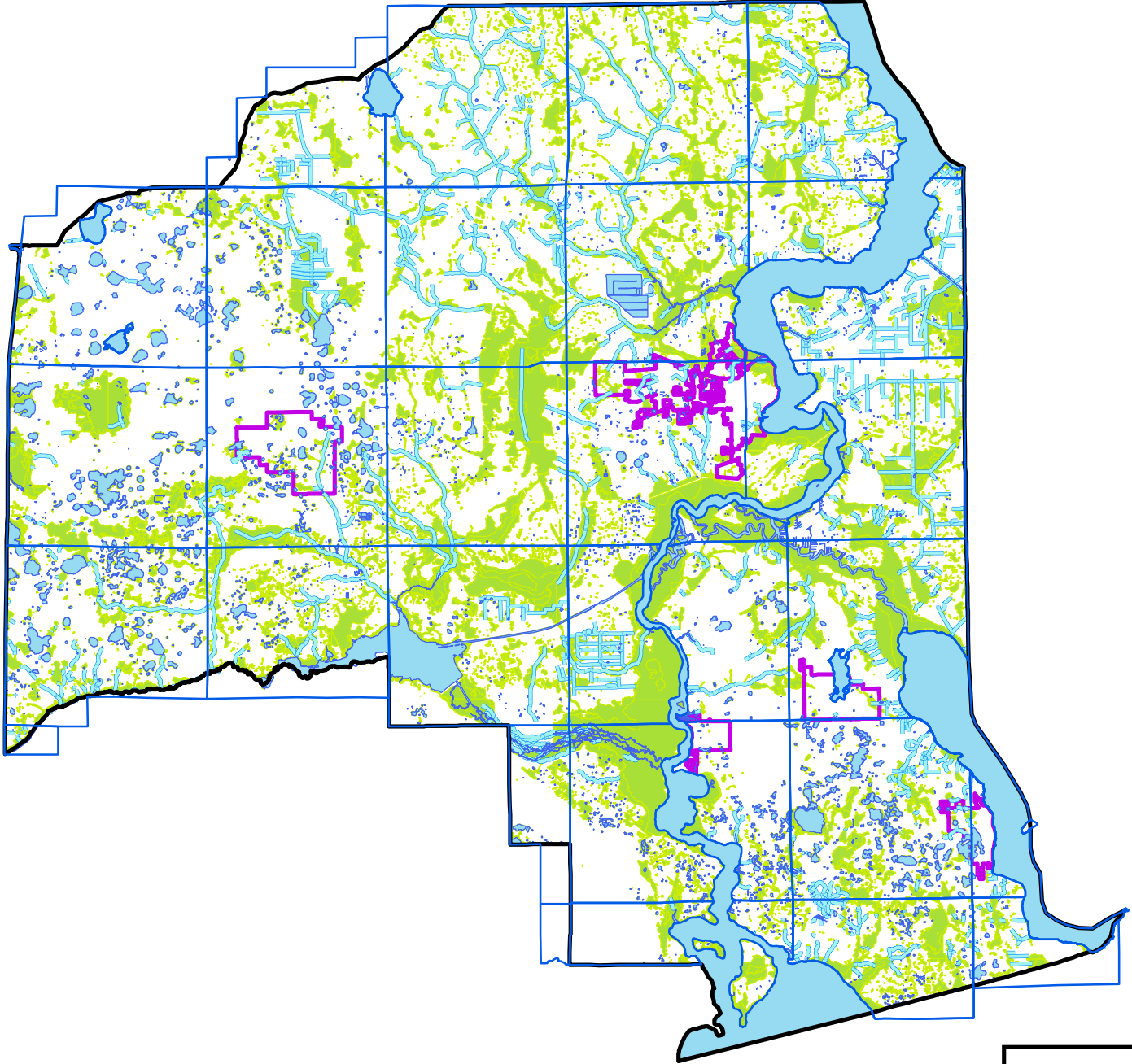
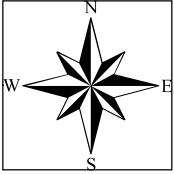
⁹Elevation computed without consideration of backwater effects from St. Johns River

Maps

(Website has separate link for Figures)

Map 1	Wetlands
Map 2	Lands of Interest
Map 3	Floodplain
Map 4	Wellheads
Map 5	Floridan Aquifer Recharge Areas

MAP 1: WETLANDS



LEGEND

- Waterbody
- Wetlands
- Municipal Boundaries



Prepared by: AG	Checked by: N/A	Approved by:
Date: TBD	Date: N/A	Date:
Source: PUTNAM CO. PROPERTY APPRAISER, PLANNING & DEVELOPMENT		
Revisions:		
Revisions:		
Revisions:		

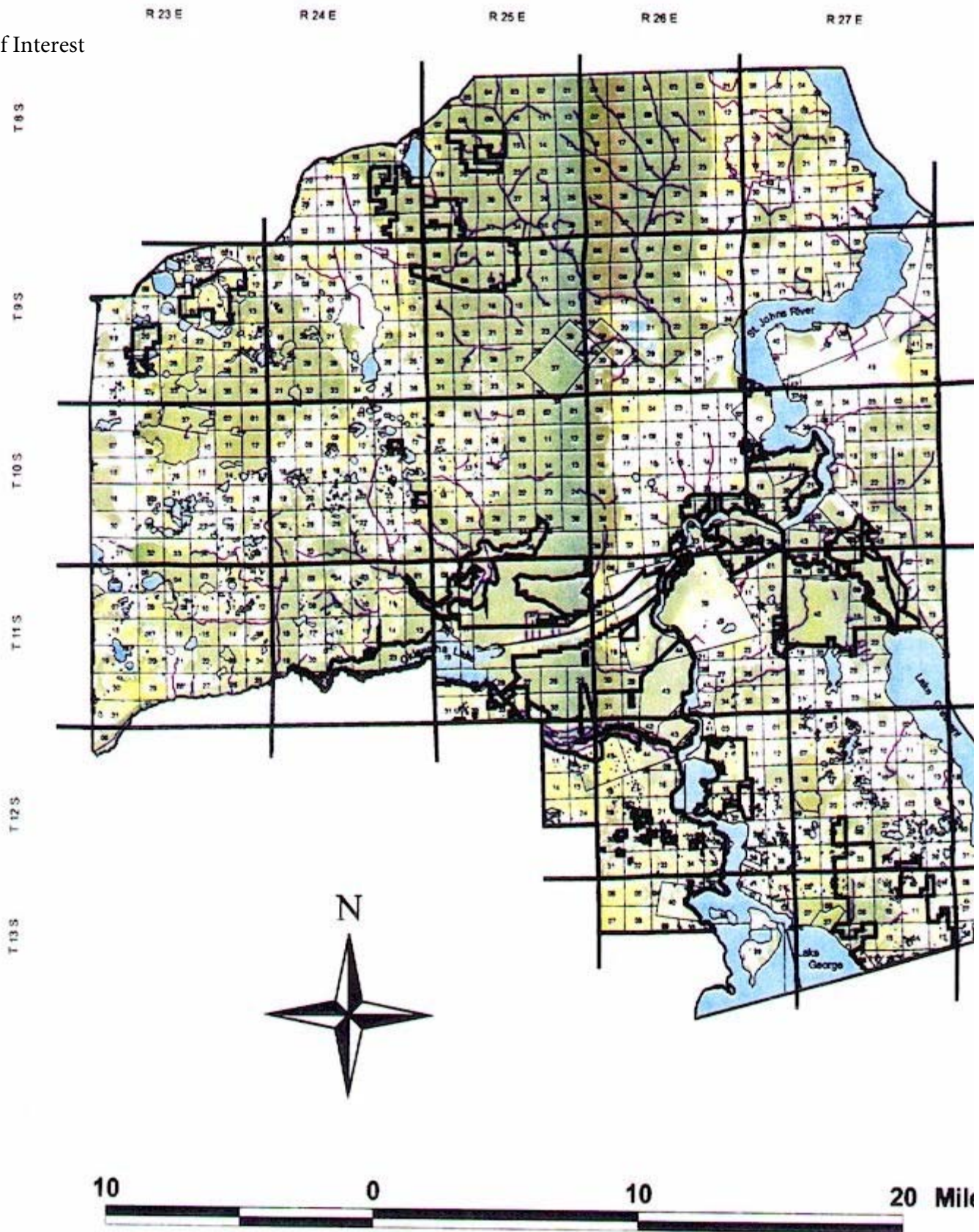
"This map was created using digital database information which was developed from one or more local government sources within Putnam County, Fl., and may include additional information from other public and private sources which may be subject to license and/or copyright. All provided Geographic Information System data is to be considered a generalized spatial representation that is subject to revisions. Maps and associated information must be accepted and used by the recipient with the understanding that the primary information sources should be consulted for verification on the information contained on these maps. As such, no warranties, expressed or implied, are given concerning the accuracy, completeness, reliability or suitability of this data for any particular use. Furthermore, this information is provided as a visual representation only and is not intended to be used as a legal or official representation of legal boundaries."

The Putnam County Board of County Commissioners joined by the county departments, together with the constitutional offices of; Clerk or the Circuit Court; Property Appraiser; Sheriff; Supervisor or Elections; and Tax Collector; assumes no liability whatsoever associated with the use or misuse of this data.



PUTNAM COUNTY

Prepared By:
PLANNING & DEVELOPMENT SERVICES
PUTNAM COUNTY, FLORIDA
2014

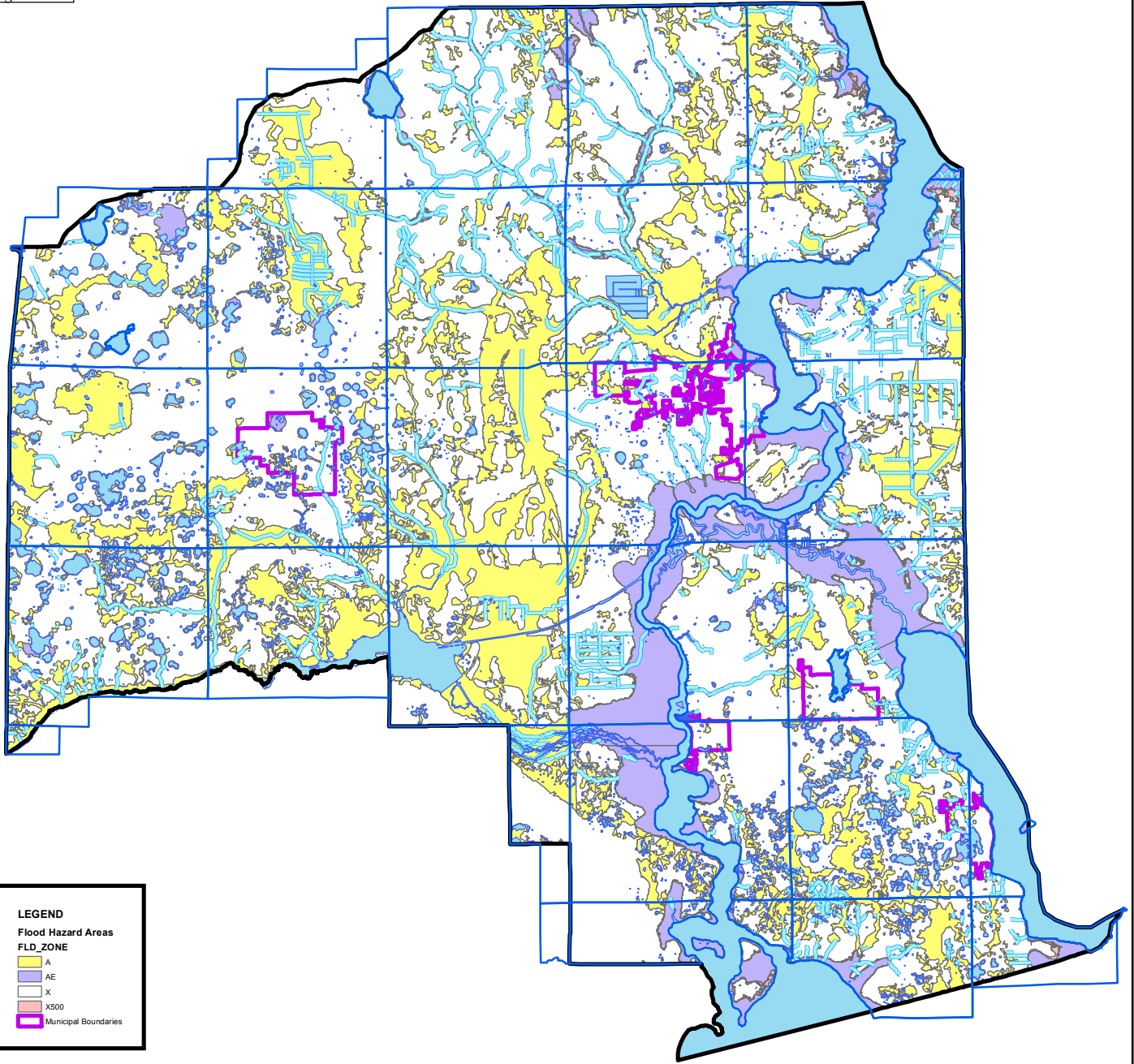
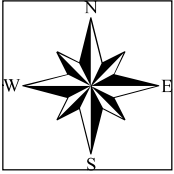
Map 2: Lands of Interest



MAP LEGEND

-  Lands of Interest Composite: (Biodiversity Hot Spots, TNC Ecological Resource Conservation Area, FNAI Potential Natural Areas, and Strategic Habitat Conservation Area)
-  Publicly Owned Lands

Map 3: Floodplain



LEGEND
Flood Hazard Areas
FLD_ZONE

- A
- AE
- X
- X500
- Municipal Boundaries



Prepared by: AG	Checked by: N/A	Approved by:
Date: TBD	Date: N/A	Date:
Source: PUTNAM CO. PROPERTY APPRAISER, PLANNING & DEVELOPMENT		
Revisions:		
Revisions:		
Revisions:		

"This map was created using digital database information which was developed from one or more local government sources within Putnam County, FL, and may include additional information from other public and private sources which may be subject to license and/or copyright. All provided Geographic Information System data is to be considered a generalized spatial representation that is subject to revisions. Maps and associated information must be accepted and used by the recipient with the understanding that the primary information sources should be consulted for verification on the information contained on these maps. As such, no warranties, expressed or implied, are given concerning the accuracy, completeness, reliability or suitability of this data for any particular use. Furthermore, this information is provided as a visual representation only and is not intended to be used as a legal or official representation of legal boundaries."

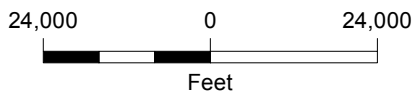
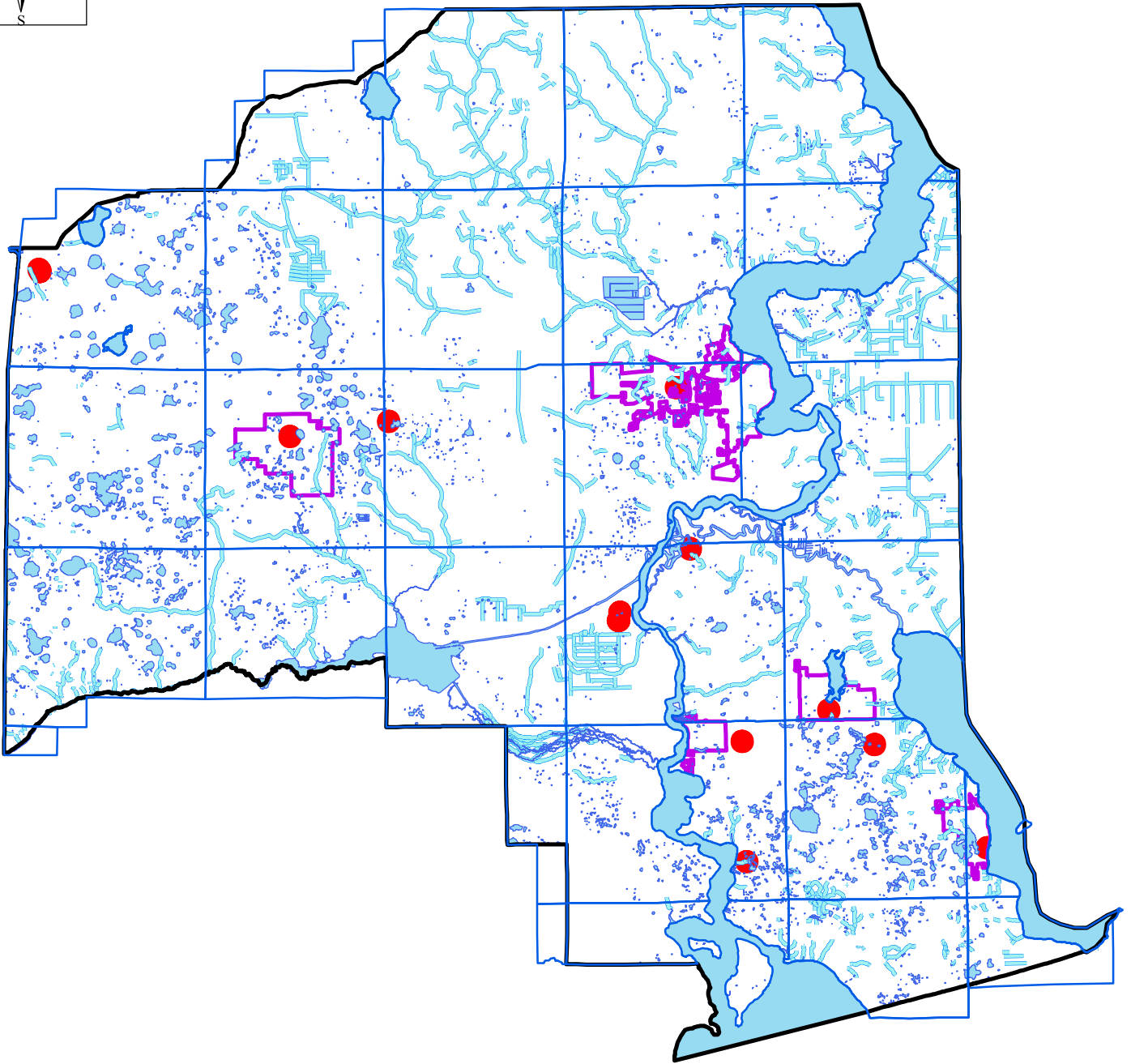
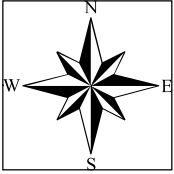
The Putnam County Board of County Commissioners joined by the county departments, together with the constitutional offices of; Clerk or the Circuit Court; Property Appraiser; Sheriff; Supervisor or Elections; and Tax Collector; assumes no liability whatsoever associated with the use or misuse of this data.

PUTNAM COUNTY

Parcel(s):

Prepared By:
 PLANNING & DEVELOPMENT SERVICES
 PUTNAM COUNTY, FLORIDA
 2014

Map 4: Wellheads



Prepared by: AG	Checked by: N/A	Approved by:
Date: TBD	Date: N/A	Date:
Source: PUTNAM CO. PROPERTY APPRAISER, PLANNING & DEVELOPMENT		
Revisions:		
Revisions:		
Revisions:		

"This map was created using digital database information which was developed from one or more local government sources within Putnam County, FL, and may include additional information from other public and private sources which may be subject to license and/or copyright. All provided Geographic Information System data is to be considered a generalized spatial representation that is subject to revisions. Maps and associated information must be accepted and used by the recipient with the understanding that the primary information sources should be consulted for verification on the information contained on these maps. As such, no warranties, expressed or implied, are given concerning the accuracy, completeness, reliability or suitability of this data for any particular use. Furthermore, this information is provided as a visual representation only and is not intended to be used as a legal or official representation of legal boundaries."

The Putnam County Board of County Commissioners joined by the county departments, together with the constitutional offices of; Clerk or the Circuit Court; Property Appraiser; Sheriff; Supervisor or Elections; and Tax Collector; assumes no liability whatsoever associated with the use or misuse of this data.

PUTNAM COUNTY

Parcel(s):

Prepared By:
 PLANNING & DEVELOPMENT SERVICES
 PUTNAM COUNTY, FLORIDA
 2014

MAP 5: Floridan Aquifer Recharge Areas

