

Water Code

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Code Pertaining to Water Quality

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Sec. 110-181. - Coastal shoreline impact.

(a) Applicants for development along the Salt Ponds, Riviera Canal, Atlantic Ocean, Gulf of Mexico, or other coastal shorelines shall be required to submit, as part of the permitting process, plans which demonstrate how the development shall incorporate features designed to protect against potential adverse impacts to the following:

- (1) Shoreline vegetation and stabilization;
- (2) **Water** quality;
- (3) Native habitat, including reef systems, seagrass beds, and coastal nontidal wetland habitats;
- (4) Living marine resources; and
- (5) Shoreline access.

(b) No shoreline development shall be approved until the applicant has demonstrated that potentially adverse impacts shall be prevented or that compensatory mitigation shall occur. The criteria in this article shall be enforced at plan review.

Sec. 110-182. - Shoreline vegetation and stability.

(a) No vegetation shall be removed from a shoreline without a duly authorized permit. No mangroves shall be removed except to the extent necessary to allow for ten-percent disturbance of a conservation designated site. The applicant shall be required to revegetate, stabilize, and enhance damaged shorelines by planting native vegetation, including mangrove and/or appropriate native plant species which:

- (1) Contribute to marine productivity and **water** quality;

(2)Offer protection from erosion and flooding; and

(3)Contribute to the natural soil building process.

(b)Whenever vegetation is removed, the applicant/developer must provide mitigation plan ensuring that revegetation shall occur at a ratio three to ten times the affected habitat. The mitigation plan shall be subject to review by the planning board and by the appropriate federal and/or state agencies having jurisdiction.

(c)Hardening of the shoreline with riprap, bulkheads or other similar devices shall not be allowed unless erosion constitutes a critical peril to upland property and the use of vegetation has failed to stabilize the shoreline. In such case, riprap shall be the first alternative. Such shoreline hardening structures shall generally not be vertical seawalls or bulkheads. The specific location and design of such structures shall:

(1)Comply with the best management principles and practices and be accomplished by use of the least environmentally damaging methods and designs possible;

(2)Avoid a vertical slope which generates erosive tendencies, especially to adjacent unprotected shoreline properties. Pervious interlocking tile systems, filter mats, and similar stabilization methods shall be used in lieu of vertical walls whenever feasible;

(3)Not be located waterward of the mean high **water** line except when it is shown to be in the public interest;

(4)First be approved by other public agencies having jurisdiction; and

(5)Incorporate a program of shoreline vegetation or revegetation in order to build, enhance, and stabilize a natural shoreline.

(Ord. No. 97-10, § 1(3-11.4(B)), 7-3-1997)

Sec. 110-183. - Living marine resources.

(a)Development along the coastal shoreline or within an area extending 600 feet into the tidal **water** adjacent to the corporate city limits shall avoid adverse impacts of development on benthic communities within tidal **waters**, including seagrass beds, algal beds, and other live bottom communities, reef systems as well as adverse impacts on the coastal nontidal wetland habitats. Since these areas are sensitive to increased turbidity and other forms of pollution, **water** runoff and introduction of nutrients, these forms of pollution shall be regulated through effective **water** quality management criteria. Plans for development impacting marine resources shall be coordinated with state agencies having jurisdiction prior to the city granting development plan approval and/or prior to release of any permit for construction. Compensatory mitigation may be permitted in cases of overriding public benefit where both the city and the state and federal agencies having jurisdiction approve the mitigation measures proposed by the developer. Any such development shall ensure continuance and maintenance of essentially natural conditions in order to further propagation of fish and wildlife as well as public recreation opportunities.

(b)All applicants proposing development activities along the coastal shoreline or within submerged areas shall be required to submit a development plan pursuant to development plan review regulations. Such development plan shall provide information describing marine life potentially impacted by proposed land uses as well as related construction activity. The plan shall stipulate assurances that the proposed project shall not adversely impact marine life or **water** quality. For instance, **water** quality control techniques such as the use of weirs for purposes of managing turbidity may be required by the city. In addition, the city shall require surveys of existing conditions, specifications of planned site improvements, and techniques to be used during construction as well as in operating and maintaining the land use in order to prevent damage to living marine organisms.

(c)Any proposed development which may impact known sea turtle nesting areas, such as along the sandy beach at Fort Zachary Taylor, shall include a mitigation plan which avoids the disturbance of nests. Site and building plans for construction of single-family or multifamily dwellings, parking lots, dune walkovers or any other lighted structures within the direct line of sight of such beaches shall incorporate the following:

(1)Low-profile and low-density lighting will be used in parking lots, and such lighting shall be positioned so that the source of light is not visible from the beach.

(2)All lights on balconies will be shielded from the beach.

(3)Floodlights on buildings or adjacent to the beach shall be positioned so that the source of light is not visible from the beach or, if required for safety, positioned in such a manner as to minimize impacts on turtles.

(4)Where lights are used, low-profile and low-intensity shielded lights will be used on dune walkovers.

(d)Any planned beach renourishment project shall protect sea turtle nesting areas by ceasing development activity during the nesting season (May 1 through October 31), or by collecting eggs from the nests, incubating them, and relocating the hatchlings.

(e)Coral reefs shall not be destroyed by development activities. The city shall assist reef relief in distributing educational material concerning the coral reef, including information on boating practices which are harmful to the coral reef. Wastewater system improvements identified in the comprehensive plan capital improvement schedule shall also be carried out to reduce potential adverse impacts on the coral reef.

(Ord. No. 97-10, § 1(3-11.4(C)), 7-3-1997)

Sec. 110-186. - Marinas and dock facilities.

All new and expanded marinas shall provide a demonstration of compliance with state **water** quality standards by maintaining a **water** quality monitoring program approved by the state department of environmental protection.

Sec. 110-187. - Ocean, gulf and nearshore **water quality.**

In order to protect the **water** quality of the Atlantic Ocean, the Florida Bay, and the Gulf of Mexico, no new point-source pollution shall be permitted to discharge into these **waters** or into ditches or canals flowing into these **waters**. In addition, in order to reduce non-point-source pollutants the city shall require the following:

(1) Surface **water** management systems shall be consistent with the city's adopted drainage level of service (reference comprehensive plan policy 4-1.1.1) and applicable federal, state, and regional standards.

(2) A vegetated pond with sloping wetland buffers shall be established and maintained as part of the surface **water** management requirements. Prior to construction of the surface **water** management system for any phase of a project, the developer shall prepare a design and management plan for the wetland/littoral zone that will be developed as part of these systems. The plan should:

a. Include typical cross sections of the surface **water** management system showing the average groundwater elevation and the minus three-foot contour (i.e., below average elevation) or a 75-foot distance from the wetland buffer, whichever is greater;

b. Specify how vegetation is to be established within this zone, including the extent, method, type and timing of any planting to be provided;

c. Include the removal of all exotic vegetation; and

d. Provide a description of any management procedures to be followed in order to ensure the continued viability and health of the stormwater management system. The wetlands as established shall consist entirely of native aquatic vegetation and shall be maintained permanently as part of the **water** management system. As a minimum, ten square feet of vegetated littoral zone per linear foot of wetland shoreline should be established as part of the **water** management plan. The developer's vegetated/littoral zone management plan shall include a plan acceptable to the city for the longterm management and maintenance of stormwater, aquatic vegetation, and shoreline stabilization. The burden for perpetual maintenance rests with the property owner. If the city establishes a citywide utility district, the city may implement a city management strategy to be funded through an equitable assessment of property owners.

Sec. 74-296. - Definitions.

The following definitions shall apply:

Impervious means land surfaces that do not allow the penetration of **water**, including paved roads, sidewalks, driveways, parking lots and highly compacted areas such as shell or clay.

Irrigation means the direct application of **water** by means other than precipitation.

Irrigation systems means equipment and devices that deliver **water** to plants being irrigated including, but not limited to pipelines, control structures, pipes and ditches, pumping stations, emitters, valves and fittings. This does not include the transfer of **water** through **water** management systems from one location to another.

Sec. 74-297. - Restrictions.

(a) Irrigation of any residential, commercial, institutional, governmental or industrial landscape areas shall be restricted to the hours of 5:00 p.m. to 9:00 a.m.

(b) It shall be unlawful to operate or cause the operation of any irrigation system or device in a manner causing potable **water** to be wasted. Such unlawful operations shall include, but not be limited to, unnecessary **watering** of impervious areas, other than that which may occur incidental to the proper operation of the primary irrigation system.

(c) Upon the effective date of Ordinance [No. 02-28, January 1, 2003,] new installations of automatic irrigation systems shall be equipped with a **water** sensing device that shall automatically discontinue irrigation during periods of rainfall.

(Ord. No. 02-28, § 3, 11-19-2002)

Sec. 74-298. - Exemptions.

The following activities shall be exempt from the provisions of [section 74-297](#)(a):

(1) Landscape irrigation by hand **watering** using a self-canceling nozzle.

(2) Landscape irrigation by systems from which the sole source is treated wastewater effluent.

(3) The operation of irrigation systems for system repair and maintenance.

(4) Flushing of **water** mains required for normal **water** main clearance and maintenance and for maintenance of **water** quality; provided, however, where practical, contractors shall direct flushed **water** into pervious areas, flush at the minimum rate necessary for cleaning, and disperse the **water** in such a manner to benefit local vegetation.

(5) Landscape irrigation for purposes of **watering** in fungicides, insecticides and herbicides as required by the manufacturer or by federal or state laws; provided, however, this exemption applies only to licensed pest control operators and shall be limited to manufacturer's recommendations.

(6) Landscape irrigation for the purpose of **watering** newly planted grass and foliage for the first 45 days after initial installation.

(7) Irrigation activity for dust emissions required by court or administrative action.

(8) Irrigation of agriculture where the use of **water** is permitted by a consumptive or **water** use permit issued by the South Florida **Water** Management District.

Sec. 108-956. - Potable **water** and wastewater.

All development plans shall include commitments demonstrating ability to comply with the following:

(1)*Access to potable **water***. All applicants for new development prior to issuance of development orders or permits must demonstrate that a source of **water** supply is available and that all issues surrounding usage of such potable **water** are being managed and coordinated with the Florida Keys Aqueduct Authority.

(2)*Access to wastewater disposal systems*. Prior to the issuance of development orders or permits, all applicants for new development must demonstrate compliance with regulations of all federal, state, and local on-site wastewater treatment systems. The location, timing, and scale of development shall be regulated in order to ensure that new development is effectively served by wastewater services. The proliferation of permanent package treatment plants shall be discouraged. System reviews shall be coordinated with the state department of environmental protection in order to promote best management practices and compliance with relevant state permitting procedures. On-site wastewater package treatment plants, including their impacts on **water** quality, shall be regulated. All new or altered on-site individual wastewater treatment improvements shall be compliant with regulations of federal and state agencies having jurisdiction. Furthermore, no new septic tanks shall be permitted. The city shall not approve any on-site package plant unless the plant complies with all federal and state regulations. Use of on-site wastewater collection systems shall be limited to the following conditions:

a. Existing septic tank and package treatment plants may remain in service until such time as centralized service is made available.

b. Use of septic tank systems for new development shall be prohibited within the service area of the city system west of the Cow Key Channel Bridge. The potential for **water** quality problems emerging in the city is increased by the high **water** table and the likelihood of tile fields beginning to submerge during high tides. Under such conditions the pollutants cannot be absorbed and the pollutants enter the groundwater system and are eventually discharged to the **waters** surrounding the city.

c. Use of package treatment plants shall comply with applicable laws governing the location, use, and design of the facility. Package treatment plants shall be designed in a manner which facilitates integration into the citywide system in the future. Package treatment plants shall be designed to achieve effluent limitations of 20 milligram/liter BOD and 0.5 total suspended solids on an annual average. In addition, NO₃ cannot exceed 12 mg/l on an annual average. All owners of wastewater treatment plants shall provide sufficient on-site certified operator time as determined by the state department of environmental protection, in order to ensure that estuarine and potable **water** systems are protected from pollution. As a minimum, the following are required:

1. Surge tanks (flow equalization tanks) are required on all treatment plants with design flows less than 100,000 gallons per day.

2. The system for monitoring treatment efficiency shall include a schedule with a minimum frequency increased to one grab sample per week.

3. A flow measuring device is required which will provide a record of diurnal flow changes as well as total daily flow.

4. An emergency power source for treatment facilities shall be provided for purposes of preventing interruptions in treatment services.

d.All development located within areas where central sewer facilities are not currently available shall be required to connect into the central sewer system when the system has been extended within 100 feet of the subject parcel.

(Ord. No. 97-10, § 1(3-10.9), 7-3-1997)

Sec. 108-957. - Conservation of potable [water](#) supply.

The city shall assist in regulating development for purposes of complying with policies of the South Florida **Water** Management District directed toward conservation of potable **water** supply and to achieve a reduction in the current rates of **water** consumption. Therefore, development plans shall be required to comply with the following potable **water** supply performance criteria:

(1)Where nonpotable alternative sources of irrigation **water** are available, potable **water** supplies shall not be used to meet irrigation needs.

(2)All new development shall be required to use **water**-saving plumbing fixtures.

(3)In order to reduce demand for irrigation **water**, which in turn often places greater demand upon potable **water** sources, at least 70 percent of all landscaping material obtained from off-site sources for use on any site should be native plant material adapted to soil and climatic conditions existing on the subject site. Further, at least 50 percent of all trees used in landscaping shall be drought tolerant native species adapted to soil and climatic conditions existing on site in order to lessen **water** demand. Refer to [section 108-518](#) for recommended plant material.

(4)The city shall require, to the extent lawful, reuse of **water**, including use of cisterns for collecting rainwater, for use in spray irrigation. In addition, the city may require mandatory hookup to systems distributing reclaimed **water** within 500 feet of the site.

Sec. 74-168. - Prohibited discharges to public sewers.

No person shall discharge or cause to be discharged any of the following described **waters** or wastes to any public sewers:

(1)Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.

(2)Any **waters** or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving **waters** of the sewage treatment plant, including but not limited to cyanides in excess of two milligrams per liter (mg/l) as cyanides (CN) in the wastes as discharged to the public sewer.

(3)Any **waters** or wastes having a pH lower than 5.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.

(4)Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works, such as but not limited

to ashes; cinders; sand; mud; straw; shavings; metal; glass; rags; feathers; tar; plastics; wood; unground garbage; whole blood; paunch manure; hair and fleshings; entrails; and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

(Code 1986, § 74.33)

Sec. 74-169. - Discharge of potentially harmful wastes.

No person shall discharge or cause to be discharged the following described substances, materials, **waters**, or wastes if it appears likely in the opinion of the director that such wastes can harm either the sewers, sewage treatment process, or equipment; have an adverse effect on the receiving stream; or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the director will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewage treatment plant, and other pertinent factors. The substances prohibited are as follows:

- (1) Any liquid or vapor having a temperature higher than 150 degrees Fahrenheit (65 degrees Celsius).
- (2) Any **water** or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of 100 mg/l or containing substances which may solidify or become viscous at temperatures between 32 and 150 degrees Fahrenheit (zero and 65 degrees Celsius).
- (3) Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of three-fourths horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the director.
- (4) Any **waters** or wastes containing strong acid iron pickling wastes, or concentrated plating solutions whether neutralized or not.
- (5) Any **waters** or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the limits established by the director for such materials.
- (6) Any **waters** or wastes containing phenols or other taste- or odor-producing substances, in such concentrations exceeding limits which may be established by the director as necessary, after treatment of the composite sewage, to meet the requirements of the state, federal, or other public agencies of jurisdiction for such discharge to the receiving **waters**.
- (7) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the director in compliance with applicable state or federal regulations.
- (8) Any **waters** or wastes having a pH in excess of 9.5.
- (9) Materials which exert or cause:

a.Unusual concentrations of inert suspended solids, such as but not limited to fuller's earth, lime slurries, and lime residues, or of dissolved solids, such as but not limited to sodium chloride and sodium sulfate.

b.Excessive discoloration, such as but not limited to dye wastes and vegetable tanning solutions.

c.Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.

d.Unusual volume of flow or concentration of wastes constituting slugs as defined in this article.

(10)**Waters** or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment process employed or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving **waters**.

Sec. 74-170. - Actions of director for potentially harmful wastes.

(a)If any waters or wastes are discharged or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in [section 74-169](#) and which, in the judgment of the director, may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters or which otherwise create a hazard to life or constitute a public nuisance, the director may:

(1)Reject the wastes;

(2)Require pretreatment to an acceptable condition for discharge to the public sewers;

(3)Require control over the quantities and rates of discharge; and/or

(4)Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under subdivision II of division 5 of this article.

(b)If the director permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the director and subject to the requirements of all applicable codes, ordinances, and laws.

(c)The director shall notify the city manager in writing of conditions present to which actions in this section are applicable.

Sec. 110-86. - Applicability.

In order to promote and preserve natural hydrological conditions and to preserve **water** quality, natural habitats, and environmentally sensitive areas, sections [110-87](#) through [110-91](#) shall be applied to wetlands and transitional wetlands, regardless of their zoning, and to all areas designated conservation on the future land use map.

Sec. 82-41. - No discharge zone.

(a) For the purpose of this section, the term "vessel" means any boat, houseboat, charterboat, fishing boat, or floating structure, whether or not habitable.

(b) The jurisdictional **waters** of the city are declared to be a no discharge zone. It shall be unlawful for any person to discharge treated or untreated sewage into the jurisdictional **waters** of the city from any vessel, whether moored, docked, in transit, or otherwise located within these **waters**.

(c) Every marina in Key West shall install sanitary sewage pump-out facilities to serve every vessel and floating structure that docks at the marina. The marina proprietor shall require that the owner or operator of each vessel and floating structure both lock out the black **water** discharge pipe and use the pump-out facilities as a condition of dockage; all leases or other agreements for dockage shall include this pump-out requirement, as well as a statement that the jurisdictional **waters** of Key West are a no discharge zone. Each marina owner shall post conspicuous signage informing vessel operators of the no discharge zone. Except as provided in [section 82-33\(d\)](#), pump-out shall occur within 24 hours of the vessel's arrival at the marina, unless the vessel departs within 24 hours of arrival, in which case pump-out is not required. Every such private marina shall maintain a pump-out log showing the sewage disposal history of each vessel and floating structure during its dockage at the marina. Every owner of a vessel docking or mooring within the jurisdictional **waters** of Key West shall also maintain such a pump-out log at all times that the vessel is in Key West **waters**. The marina proprietor shall file with the director of utilities a plan for the collection and disposal of vessel and floating structure sewage not later than December 1, 2002, at which date enforcement of the requirements of this subsection shall commence.

(d) Violations of this section are punishable as provided in [section 82-1](#). A conviction under this section may result in eviction from a city marina.

Sec. 122-201. - Intent.

(a) The coastal low density residential district (LDR-C) is established to implement comprehensive plan policies for areas designated "LDR-C" on the comprehensive plan future land use map. These areas are situated on the north side of South Roosevelt Boulevard on the very narrow strip of uplands lying between the "bridle path" easement and jurisdictional **waters** and lands of the state as well as certain undeveloped lands east of Atlantic Boulevard which are located fully within the coastal high hazard velocity (VE) zone as delineated by the Federal Emergency Management Agency. These areas are restricted to residential development with a maximum density of one unit per acre and shall not include transient lodging or guesthomes. Supportive public community facilities and accessory land uses also may be located within areas designated for coastal low density residential use.

(b) The coastal low density residential (LDR-C) designation is established to:

- (1) Provide an equitable development right for the LDR-C designated areas;
- (2) Protect remaining coastal wetlands;
- (3) Maintain **water** quality;

(4)Protect marine habitats; and

(5)Preserve a significant amount of open space for purposes of reducing surface **water** runoff and maintaining **water** quality in a major environmentally sensitive coastal area.

Sec. 74-362. - Findings, determinations and powers.

(a)It is hereby found, determined, and declared that those elements of the system that provide for the collection, treatment, and disposal of stormwater and the regulation of groundwater are of benefit and provide services to all property within the incorporated city limits, including property not currently served by the storm elements of the system. The beneficiaries of the system include all real properties within the city that benefit by the provision, operation, and improvement of the system. Such benefits may include, but are not limited to, the provision of adequate systems of collection, conveyance, detention, treatment, and release of stormwater; the reduction of hazard to property and life resulting from stormwater runoff; improvement in general health and welfare through reduction of undesirable stormwater conditions; and improvement to the **water** quality in the stormwater and surface **water** system and its receiving **waters**.

(b)The city, under the direction of the director of utilities or other authorized city personnel, shall have the power to:

(1)Prepare regulations as needed to implement this article, and forward the regulations to the city commission for consideration and adoption, and adopt such procedures as are required to implement such regulations or carry out other responsibilities of the system;

(2)Administer the acquisition, design, construction, maintenance and operation of the system, including capital improvements designated in the comprehensive drainage plan;

(3)Administer and enforce this article and all regulations and procedures adopted relating to the alteration of the system including, but not limited to, the quantity, quality and/or velocity of the stormwater conveyed thereby;

(4)Inspect private systems as necessary to determine the compliance of such systems with this article and any regulations adopted under this article;

(5)Advise the city commission, city manager and other city departments on matters relating to the system;

(6)Prepare and revise a comprehensive drainage plan for adoption by the city commission periodically;

(7)Review plans, approve or deny, inspect, and accept extensions to the system;

(8)Establish and enforce regulations to protect and maintain **water** quality within the system in compliance with **water** quality standards established by state, regional and/or federal agencies as now adopted or hereafter amended; and

(9)Analyze the cost of services and benefits provided, and the system and structure of fees, charges, fines, and other revenues of the system annually.

(Ord. No. 01-06, § 2, 6-5-2001; Ord. No. 02-16, § 2, 6-18-2002)

Sec. 110-151. - Scope; compliance; contents of development plan.

(a)The city shall regulate development for purposes of protecting the freshwater lens. The applicant or owner or developer of any proposed development shall be required to comply with the open space requirements established in division 3 of article V of [chapter 122](#) pertaining to size and dimension criteria.

(b)In addition to subsection (a) of this section, development plans shall contain improvements designed to preserve the quality and quantity of **water** resources within the freshwater lens. This shall be accomplished by ensuring against pollutants entering the freshwater lens. Typical pollutants contributing to the degradation of the freshwater lens include saltwater intrusion, septic tanks, mosquito spraying, oils from lobster traps, and leakage from sewer lines. In order to accomplish this objective, the city shall coordinate with the Florida Keys Aqueduct Authority for purposes of discouraging or preventing, to the extent lawful, withdrawal of **water** from the freshwater lens for domestic purposes. The city shall coordinate related site plan review activities with the South Florida **Water** Management District.

Sec. 110-463. - Objectives.

Regulation of development within floodplains is necessary in order to:

- (1)Minimize the potential for property damage and personal injury from flooding;
- (2)Restrict adverse interference with the normal movement of surface **waters**;
- (3)Maintain the optimum storage capacity of watersheds;
- (4)Maintain desirable groundwater levels;
- (5)Maintain the natural hydrological and ecological functions of wetlands and other floodprone lands;
- (6)Prevent increased erosion and sedimentation; and
- (7)Maintain **water** quality.

Sec. 54-26. - Adopted.

(a)Pursuant to F.S. ch. 163, part III, pertaining to county and municipal planning and land development regulation, the city commission declares its intent to exercise its authority to plan for the area within its jurisdiction as granted by the act and adopts the city comprehensive plan, including the remedial actions cited in the stipulated settlement agreement signed June 15, 1993, between the state department of community affairs and the city which mandate additional policies addressing the following items:

- (1)Established residential building permit allocation system;
- (2)Redefined the high hazard area and established more restrictive land use policies in the Key West Bight area;
- (3)Redefined the drainage system level of service to include **water** quality criteria;
- (4)Redefined the package treatment plant level of service standards to include nutrient limiting standards for private sewage treatment facilities;

Flood and *flooding* mean a general and temporary condition of partial or complete inundation of normally dry land areas from:

Sec. 26-67. - Cleaning fish, shellfish or other seafood.

No person shall clean any fish, shellfish, or other seafood product upon a public beach.

Code Pertaining to Stormwater, Wastewater, and Sewer

Includes Sections:

108-778	108-788	108-712	74-168	110-466
108-780	108-789	108-713	118-300	108-91
108-782	108-790	108-714	94-67	108-95
108-783	108-791	108-719	94-69	54-154
108-784	108-792	108-720	108-851	108-346
108-785	108-793	108-956	74-361	
108-786	108-794	74-238	74-362	
108-787	108-711	74-167	110-123	

Sec. 108-778. - **Water** quantity criteria.

All new stormwater management systems will be evaluated on the ability of the system to prevent flooding of on-site structures, adjacent properties, roads, and road rights-of-way based upon antecedent rainfall conditions. The following criteria shall be met:

(1)*Discharge*. Off-site discharge is limited to amounts which will not cause adverse off-site impacts. These amounts are:

a. Historic discharges based on natural site drainage patterns; or

b. Amounts determined in previous South Florida **Water** Management District or county permit actions.

(2)*Drainage and flood protection criteria*. The surface **water** management system shall be designed using a 24-hour rainfall duration and 25-year return frequency in computing allowable off-site discharge rate. The applicant shall also provide data indicating the effect of a 25-year, 72-hour storm on the development project as proposed. If the more intense storm event will cause drainage problems for the proposed surface **water** management system, than city staff shall require the surface **water** management system to be designed for the 25-year, 72-hour storm event instead of the 25-year, 24-hour storm event. Flood protection and floodplain encroachment standards shall be those established in this subpart B. If post-development conditions are such that a volume greater than the retention and/or detention volume required for stormwater management is already being retained on site, that condition will be maintained.

Sec. 108-780. - Same—Discharge structures.

Discharge structures for new stormwater management systems shall comply with the following:

(1) All design discharges from the site shall be made through and controlled by structural discharge facilities. Earth berms shall be used only to disperse or collect sheet flows from or to ditches, swales, or other **water** channels, served by discharge structures.

(2) Discharge structures shall be constructed so that they are stationary.

(3) Discharge structures shall include gratings for safety and maintenance purposes. Removal of trash is mandatory if the stormwater management system discharges into surface **waters** and/or outstanding Florida **waters**.

(4) Discharge structures shall include a method which would allow discharge from the middle of the **water** column and shall include a cleanable jump area for the sediment removal. Discharge structures for areas with greater than 50 percent impervious area or systems with inlets in paved areas shall include a baffle, skimmer, or other mechanism suitable for preventing oil and grease from passing through the structure.

(5) Direct discharges, such as through culverts, storm drains, or weir structures, will normally be allowed to receive **waters** which, by virtue of their large capacities and configuration, are easily able to absorb concentrated discharges. Such receiving **waters** might include existing storm sewer systems and manmade ditches, canals, the bay, channels, and the ocean.

(6) Indirect discharges, such as overflow and spreader swales, are required where the receiving **water** or its adjacent supporting ecosystem might be degraded by a direct discharge. The discharge structure would therefore discharge into the overflow, spreader swale, or other channel, which in turn would release **water** to the actual receiving **water**. Such receiving **waters** might include marshes, wetlands, salt marshes, and land naturally receiving overland sheet flow.

Sec. 108-782. - Same—Wet retention/detention areas.

Criteria for wet retention/detention areas for new stormwater management systems shall be as follows:

(1) *Dimensional criteria.* Dimensional criteria, as measured at or from the control elevation, shall be as follows:

a. *Depth.* A minimum of 20 percent of the area shallower than six feet is required.

b. *Side slopes.* For purposes of public safety, **water** quality enhancement and maintenance, all wet retention/detention areas should have side slopes no steeper than 4:1 (horizontal:vertical) out to a depth of two feet below the control elevation, or an equivalent substitute. Side slopes should be topsoiled, nurtured or planted from two feet below to one foot above control elevation to promote vegetation growth. Refer to section 108-518 containing the recommended plant material for suitable plant selection.

(2) *Support facility design criteria.* Perimeter maintenance and operation easements of 20-foot (minimum preferable) width at slopes no steeper than 4:1 (horizontal:vertical) should be provided beyond the control elevation **water** line. Control elevations must be set so as not to cause flooding in roadways and to protect road subgrades.

(Ord. No. 97-10, § 1(3-12.7(C)(3)), 7-3-1997)

Sec. 108-783. - Same—Impervious areas.

For new stormwater management systems, runoff shall be discharged from impervious surfaces through retention areas, detention devices, filtering and cleansing devices, and/or subjected to best management practice (BMP) prior to discharge from the project site. In projects which include substantial paved areas, such as shopping centers, large highway intersections with frequently stopped traffic, and high density developments, provisions shall be made for the removal of oil, grease, and sediment from the stormwater prior to discharge into the receiving **waters** or watercourse.

(Ord. No. 97-10, § 1(3-12.7(C)(4)), 7-3-1997)

Sec. 108-784. - Same—Stagnant **water** conditions.

Configurations which create stagnant **water** conditions shall not be allowed in new stormwater management systems.

(Ord. No. 97-10, § 1(3-12.7(C)(5)), 7-3-1997)

Sec. 108-785. - Same—Disposition of storm-[water](#) runoff.

The stormwater management system for developments located predominately on excessively drained soils should maximize stormwater infiltration. This shall be accomplished through the use of infiltration or exfiltration facilities, grading to retard runoff, natural or artificial retention or detention basins, or other methods depending on the characteristics of the land area. Specific guidelines are as follows:

(1) Areas and lots shall be developed to maximize the amount of natural rainfall which is percolated into the soil and to minimize direct overland runoff into adjoining streets and watercourses. Stormwater runoff from roofs and other impervious surfaces should be diverted into swales or terraces on the lot.

(2) Street drainage shall be by grassed swales or curb and gutter in accordance with city specifications, provided all curb and gutter systems shall discharge or direct **water** into a best management practice. Whenever practical, as indicated by soil characteristics, **water** table elevation, and topography, the overflow from any swale used shall be diverted to percolation areas, ponding areas or natural or artificial seepage basins of sufficient capacity to retain and provide for the maximum infiltration of stormwater runoff from each drainage area for the 25-year, 24-hour storm. Except in those development projects where temporary ponding is allowable pursuant to [section 108-789](#), each percolation or retention area shall include positive drainage facilities which provide for drainage to public outfalls or a lake or watercourse, to handle the runoff from storms of longer duration and severity than the 25-year, 24-hour storm. The area surrounding these retention or detention basins is recommended to be used as public or private open space and shall be grassed.

(Ord. No. 97-10, § 1(3-12.7(C)(6)), 7-3-1997)

Sec. 108-786. - Same—Material specifications for culverts and storm sewers.

The following pipe materials are acceptable for new stormwater management systems:

(1) Reinforced concrete pipe; bituminous coated, corrugated steel pipe; aluminum pipe; aluminum pipe arch; bituminous coated structural plate steel pipe; and bituminous coated steel pipe arch are acceptable. PVC pipe shall be acceptable only for installations in a privately maintained system and only if it is comprised of an appropriate wall thickness for the intended use.

(2) Workmanship and pipe materials shall conform to state department of transportation standard specifications, latest edition.

(3) Only concrete and aluminum pipes shall be used under public right-of-way pavement and/or into saltwater outfalls. Concrete for reinforced concrete box culverts shall conform to the state department of transportation's standard specifications, latest edition.

(Ord. No. 97-10, § 1(3-12.7(C)(7)), 7-3-1997)

Sec. 108-787. - Same—Inlets.

Design and spacing of inlets for new stormwater management systems shall be in accordance with the state department of transportation's standard specifications or the city's standard specifications. These standards shall be prepared by the city engineer and shall be adopted by resolution of the city commission.

(Ord. No. 97-10, § 1(3-12.7(C)(8)), 7-3-1997)

Sec. 108-788. - Same—Drainage structures.

All cross drains and storm sewers for new stormwater management systems shall have headwalls, flared-end sections, mitered end sections or terminating structures in accordance with the city's standard specifications or the state department of transportation's specifications. End walls, inlets, or other appropriate terminating and intermediate structures and backflow devices may be required where necessary.

(Ord. No. 97-10, § 1(3-12.7(C)(9)), 7-3-1997)

Sec. 108-789. - Same—Control of temporary ponding.

For new stormwater management systems, temporary ponding is allowable in areas specifically designed with high percolation rates so that ponding does not last more than eight hours. The height of allowable ponding shall not exceed one-quarter of the distance between the ground and the lowest floor.

(Ord. No. 97-10, § 1(3-12.7(C)(10)), 7-3-1997)

Sec. 108-790. - Same—Facilities impacting roads.

For new stormwater management systems, materials used in drainage facilities which cross, traverse, or encroach major roads as depicted on the city thoroughfare plan shall be designed in accordance with the state department of transportation standards.

(Ord. No. 97-10, § 1(3-12.7(C)(11)), 7-3-1997)

Sec. 108-791. - Same—[Water](#) management tracts.

All stormwater facilities shall be established in dedicated **water** management tracts, easements, or specified common areas. Condominium documents, deed restrictions, or other legally binding instruments shall describe the location of such areas, shall specifically define the mechanism for preservation and maintenance of any private drainage systems, and shall appoint an entity responsible for maintenance and preservation. All **water** management tracts shall include a maintenance berm, the top of which may be level or have a slope not steeper than eight feet horizontal to one foot vertical. In addition, such facilities, as well as open channels and ponds, shall have an easement for access to and around the perimeter for maintenance. Retention or detention facilities shall be graded to slopes not steeper than four feet horizontal to one foot vertical above the conservation elevation and shall be graded to slopes not steeper than three feet horizontal to one foot vertical below the conservation elevation. Dry retention slopes and wet retention slopes above the designed low **water** elevation shall be grassed or otherwise stabilized.

(Ord. No. 97-10, § 1(3-12.7(C)(12)), 7-3-1997)

Sec. 108-792. - Same—Watershed areas.

In watershed areas where the city has an adopted master stormwater management plan, all proposed facilities for new stormwater management systems shall be in conformance with the adopted plan.

(Ord. No. 97-10, § 1(3-12.7(C)(13)), 7-3-1997)

Sec. 108-793. - Same—Impacts on drainage districts.

Stormwater systems connected to any local, regional, or state drainage district system shall be designed with consideration given to the capacity of the overall system and shall be compatible with the objectives of each respective jurisdiction.

(Ord. No. 97-10, § 1(3-12.7(C)(14)), 7-3-1997)

Sec. 108-794. - General criteria.

All new surface **water** management systems shall comply with the following general criteria:

(1) Rainfall runoff from roads, parking lots, roofs, and other impervious surfaces shall be directed to areas where percolation into the soil can be accomplished prior to introduction into any off-site receiving facilities. Pervious areas on line shall be covered with grass or suitable ground cover which has effective filtering characteristics. Where pervious or grassed areas are not available, runoff from impervious surfaces should be directed into some other kind of stormwater best management practice for pretreatment prior to discharging into a watercourse.

(2) The stormwater management system shall handle all stormwater that flows into, through and from the project without creating adverse impacts on other lands served by the stormwater management system or by the receiving **waters** relative to flooding, erosion hazards, or **water** quality and quantity.

(3)The applicant will demonstrate that the development project is not in a flood hazard zone. Flood hazard zones are identified under the following procedure:

a.A flood hazard zone shall encompass all lands subject to inundation by the regulatory flood, including lands in a critical flood zone or coastal high hazard zone.

b.A critical flood zone shall encompass the following:

1.Lands subject to inundation by a ten-year flood, i.e., the flood that has a ten-percent probability of being equaled or exceeded in any given year.

2.Wetlands, watercourses and waterbodies.

3.Floodways. See subsection (3)d of this section.

4.Isolated topographic depressions with a history of flooding or a high potential for flooding.

c.A coastal high hazard zone is defined in section 108-714

d.A floodway shall include the normal channel of a watercourse and adjacent lands that must remain unobstructed to convey the regulatory flood discharge without causing flood elevations to rise along any stretch of the watercourse above a specified permissible increase known as the floodway surcharge. The floodway surcharge shall be established, considering both existing and potential development, at a level that avoids an increase in potential flood damage. The floodway surcharge may be increased; however, if an applicant wishes to construct some additional obstruction, flowage easements must first be obtained from the owners of all land that would be affected by increased levels. In no case, however, may a floodway surcharge exceed one foot. The floodway shall normally be calculated assuming equal encroachment on the floodplain from both sides of the watercourse, unless legally enforceable deed restrictions, limiting development rights, are recorded for the lands needed for the floodway.

e.Flood hazard zones, critical flood zones, coastal high hazard zones, and flood elevation data have been identified through flood hazard studies and delineated on the Federal Emergency Management Agency's (FEMA) flood insurance rate maps (FIRM). A copy of the these maps are on file in the city planning office.

Sec. 108-711. - Applicability.

The surface **water** management regulatory sections established in this article shall apply to all development within the city.

(Ord. No. 97-10, § 1(3-12.1), 7-3-1997)

Sec. 108-712. - Purpose.

The purpose of the surface **water** management policy is to:

(1)Protect the health, safety, and welfare of the citizens of the city;

(2)Implement those drainage objectives and policies found in the public facilities element of the city's comprehensive plan;

(3)Ensure protection of land and improvements together with natural resources through the use of responsible stormwater management and flood protection practices;

(4)Ensure replenishment of the city's surficial aquifer system and provide a continuing usable **water** supply; and

(5)Ensure compliance with level of service criteria and concurrency management policies established in the comprehensive plan.

(Ord. No. 97-10, § 1(3-12.2), 7-3-1997)

Sec. 108-713. - Intent.

The surface **water** management requirements are intended to complement regulations of the state department of environmental protection (DEP) including but not limited to those found in F.A.C. ch. 17-25, entitled "Regulation of Stormwater Discharge," and the surface **water** management rules of the South Florida **Water** Management District, all as adopted or as may be amended from time to time. Approval of a stormwater management system under this article shall not relieve any applicant of the necessity to obtain required permits or approvals from other state, regional, or local agencies, including specifically but not limited to observance of the state department of environmental protection permitting requirements for use of the "landward extent of **waters** of the state," as defined in F.A.C. 17-4.02(17). If a conflict occurs between the city regulations and state regulations, the more restrictive regulations shall prevail.

(Ord. No. 97-10, § 1(3-12.3), 7-3-1997)

Sec. 108-714. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Adverse impacts means any modifications, alterations or effects upon a feature or characteristic of **water** or floodprone land, which are or potentially may be harmful or injurious to **water** resources and environmentally sensitive areas, as well as human health, welfare, safety or property, or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation. The term includes secondary and cumulative as well as direct impacts.

Alter and *alteration* mean any work beyond maintenance of the original condition including additions to an existing system; changes of any part of an existing system to capacities or locations different from those originally constructed; and changes in the rate, volume, or timing of discharges.

Best management practice (BMP) means the best management practices for stormwater which are those which meet discharge quantity and quality criteria as contained in Manual of Stormwater Management Practices, and future amendments, as prepared for the county by the South Florida Regional Planning Council.

Coastal high hazard area, as defined in F.A.C. 9J-5.003(19), means the coastal high hazard area which shall encompass the evacuation zone for a category 1 hurricane as established in the regional hurricane evacuation study applicable to the city.

Control elevation means the lowest elevation at which **water** can be released through the discharge structure.

Detention and to detain mean the collection and temporary storage of stormwater in such a manner as to provide for treatment through physical, chemical, or biological processes with subsequent gradual release of the stormwater to the receiving **waters**, in which the capacity for the specified treatment volume of stormwater is again provided within 72 hours following a storm event. On-line detention is temporary storage along the axis of the drainage system, whereas off-line detention is temporary storage at a location away from the system's direct path.

Detention, dry, means **water** storage with the bottom elevation at least one foot above the control elevation. Sumps, swales, and other minor features may be at a lower elevation.

Detention, wet, means **water** storage with the bottom elevation lower than one foot above the control elevation of the system.

Development project means any manmade change or improvement to land which increases the amount of impervious cover or results in the change in elevation of any portion of the land or changes the existing stormwater system and flood management system. A development project includes but is not limited to all projects which require site plan or subdivision approval under the city's land development regulations.

Discharge means the outflow of **water** from a project site, drainage basin or other facility.

Drainage system, artificial, means any canal, ditch, culvert, dike, storm sewer or other manmade facility which tends to control the surface flow of **water**.

Drainage system, natural, means surface streams or marshes which convey **water** to natural points of drainage.

Elevation means height in feet expressed in relation to mean sea level and referenced to the National Geodetic Vertical Datum (NGVD).

Filtration and to filter mean the selective removal of suspended matter from stormwater by passing the **water** through suitable fine textured granular media such as porous soil, sand and gravel or other natural or artificial aggregate, which may be used in conjunction with filter fabric or underdrain pipe or both.

Flood and flooding mean a general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland or tidal **waters**.

(2) The unusual and rapid accumulation of runoff or surface **waters** from any source.

Flood insurance rate map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Flood insurance study means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the flood boundary-floodway map and the **water** surface elevation of the base flood.

Floodway means the normal channel of a watercourse and the adjacent land areas that must remain unobstructed to convey the regulatory flood discharge without raising flood elevations above specified levels as determined in section 108-794(3)d.

Hydrograph means a graph of discharge or, for the purposes of this article, volume of stormwater, versus time.

Impervious surface means a surface which is highly resistant to infiltration by **water**. It includes surfaces such as compacted sand, limerock, or clay, as well as most conventionally surfaced streets, roofs, sidewalks, porous and nonporous parking lots and other similar structures.

Legal positive outfall means the availability of a permanent and legally established watercourse or similar facility or means which has the hydraulic capability of conveying the stormwater discharge from a development project to receiving **waters** downstream. The term "legally established watercourse" refers to a watercourse which is established by either an express easement, plat dedication, or other documentation, or implied easement or servitude as may be demonstrated to exist in accordance with state law.

Lowest floor means the top surface of the lowest area within the inside perimeter of the exterior walls of a building. For slab-on-grade type buildings or buildings with basements, the top surface of the slab or basement floor would constitute the lowest floor. For footing, foundation walls, or pile-type buildings with crawl spaces under the building without a basement, the top surface of the finished flooring above the horizontal joist, beam or other supporting member would constitute the lowest floor.

Maintain and *maintenance* mean to keep in an acceptable state of performance and repair as determined by the city engineer. The city engineer shall determine if the performance standards of the respective **water** management plans are maintained. The type and height of aquatic vegetation shall be secondary to the integrity of the **water** management plan.

Mangrove stand means an assemblage of one or more of the following species: black mangrove (*Avicennia nitida*); red mangrove (*Rhizophora mangle*); white mangrove (*Languncularia racemosa*); and buttonwood (*Conocarpus erecta*).

Master stormwater management plan and *master plan* mean an engineering plan, written report, or engineering drawing outlining the primary and secondary drainage and stormwater treatment facilities needed for the proper development of a specific increment of the incorporated area of the city.

National Geodetic Vertical Datum (NGVD), as corrected in 1929, means a vertical control used as a reference for establishing varying elevations within the floodplain.

Regulatory flood means the 100-year flood. The 100-year flood is that flood which has, on the average, a one-percent probability of being equalled or exceeded in any given year, as indicated on the official city flood hazard map.

Retention and to retain mean the prevention of or to prevent the discharge of a given volume of stormwater runoff into surface **waters** of the state by complete on-site storage where the capacity to store the given volume of stormwater is again provided within 72 hours following the storm event. The required storage volume must be provided by a decrease of stored **water** caused by percolation through soil, evaporation, evapotranspiration, or spray irrigation. Retention shall be off-line (i.e., outside of the primary drainage path), unless it is demonstrated by the applicant that **water** quality in the receiving **waters** will not be adversely impacted by on-line retention. Wet retention refers to an area the lowest elevation of which penetrates the dry season groundwater table. Dry retention refers to an area the lowest elevation of which lies at least two feet above the wet season groundwater table.

Sediment means fine particulate material which is capable of gravity settlement, whether mineral or organic, and which is in suspension or has settled in a waterbody.

Stormwater and flood management system means a system of natural or artificial waterbodies or watercourses which stores, conveys and/or treats **water**. The system generally includes a dam, impoundment, reservoir, inlet, pipe, swale, ditch, appurtenant works, or a combination thereof that is intended to provide drainage, **water** storage conveyance, prevent or impair inundation, or other **water** management capabilities in and for a discrete area or a work that traverses **waters** in the city. A system may be designed and constructed in phases.

Water means all **water** on or beneath the surface of the ground including natural or artificial watercourses, lakes, ponds, or diffused surface **water** and **water** standing, percolating or flowing beneath the surface of the ground, as well as all coastal **waters** within the city.

Waterbody means any natural or artificial pond, lake, reservoir or other area which ordinarily or intermittently contains **water** and which has a discernible shoreline.

Watercourse means any natural or artificial channel, ditch, canal, stream, river, creek, waterway or wetland which flows either continuously or intermittently, and which has a definite channel, bed, banks or other discernible boundary.

Watershed means a drainage area or drainage basin contributing to the flow of **water** directly or indirectly into receiving **waters**.

Wetland. Wetlands shall be defined based on hydrology as well as hydric soil and wetland vegetation. Wetlands include transitional wetlands and include those areas that are inundated or saturated by surface **water** or groundwater at a frequency and duration sufficient to support and that under normal circumstances do or would support a prevalence of vegetation typically adapted for life in saturated soil conditions. The following vegetative species are wetland species commonly found in the city, although the applicable state and federal list of jurisdictional wetland vegetation shall apply:

Sec. 108-719. - Duties of city engineer.

The city engineer shall perform the following specific duties under this article:

(1)*Render professional determinations.* Make all professional engineering determinations required with respect to analysis of any given application.

(2)*Provide recommendation on modifications.* Recommend appropriate courses of action regarding any requested changes or amendments to an approved stormwater management plan.

(3)*Provide necessary information.* Provide a courtesy notice as to the general description and location of newly constructed wet or dry retention facilities to special districts or political entities as may be appropriate.

(4)*Certificates of completion.* After the completion of a project, require as-built plans from the owner or applicant and a certificate of completion from the engineer of record.

(5)*Maintenance recommendations.* Any surface **water** management improvements required by the land development regulations shall be maintained by the owner, successor owners, or an entity designated by the owner, except that the city engineer may recommend that the city commission accept certain drainage facilities or systems for city maintenance. The selection of critical areas or structures to be maintained by the city shall be recommended to the city commission by the city engineer. All areas or structures to be maintained by the city must be dedicated to the city by plat or separate instrument and expressly accepted by the city commission. For any system which is to be maintained by the applicant or entity succeeding in ownership other than the city, easements shall be established which permit the city to inspect and if necessary, as determined by the city, to take corrective action if the entity fails to properly maintain the system. Such easements shall also establish a right of entry as may be necessary for special purposes as directed by state laws or as may be duly determined by the city. If the applicant or entity succeeding in ownership fails to properly maintain a system as required, the city engineer shall give the applicant or entity succeeding in ownership written notice of the nature of the corrective action necessary. If the applicant or entity succeeding in ownership fails, within 30 days from the date of the notice to take or commence taking corrective action to the satisfaction of the city engineer, the city may enter upon lands and take corrective action, and the cost of such corrective action shall become a lien on the property benefitted.

(Ord. No. 97-10, § 1(3-12.13(A)), 7-3-1997)

Sec. 108-720. - Administration.

The city engineer or other designated city official shall have authority to administer this article and shall perform the following specific duties:

(1)*Determine adequacy of information.* Determine any additional information that must be submitted for flood management review.

(2)*Determine completeness of applications and evaluation.* Review applications for compliance with the standards of surface **water** management policies of this article, after input from the administrative staff and the city attorney as to those matters within their professional disciplines, and either approve, approve with conditions, or deny the application based on that review. If application approval is denied, the city engineer shall state the reasons for denial.

(3)*Filing of building plans.* The building official shall maintain a record of the actual, as-built elevation or floodproofing of all buildings constructed after flood management review.

(4)*Coordinating review functions.* Coordinate the review with other permitting agencies, if necessary.

Sec. 108-956. - Potable [water](#) and wastewater.

All development plans shall include commitments demonstrating ability to comply with the following:

(1)*Access to potable **water**.* All applicants for new development prior to issuance of development orders or permits must demonstrate that a source of **water** supply is available and that all issues surrounding usage of such potable **water** are being managed and coordinated with the Florida Keys Aqueduct Authority.

(2)*Access to wastewater disposal systems.* Prior to the issuance of development orders or permits, all applicants for new development must demonstrate compliance with regulations of all federal, state, and local on-site wastewater treatment systems. The location, timing, and scale of development shall be regulated in order to ensure that new development is effectively served by wastewater services. The proliferation of permanent package treatment plants shall be discouraged. System reviews shall be coordinated with the state department of environmental protection in order to promote best management practices and compliance with relevant state permitting procedures. On-site wastewater package treatment plants, including their impacts on **water** quality, shall be regulated. All new or altered on-site individual wastewater treatment improvements shall be compliant with regulations of federal and state agencies having jurisdiction. Furthermore, no new septic tanks shall be permitted. The city shall not approve any on-site package plant unless the plant complies with all federal and state regulations. Use of on-site wastewater collection systems shall be limited to the following conditions:

a. Existing septic tank and package treatment plants may remain in service until such time as centralized service is made available.

b. Use of septic tank systems for new development shall be prohibited within the service area of the city system west of the Cow Key Channel Bridge. The potential for **water** quality problems emerging in the city is increased by the high **water** table and the likelihood of tile fields beginning to submerge during high tides. Under such conditions the pollutants cannot be absorbed and the pollutants enter the groundwater system and are eventually discharged to the **waters** surrounding the city.

c. Use of package treatment plants shall comply with applicable laws governing the location, use, and design of the facility. Package treatment plants shall be designed in a manner which facilitates integration into the citywide system in the future. Package treatment plants shall be designed to achieve effluent limitations of 20 milligram/liter BOD and 0.5 total suspended solids on an annual average. In addition, NO₃ cannot exceed 12 mg/l on an annual average. All owners of wastewater treatment plants shall provide sufficient on-site certified operator time as determined by the state department of environmental protection, in order to ensure that estuarine and potable **water** systems are protected from pollution. As a minimum, the following are required:

1. Surge tanks (flow equalization tanks) are required on all treatment plants with design flows less than 100,000 gallons per day.

2.The system for monitoring treatment efficiency shall include a schedule with a minimum frequency increased to one grab sample per week.

3.A flow measuring device is required which will provide a record of diurnal flow changes as well as total daily flow.

4.An emergency power source for treatment facilities shall be provided for purposes of preventing interruptions in treatment services.

d.All development located within areas where central sewer facilities are not currently available shall be required to connect into the central sewer system when the system has been extended within 100 feet of the subject parcel.

(Ord. No. 97-10, § 1(3-10.9), 7-3-1997)

Sec. 74-238. - Estimates of flow, extranormal strength and base charge units.

(a)*Sewage flow.* Sewage flow shall be estimated by obtaining monthly **water** consumption data for each sewer system user and multiplying by a factor representing the assumed percentage of **water** being contributed to the sewer system. Monthly wastewater contribution shall be estimated for each account by the city from FKAA **water** meter reading data or from **water** meters installed on privately owned wells and cisterns.

If **water** furnished by the FKAA or any other **water** supply source or system shall be used exclusively for irrigation purposes or for any other application from which the **water** does not enter the city's sanitary sewer facilities, the user may, at the user's own expense, contract with FKAA to separately meter such **water**. The city manager shall determine approved meter types, frequency of maintenance and testing, criteria for meter location, and requirements for meter replacement. After the city is notified by the user of the installation of such a meter, the city shall maintain, repair, and read the meter and may bill the owner's sewer account for such charge. The **water** measured by such meter will be excluded from the calculation of chargeable sewer flow. Meters shall be considered city property. City employees or agents may enter upon the premises during business hours for purposes of maintenance, repair, and reading and may remove meters from the property for purposes of maintenance and repair.

For any residential living space using unmetered wells or cisterns as the sole source of **water** supply, a base charge shall be assessed for each such living space. The monthly wastewater flow (proportional use) component of the user charge for such residential wells and/or cisterns shall be based on an amount of **water** equal to the average monthly flow for residential system users. In addition to the proportional use component, a flat monthly well surcharge shall be assessed for each residential living space served by the unmetered wells and/or cisterns. The well surcharge shall be assessed to account for the exposure of the wastewater system to unmetered flows and the likelihood that wells are contributing more than the average monthly flow for residential system users.

For any residential system user having a metered **water** connection to the FKAA **water** system and owning wells and/or cisterns currently in use and connected to the wastewater system, a base charge shall be assessed for the FKAA **water** system connection, but no base charge shall be assessed for the wells and/or cisterns. However, a minimum flow charge based on the estimated average monthly

residential wastewater flow shall be assessed, if the FKAA meter reading is less than the average. In addition, regardless of the amount of metered FKAA **water** consumption, the flat monthly well surcharge to be established by the city manager shall be assessed for each residential living space served by an unmetered well or cistern connected to the city's wastewater system. Owners of single-family residences and duplexes, including mobile homes, may but shall not be required to install **water** meters on their private **water** supplies.

Wells and cisterns used by all nonresidential users and that are connected to the city's wastewater system shall be metered at the user's expense in accordance with section 74-204. The city shall bill monthly sewer service charges to such users in accordance with section 74-205.

All wells and cisterns of all residential and nonresidential users within the city limits shall be assumed to be active wells and cisterns connected to the city's sanitary sewer system. The holder of record title to the property may demonstrate otherwise by filing with the city a notarized affidavit, supported by available documentation, declaring that the well or cistern is not active or connected and does not discharge **water** before or after use into the city sanitary sewer system.

(b)*Extranormal strength.* The extranormal strengths of wastes shall be estimated by the city by periodically monitoring wastes contributed to the system by users deemed as frequently or consistently having waste discharges of strengths in excess of those defined as being of domestic or normal strength. The monitoring of wastes shall be performed in accordance with current industry standards and procedures for waste flow sampling and laboratory testing. The amounts of extranormal strength waste components, expressed in pounds of biochemical oxygen demand (BOD) and total suspended solids (TSS), to which the extranormal strength surcharge shall be applied shall be calculated from monitoring data. The estimated amount of such waste component shall be applicable for 12 billing periods or until an adjustment is made resulting from a user's request for adjustment in accordance with the appeals and adjustment sections of this subdivision.

(c)*Base charge units.* For purposes of determining the number of base charge units chargeable to each sewer system user, the average monthly **water** consumption shall be calculated annually for residential users on the basis of a three-year rolling average.

The average monthly **water** consumption per residential dwelling unit shall be calculated from FKAA **water** billing records, from city sewer department data files, and from the city's **water** well and cistern meter readings data for all residential users of the sewer system owning such wells and cisterns, currently in use, who have elected to install, at their own expense, **water** meters. The **water** consumption records and meter reading data shall be adjusted prior to calculation of the monthly average residential consumptions, to account for nonuse, meter errors, customers' misclassifications and other data errors.

Each residential dwelling unit shall be defined as one base charge unit regardless of the source of **water** for that dwelling unit.

The total annual **water** consumption from FKAA and city meter reading data, adjusted, for each nonresidential user of the sewer system shall be divided by the number of **water** bills rendered to such FKAA **water** customer, and the quotient of that division shall be divided by the monthly average **water** consumption for residential users of the sewer system, calculated as prescribed in this section. The quotient of the second division will show the number of base charge units and fractions thereof

that such sewer system user shall be assessed; provided, however, that the number of the base charge units shall not be less than one. The resulting number of base charge units, including fractions thereof, shall be billed to such nonresidential users for the 12 billing periods following such determination.

Sec. 74-241. - Adjustment in base charge units.

Upon written appeal in a form prescribed by the city manager and satisfactory presentation and verification of data on and affidavits related to **water** consumption from all sources, including wells and cisterns, for six months preceding the date of the appeal, the city manager may adjust the number of base charge units by use of the average monthly **water** consumption for the preceding six months divided by the number of gallons most recently estimated to be the average monthly residential contribution to the wastewater system, provided that the number of whole base charge units thus determined shall not be less than the number of living units for multiple-family occupancies, whether transient or permanent in nature, nor shall the number of base charge units be less than one. The city manager may from time to time require a sewer system user who has made such an appeal to present further evidence as to **water** consumption, but only at intervals of six months or more, as the city manager shall choose. Charges shall be adjusted retroactively to the date that the appeal and adequate supporting data, as described in this section, are filed.

(Code 1986, § 74.42(e))

Sec. 74-242. - Adjustment in estimated flow.

Upon written appeal in a form prescribed by the city manager and presentation of satisfactory, verifiable **water** consumption data for the six months preceding the date of the appeal, along with appropriate affidavits related thereto, the city manager may adjust the estimated sewage flow to the average of the **water** consumption for the preceding six months. The city manager may from time to time require a customer who has made such an appeal to present further evidence as to **water** consumption, but only at intervals of six months or more, as the city manager shall choose. Charges for proportionate use of the system shall be adjusted retroactively to the date the appeal and adequate supporting data, as described in this section, are filed.

Sec. 74-246. - Annual sewer rates, charges and components.

(a)The base charge component (BCU) of the sewer service user charge is determined to be \$23.23. The BCU may be adjusted each October 1, by resolution of the city commission by up to 100 percent of the percentage increase in the CPI-(U), U.S. City Averages (as of June). The city commission shall enact an ordinance amendment to this section in order to increase the BCU in excess of the CPI.

(b)The proportional use charge component of the sewer service user charge is determined to be \$4.60 per 1,000 gallons per month of actual or estimated sewage flow per user. The proportional use charge may be adjusted each October 1, by resolution of the city commission by up to 100 percent of the percentage increase in the CPI-(U), U.S. City Averages (as of June). The city commission shall enact an ordinance amendment to this section in order to increase the proportional use charge in excess of the CPI.

(c)The extra-normal strength charge component of the sewer service user charge is determined to be \$0.57 per pound of biochemical oxygen demand (BOD) and \$0.26 per pound of total suspended solids

(TSS) contributed per month per user in excess of the amount accounted for in waste at a rate of 350 mg/l for BOD and for TSS.

(d)The flat monthly alternative **water** surcharge is determined to be \$8.51.

(e)The assumed percentage of **water** being contributed to the sewer system, as referred to in Ordinance No. 89-33, subsection (b)(1), continues to be 80 percent. This figure times the average monthly residential **water** consumption, the product then divided by the average number of residential dwelling units, yields an average residential monthly wastewater production (rounded to the nearest hundred gallons) or monthly base charge unit (BCU) of 3,600.

Sec. 74-167. - Infiltration and inflow and other discharges to sewer prohibited.

(a)It shall be unlawful for a person to allow or to cause infiltration and inflow to enter the city's sewer system from private property. If the director determines that infiltration and inflow is entering the sewer system from private property, he shall provide written notice to the property owner or his agent of such defect. The director may require that the owner make repairs to laterals or make other repairs as the director determines necessary within 30 days of the sending of such notice. If, in the judgment of the director, the defect presents an emergency, the director may require immediate repairs. Upon receipt of the notice, the property owner may request a hearing with the director at which the owner or his agent may present evidence to rebut the determination of the director or to negotiate terms of the repair. The director may deny such hearing in an emergency situation. If the property owner fails to correct the infiltration and inflow problem immediately in an emergency or otherwise on a timely basis, the director on behalf of the city may undertake either or both of the following actions:

(1)Institute penalty proceedings against the property owner as provided in [section 1-15](#) or by referral to the code enforcement special master. To the extent that this subsection conflicts with [section 74-28](#), this subsection shall prevail.

(2)Make a written finding of the emergency nature of the infiltration and inflow, after consultation with the city manager and city attorney. If the director determines an emergency, he may authorize city workers or agents of the city to enter onto the private property for the limited purpose of effecting repairs. In such event, the city shall bill the property owner the cost of repairs, payable within 15 days of mailing. Failure of the property owner to pay the bill timely shall entitle the city to place a lien on the property by an appropriate filing in the circuit court. The city shall foreclose the lien in the manner provided by the laws of the state, and when applicable the lien shall have priority pursuant to F.S. § 159.17.

(b)No person shall discharge or cause to be discharged any stormwater, surface **water**, groundwater, pool **water**, roof runoff, surface drainage, uncontaminated cooling **water**, or unpolluted industrial process **waters** to any sanitary sewer. However, uncontaminated cooling **water** or unpolluted industrial process **waters** may be discharged into a storm sewer or natural outlet upon the prior written approval of the director in accordance with written standards for such discharge that are issued from time to time by the director.

Sec. 74-168. - Prohibited discharges to public sewers.

No person shall discharge or cause to be discharged any of the following described **waters** or wastes to any public sewers:

- (1) Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.
- (2) Any **waters** or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving **waters** of the sewage treatment plant, including but not limited to cyanides in excess of two milligrams per liter (mg/l) as cyanides (CN) in the wastes as discharged to the public sewer.
- (3) Any **waters** or wastes having a pH lower than 5.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
- (4) Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works, such as but not limited to ashes; cinders; sand; mud; straw; shavings; metal; glass; rags; feathers; tar; plastics; wood; unground garbage; whole blood; paunch manure; hair and fleshings; entrails; and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

(Code 1986, § 74.33)

Sec. 74-170 - Actions of director for potentially harmful wastes.

(a) If any waters or wastes are discharged or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in section 74-169 and which, in the judgment of the director, may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters or which otherwise create a hazard to life or constitute a public nuisance, the director may:

- (1) Reject the wastes;
 - (2) Require pretreatment to an acceptable condition for discharge to the public sewers;
 - (3) Require control over the quantities and rates of discharge; and/or
 - (4) Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under subdivision II of division 5 of this article.
- (b) If the director permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the director and subject to the requirements of all applicable codes, ordinances, and laws.
- (c) The director shall notify the city manager in writing of conditions present to which actions in this section are applicable.

Sec. 118-391. - Underground installation.

(a)*Required for new subdivisions.* New subdivisions shall be required to install underground utilities, including franchised utilities, power and light, telephone and telegraph, **water**, sewer, cable television, and wiring to streetlights and gas.

(b)*Coordination of easements.* Easements shall be coordinated with requisite utility authorities and shall be provided as prescribed by this chapter for the installation of underground utilities or relocating existing facilities in conformance with the respective utility authority's rules and regulations.

(c)*Waivers.* The city engineer may waive the requirement for underground installation if the service to the adjacent area is overhead and it does not appear that further development in adjacent areas with underground utilities is possible. Any new service which is allowed by the waiver to be supplied by overhead utilities shall be connected to a service panel that is convertible for underground utility service at a future date.

(d)*Applicant's responsibility.* The applicant shall make necessary cost and other arrangements for such underground installations with each of the persons furnishing utility service involved.

(e)*Construction within easements.* Utilities shall be constructed in easements as prescribed by this chapter.

(f)*Utility installation.* After the subgrade for a street has been completed, the remainder of the street right-of-way has been graded and before any road or street construction material is applied, all underground work for the **water** mains, sanitary sewers, gas mains, telephone, electrical power conduits, cable television and any other utilities with appurtenances and branches for surface connections shall be completely installed throughout the width of the street to the sidewalk area or provisions made so that the roadway or right-of-way will not be disturbed for utilities installations or service connections. All underground improvements so installed for the purpose of future service connections shall be properly capped and backfilled and their locations identified.

(Ord. No. 97-10, § 1(4-19.2(X)), 7-3-1997)

Sec. 118-392. - Central [water](#) system.

A complete **water** distribution system connected to the city **water** system shall be provided for all new subdivisions. The design of the entire system shall be engineered and coordinated with the Florida Keys Aqueduct Authority to comply with the authority's adopted design standards and shall conform to the state department of environmental protection, the fire protection requirements of the American Insurance Association, and accepted standards for municipal **water** supply and fire protection systems as prescribed by the National Fire Codes and the Fire Protection Handbook published by the National Fire Protection Association as exists or may be amended. Concurrency management criteria of [chapter 94](#) must be met. The following are general requirements for central **water** systems:

(1)*Water supply.* The central **water** system shall connect to the Florida Keys Aqueduct Authority **water** system.

(2)*Distribution system.*

a. The distribution system shall provide connections to each individual lot, to each public facility, to all required fire hydrants and fire protection systems and to median strips for irrigation where landscaped unless the median strips are irrigated by a separate system. **Water** mains shall be required in each street right-of-way and shall be looped except in culs-de-sac less than 300 feet long and cross streets not requiring service connections.

b. Plans for the central **water** system including fire protection facilities and appurtenances shall be submitted to the Florida Keys Aqueduct Authority as well as the city engineer and fire marshal, for review and approval.

c. New **water** systems shall be designed and constructed for an economic life of not less than 20 years. Central **water** systems shall comply with the following requirements according to the type of development or subdivision served as prescribed in this chapter.

(3) *Waivers.* Requirements for attachment to an approved **water** system may be waived only when the waiver is recommended by the planning board as placing an undue hardship on the builder when the subdivision consists of six lots or less and when the city commission approves a preliminary plan including the waiver. The requirement for fire hydrants may be waived temporarily in areas where adequate mains are not available, but in that case the builder must place in escrow an amount equal to the cost of the hydrants plus an additional 25 percent to provide for their connection as soon as adequate mains become available, and these funds may be used for no other purpose. In any case the distribution system shall comply with the requirements below.

(Ord. No. 97-10, § 1(4-19.2(F)), 7-3-1997)

Sec. 118-393. - Central wastewater systems.

Central wastewater collection, wastewater treatment and disposal systems shall be provided for all new subdivisions. The system shall meet concurrency management criteria of [chapter 94](#) and the following criteria:

(1) *General requirements.* The central wastewater system shall be designed by a professional engineer, registered in the state, conforming to acceptable standards of sound practices for wastewater collection systems and shall conform to all requirements of the state department of environmental protection and any other wastewater permitting authorities and shall conform to the fire protection requirements of the American Insurance Association requirements. The entire wastewater collection system must be engineered and coordinated with the city's comprehensive plan. The appurtenances to the system shall be equal to or shall exceed the minimum requirements of the city and applicable state statutes. New sewer systems shall be designed and constructed for an economic life of not less than 20 years.

(2) *Submittal requirements.* Upon submittal of construction plans for a central system as prescribed by this chapter, the design engineer shall supply data, calculations and analyses showing important features affecting design, including but not limited to the following:

a. The number of units, bedrooms, other domestic wastewater generators.

b. The type of units and expected population or estimated flow of wastewater from any unit designed for use.

c. The number of proposed equivalent residential connections (ERC) to the system and the anticipated flow of sewage to the wastewater treatment plant computed in accordance with current city criteria.

d. Any other meaningful information necessary to arrive at estimates of amounts and character of wastewater pertinent to the design.

(Ord. No. 97-10, § 1(4-19.2(G)), 7-3-1997)

Sec. 118-394. - Easements.

Utility easements, including **water**, sewer, electric, telephone, and gas and drainage, shall be provided in new subdivisions as follows:

(1) Applicants are encouraged to install utilities in the public right-of-way. Easements for utilities along rear lot lines and, where deemed necessary, along side lot lines, of a minimum width of eight feet, shall be provided as required for proposed utility installation, maintenance, or as may be required.

Easements of greater width may be required along or across lots, where necessary, for the extension of main sewer or other utilities or where multiple utilities and **water** and sewer lines are located within the same easement. Side lot easements may be decreased to ten feet when serving a single electric or telephone utility. Specific easements widths shall be coordinated with CES and the Florida Keys Aqueduct Authority.

(2) A drainage easement shall be provided when necessary. This easement shall be of sufficient width to provide adequately for watercourses, drainageways, channels, pipes, culverts, or streams, and access to permit maintenance of the drainage easement.

(3) Swales shall be permitted within subdivisions; storm sewers shall be covered and open ditches shall be permitted across undeveloped land only as an outlet into an established watercourse. This subsection is subject, however, to the following:

a. The current requirements of the state department of environmental protection and South Florida **Water** Management District.

b. Submission of acceptable hydraulic calculations.

c. Approval of the city engineer.

d. Approval of the state department of environmental protection and the South Florida **Water** Management District.

(Ord. No. 97-10, § 1(4-19.2(K)), 7-3-1997)

Sec. 118-395. - Individual wastewater system.

Individual wastewater systems consisting of pipes, tanks or treatment devices and subsurface absorption fields or other devices shall meet the requirements of this chapter and the requirements of all requisite federal, state and regional permitting agency regulations and shall be designed and located to facilitate a convenient and economical connection to a future central sewer system. Individual

systems shall not be allowed where connection to the city's central wastewater system is feasible, as determined by the city.

Sec. 18-116. – Definitions

14) *Underground utility and excavation contractor* means a contractor whose services are limited to the construction, installation, and repair, on public or private property, whether accomplished through open excavations or through other means, including but not limited to directional drilling, auger boring, jacking and boring, trenchless technologies, wet and dry taps, grouting, and slip lining, of main sanitary sewer collection systems, main **water** distribution systems, storm sewer collection systems, and the continuation of utility lines from the main systems to a point of termination up to and including the meter location for the individual occupancy, sewer collection systems at the property line on residential or single-occupancy commercial properties, or on multioccupancy properties at manhole or wye lateral extended to an invert elevation as engineered to accommodate future building sewers, **water** distribution systems, or storm sewer collection systems at storm sewer structures. However, an underground utility and excavation contractor may install empty underground conduits in rights-of-way, easements, platted rights-of-way in new site development, and sleeves for parking lot crossings no smaller than two inches in diameter, provided that each conduit system installed is designed by a licensed professional engineer or an authorized employee of a municipality, county, or public utility and that the installation of any such conduit does not include installation of any conductor wiring or connection to an energized electrical system. An underground utility and excavation contractor shall not install any piping that is an integral part of a fire protection system as defined in F.S. § 633.021 beginning at the point where the piping is used exclusively for such system.

Sec. 108-885. - Same—Significant threat of releasing harmful pollutants to surface **waters** or groundwaters during flooding.

In a development project determined to be within a flood hazard zone, no development will be allowed that poses a significant threat of releasing harmful quantities of pollutants to surface **waters** or groundwaters during flooding.

Sec. 108-890. - Same—Design and location of sewage collection and treatment systems, potable [water](#) supply systems and electrical and communication utilities.

In a development project determined to be within a flood hazard zone, sewage collection and treatment systems and potable **water** supply systems must be designed and located to prevent inflow or contamination of surface **waters** up to the flood protection elevation. Electrical and communication utilities must be designed to avoid flood damage up to the flood protection elevation.

Sec. 108-894. - Same—Development project in critical flood zone.

If the development project is in a critical flood zone, it must be demonstrated, in addition to compliance with division 3 of this article, that:

(1) The elevation or mean and peak velocity of the regulatory flood will not be increased as a result of any obstruction or displacement of flood **waters**.

(2) There is no significant threat of releasing quantities of pollutants which have the effect of degrading **water** quality below standards established in F.A.C. ch. 17-3, as amended from time to time, to surface **water** or groundwater during the regulatory flood.

(3) The capacity of the critical flood zone to store and convey surface **waters** or perform other significant **water** management functions will not be impaired.

Sec. 74-26. - Definitions.

Equivalent residential unit means a unit of measure for billing purposes equivalent to a **water** consumption of 3,000 gallons per month of normal domestic strength sewage.

Infiltration and inflow means groundwater and surface **water** that enters into the sewer system through cracked pipes, joints, manholes or other openings. *Sanitary sewer* means a sewer which carries sewage and to which stormwaters, surface **waters**, and groundwaters are not intentionally admitted.

Sewage means a combination of the **water**-carried wastes from residences, business buildings, institutions, and industrial establishments, together with such groundwaters, surface **waters**, and stormwaters as may be present.

Sewage treatment plant means any arrangement of devices and structures used for treating sewage.

Sewage works means all facilities for collecting, pumping, treating, and disposing of sewage.

Sewer means a pipe or conduit for carrying sewage.

Shall is mandatory; *may* is permissive.

Sludge means any discharge of **water**, sewage, or industrial waste which, in concentration of any given constituent or in quantity of flow, exceeds, for any period of duration longer than 15 minutes, more than five times the average 24-hour concentration of flows during normal operation.

Storm drain and *storm sewer* mean a sewer which carries stormwaters and surface **waters** and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling **water**.

Suspended solids means solids that either float on the surface of or are in suspension in **water**, sewage, or other liquids, and which are removable by laboratory filtering.

Utility means the city sewer utility.

Watercourse means a channel in which a flow of **water** occurs, either continuously or intermittently.

(Code 1986, § 74.02)

Sec. 86-3. - Legislative purpose, intent and scope.

The purpose of the land development regulations is to assist implementation of the city's comprehensive plan. More specifically the land development regulations are intended to carry out comprehensive plan policies concerned with land use; transportation; housing, parks; recreation and

open space; conservation; public facilities including **water**, wastewater and drainage system improvements; fiscal management; and intergovernmental coordination.

(Ord. No. 97-10, § 1(1-1.3), 7-3-1997)

Sec. 118-300. - Stormwater management.

(a) All subdivisions shall have an adequate comprehensive stormwater management system compliant with the surface **water** management requirements in article VIII of [chapter 108](#), including necessary ditches, canals, swales, percolation areas, berms, dikes, piers, detention ponds, storm sewers, drain inlets, manholes, head walls, end walls, culverts, bridges and other appurtenances, shall be required in all subdivisions for the positive drainage of stormwater. In addition, stormwater treatment facilities shall be required in the subdivision to control stormwater runoff quality by providing for on-site percolation and/or retention or other appropriate treatment technique for stormwater. Such requirements shall be compliant with article VIII of [chapter 108](#) as well as the environmental performance criteria of sections [108-1](#) and [108-957](#); and articles III, IV, V, VII and VIII of [chapter 110](#) pertaining to environmental protection.

(b) The design data of the drainage system shall be submitted along with the construction plans in a report form prepared by the applicant's engineer indicating the method of control of stormwater and groundwater pursuant to criteria of article VIII of [chapter 108](#) pertaining to surface **water** management.

Sec. 94-67. - Sanitary sewer

(d) The city's Fleming Key wastewater treatment facility shall meet all **water** quality requirements of F.A.C. ch. 17-3, including the chlorine residual standard. Dechlorination may be necessary if the chlorine residual in the effluent exceeds the maximum limits at the end of the discharge pipe which would cause a violation of F.A.C. ch. 17-3 standards. The wastewater treatment facility contains dechlorination facilities. To help minimize the eutrophication of ocean **waters** by ocean outfall which contains nutrients, the wastewater treatment plant effluent shall not exceed the following nutrient levels on an average annual basis:

(1) Total nitrogen concentration: six mg/l; and

(2) Total phosphorus concentration: four mg/l.

Sec. 94-69. - Drainage facilities.

The drainage level of service standard in this section will be applicable to all types of development. Where two or more standards impact a specific development, the most restrictive standard shall apply:

(1) Postdevelopment runoff shall not exceed the predevelopment runoff rate for a 25-year storm event, up to and including an event with a 24-hour duration.

(2) Stormwater treatment and disposal facilities shall be designed to meet the design and performance standards established in F.A.C. 17-25.025, with treatment of the runoff from the first one inch of rainfall on site to meet the **water** quality standards required by F.A.C. 17-302.500. Stormwater

facilities which directly discharge into outstanding Florida **waters** (OFW) shall provide an additional treatment pursuant to F.A.C. 17-25.025(9).

(3) Stormwater facilities must be designed so as to not degrade the receiving **water** body below the minimum conditions necessary to ensure the suitability of **water** for the designated use of its classification as established in F.A.C. ch. 17-302.

Sec. 108-851. - Required information for application.

For a type A surface **water** management permit application, a detailed description and drawing, with a scale of one inch equals 50 feet or larger, of the proposed stormwater management system shall be submitted to the city engineer by a state registered engineer. The following information shall be required:

(1) Hydrologic data including design rainfall, project drainage area, tributary off-site drainage area, existing and proposed land cover and soil characteristics relevant to the infiltration capacity of the soil including depth to the seasonal high **water** table. Soil borings at 400-foot spacing to a depth of six feet shall be provided. Alternate representative soil profiles may be used if approved in writing by the city engineer and if demonstrated to be from a reliable and generally recognized source. A one-half-foot interval contour topographic map of the development area including off-site area of sufficient size to indicate the general neighboring elevations shall be provided. The delineation of the latter area shall be satisfactory to the city engineer.

(2) Hydrologic calculations for determining existing and proposed stormwater runoff.

(3) Hydraulic data including receiving **water** stages, stage-storage and stage-discharge data for proposed retention and/or detention facilities, and percolation test data which follow a standardized percolation methodology approved by the city engineer.

(4) Hydraulic calculations for sizing channels, culverts, inlets, retention/detention ponds, pond discharge structures, and determining discharge rates and maximum **water** surface elevations.

(5) Erosion and sedimentation control plans, during and after construction.

(6) A statement of all assumptions and reference sources used in the conduct of the study.

(7) A certificate from a professional engineer licensed in the state that the soils are suitable and proper for the uses and purposes of the proposed development; or submission of a plan calling for the removal and replacement of unsatisfactory soils. If the applicant submits a plan for removal and replacement of soils, the applicant shall submit a certificate from a professional engineer after the removal and replacement of soils has been completed, stating the new soils are suitable and proper for the uses and purposes of the proposed development. Such certificate shall be furnished to the city engineer prior to the issuance of a certificate of completion.

(8) Where percolation is proposed, at least one boring per basin shall be submitted. The borings shall be to a depth of 20 feet below the invert of the basin or to a depth sufficient to locate the groundwater table or impervious soil layer.

(9)A general description of the manner in which the stormwater management system is to be maintained, indicating who or what entity shall be responsible and by what method the responsibility shall be created and documented.

(10)A list of all agencies (state, federal or local) having permit jurisdiction for the project.

Sec. 74-361. - Definitions.

Impervious area means the number of square feet of surface area that either prevents or retards the entry of **water** into soil as **water** would otherwise enter it under natural conditions if the surface were undisturbed property; and/or causes **water** to run off the surface in greater quantities or at an increased rate of flow from that present under natural conditions on undisturbed property. Impervious area includes, but is not limited to, structures, roofs, roof extensions, patios, porches, driveways, parking areas, sidewalks, pavement and athletic courts.

Stormwater management system and *system* mean the existing stormwater management of the city and all improvements thereto which by this article are constituted as the property and responsibility of the city, to be operated to, among other things, conserve **water**, control discharges necessitated by rainfall events, incorporate methods to collect, convey, store, absorb, inhibit, treat, use or reuse **water** to prevent or reduce flooding, over-drainage, environmental degradation and **water** pollution or otherwise affect the quality and quantity of discharge from such system.

Sec. 74-362. - Findings, determinations and powers.

(a)It is hereby found, determined, and declared that those elements of the system that provide for the collection, treatment, and disposal of stormwater and the regulation of groundwater are of benefit and provide services to all property within the incorporated city limits, including property not currently served by the storm elements of the system. The beneficiaries of the system include all real properties within the city that benefit by the provision, operation, and improvement of the system. Such benefits may include, but are not limited to, the provision of adequate systems of collection, conveyance, detention, treatment, and release of stormwater; the reduction of hazard to property and life resulting from stormwater runoff; improvement in general health and welfare through reduction of undesirable stormwater conditions; and improvement to the **water** quality in the stormwater and surface **water** system and its receiving **waters**.

(b)The city, under the direction of the director of utilities or other authorized city personnel, shall have the power to:

(1)Prepare regulations as needed to implement this article, and forward the regulations to the city commission for consideration and adoption, and adopt such procedures as are required to implement such regulations or carry out other responsibilities of the system;

(2)Administer the acquisition, design, construction, maintenance and operation of the system, including capital improvements designated in the comprehensive drainage plan;

(3)Administer and enforce this article and all regulations and procedures adopted relating to the alteration of the system including, but not limited to, the quantity, quality and/or velocity of the stormwater conveyed thereby;

- (4) Inspect private systems as necessary to determine the compliance of such systems with this article and any regulations adopted under this article;
- (5) Advise the city commission, city manager and other city departments on matters relating to the system;
- (6) Prepare and revise a comprehensive drainage plan for adoption by the city commission periodically;
- (7) Review plans, approve or deny, inspect, and accept extensions to the system;
- (8) Establish and enforce regulations to protect and maintain **water** quality within the system in compliance with **water** quality standards established by state, regional and/or federal agencies as now adopted or hereafter amended; and
- (9) Analyze the cost of services and benefits provided, and the system and structure of fees, charges, fines, and other revenues of the system annually.

(Ord. No. 01-06, § 2, 6-5-2001; Ord. No. 02-16, § 2, 6-18-2002)

Sec. 74-363. - Creation of stormwater user fees.

Pursuant to Article VIII, Section 1 of the Florida Constitution, F.S. ch. 166, and the powers granted in the Charter of the city, there are hereby established stormwater user fees and accompanying regulations, whereby the city will be responsible for the operation, construction, maintenance and repair of stormwater facilities; for stormwater system planning; and for **water** quality management.

Sec. 74-367. - Program responsibility.

It shall be the duty of the city's department of utilities to administer the stormwater management user fee system. The department shall keep an accurate record of all persons using the services and facilities of the stormwater management system of the city and to make changes in accordance with the rates and changes established in this article.

(Ord. No. 01-06, § 2, 6-5-2001; Ord. No. 02-16, § 6, 6-18-2002)

Sec. 74-368. - Stormwater management utility enterprise fund.

(a) All user fees collected by the city shall be paid into a separate fund which is hereby created, to be known as the "stormwater management fund". Such fund shall be used for the purpose of paying the costs of construction, operations, and maintenance, and administration of the stormwater facilities of the city and to carry out all other purposes of the system. To the extent that the user fees collected are insufficient to construct the needed stormwater drainage facilities, the cost of the same may be paid from such city fund as may be determined by the city commission, but the city commission may order the reimbursement of such fund if additional charges are thereafter collected.

(b) The fees paid shall not be used for general or other governmental or proprietary purposes of the city, except to pay for the equitable share of the cost of accounting, management and government thereof. Other than as described above, the fees shall be used solely as provided herein.

(Ord. No. 01-06, § 2, 6-5-2001; Ord. No. 02-16, § 7, 6-18-2002)

Sec. 74-369. - Equivalent stormwater unit (ESU) rate.

The user fee charged on each ESU shall be \$7.05. This rate may be adjusted by resolution of the city commission each October 1, by up to 100 percent of the percentage increase in the CPI-(U), the U.S. City Averages (as of June). The city commission shall enact an ordinance amendment to this section in order to increase the ESU in excess of the CPI.

Sec. 110-123. - Erosion control measures.

All measures necessary to minimize soil erosion and to control sedimentation in the disturbed land area shall be implemented. The following protection shall be provided for all disturbed areas:

- (1) Minimize velocities of **water** runoff;
- (2) Maximize protection of disturbed areas from stormwater runoff; and
- (3) Prevent or retain sedimentation within the development site as early as possible following disturbances.

Sec. 110-466. - Limitations and restrictions applicable to all development allowed within undisturbed flood zone areas

Stormwater facilities. Drainage facilities shall be in place and functional concurrent with deadlines established in the concurrency management system. Such drainage facilities shall be designed to:

- a. Comply with the city's established level of service standards and state stormwater facility standards cited in [chapter 94](#) pertaining to concurrency management.
- b. Maintain the natural flow regime and function of the floodplain.
- c. Support and further regional stormwater policies prepared by the South Florida **Water** Management District.

Sec. 108-91. - Scope; major and minor developments.

Modifications of development plan:

1. *Administrative Modifications.* The following and similar modifications that do not rise to the status of minor or major plan modifications may be approved by the city planner:

- (a) Reduction of building size;
- (b) Reduction of impervious area;
- (c) Expansion of landscaping; or

(d)A revision to enhance storm **water** management, landscaping, handicapped accessibility, and/or utilities.

Sec. 108-95. - Performance guarantee.

A performance guarantee may be required from applicants as a condition of development plan approval if all required on- or off-site infrastructure improvements are not in place at the time of development plan approval. The performance guarantee shall be in the form of a performance bond or other instrument approved by the city commission. The performance guarantee shall be furnished and payable to the city in the sum of 125 percent of the total cost of the city engineer's estimates for extension of potable **water** distribution system components; sanitary sewer system components; street improvements, including acceleration and/or deceleration lanes, traffic control devices, markings, signage, and/or related street improvements; sidewalks, curbs, and/or gutters; stormwater management improvements; and/or other improvements required in the development plan approval. The terms of the performance guarantee may be modified by the city commission after considering recommendations of staff and the city attorney.

Sec. 54-154. - Payment required prior to issuance of building permit or certificate of occupancy or connection to city sewer.

(a)No person shall receive a building permit, a certificate of occupancy, or connect to the city sewer system any property, building or structure until a sewer impact fee shall be paid in accordance with this division and in the amount required by this section. However, if a previously unavailable public sewer system is newly extended to a person with property, building or structure, bringing such public sewer system within 200 feet of the property line, such person shall have six months from the date of connection to pay for such connection. Payment shall be equally divided over the six-month period, payable in monthly installments with interest assessed at an amount equal to eight percent per annum on the monthly balance.

(b)The sewer impact fee shall be paid in the amount of \$2.00 per gallon per day of sewage flow for the estimated use of the development. The estimated sewage flow shall be based upon 95 percent of actual **water** consumption averaged over the highest six months of consumption during the three years preceding hookup into the Sigsbee Force Main Extension, South Roosevelt Extension, Hilton Haven Extension or other extensions of the sanitary sewer system approved after the effective date of the ordinance from which this section derives. For those existing uses required to connect to the extended sewer systems, **water** consumption shall be based on Florida Keys Aqueduct Authority billing data. For all new development wherever located when actual **water** consumption data is not available for the required three-year period, estimated sewage flow shall be for the most nearly approximate use listed as F.A.C. [ch. 10D-6.49](#), "System Size Determinations." A copy of such rules shall be kept on file for public view in the offices of the city clerk. Where actual **water** consumption data is used to estimate sewage flow, it shall be verified by the building official that Florida Keys Aqueduct Authority is the sole source of **water** supplied to a location.

Sec. 108-346. - Open space, landscaping and removal of exotic vegetation.

(a)Open space shall be comprised of permeable open surfaces, excluding principal structures and impermeable surfaces. No parking or paved areas shall be included as open area. Active recreation areas may be counted as open area.

(b) Residential uses shall provide a minimum of 35 percent open space. Nonresidential uses shall provide a minimum of 20 percent open space. The total open space provided by mixed uses shall be based on the percent of total square feet of floor area on site allotted to the respective residential and nonresidential uses.

(c) Open space and spaces between buildings required by this article, shall be located and improved so as to reasonably serve the purposes for which the requirements are intended. These purposes include provision of adequate light and air, appropriate separation between buildings and uses, enhancement of privacy, sufficient area for recreation and leisure pursuits in residential areas, and to facilitate surface **water** drainage.

(d) The natural landscape of the site shall be preserved as much as possible for purposes of enhancing the general appearance of the site as well as to prevent excessive stormwater runoff, erosion, siltation and dust. Prior to the issuance of a certificate of occupancy for a new development, the owner/applicant shall remove all nuisance and invasive exotic vegetation from the site for which a development order or permit is requested. Nuisance plants include those plants which may or may not be native, and their growth habits are hard to control or they exhibit some undesirable features. Invasive exotic vegetation is those plants which have been introduced into the area and may have undesirable growth habits or maintenance constraints.

Code Pertaining to Water Conservation

Includes Sections:

74-302	74-308	108-514
74-303	74-295	108-515
74-304	74-296	
74-305	108-957	
74-307	110-86	

Sec. 74-302. - Intent and purpose.

It is the intent and purpose of this subdivision to protect the city **water** resources from the harmful effects of overutilization during periods of **water** shortage and allocate available **water** supplies by assisting the South Florida **Water** Management District in the implementation of its **water** shortage plan.

(Code 1986, § 77.01)

Sec. 74-303. - Applicability.

This subdivision shall apply to all persons using the **water** resource within the geographical areas subject to the **water** shortage or **water** shortage emergency, as determined by the district, whether from public or privately owned **water** utility systems, private wells, or private connections with surface **water** bodies. This subdivision shall not apply to persons using treated effluent or saltwater.

(Code 1986, § 77.03)

Sec. 74-304. - Plan adopted by reference.

F.A.C. ch. 40E-21, **Water** Shortage Plan, as may be amended from time to time, is incorporated by reference as a part of this Code.

(Code 1986, § 77.04)

Sec. 74-305. - Implementation of plan; violation.

The declaration of a **water** shortage or **water** shortage emergency within all or any part of the city by the governing board or the executive director of the district and its subsequent approval by the city commission shall invoke this subdivision. Upon such declaration, all **water** use restrictions or other measures adopted by the district applicable to the city or any portion thereof shall be subject to enforcement action pursuant to [section 74-306](#). Any violation of the provisions of F.A.C. ch. 40E-21 or any order issued pursuant thereto shall be a violation of the **water** shortage plan adopted in this subdivision.

Sec. 74-307. - Penalties for violation.

(a) Violation of any section of this subdivision shall be subject to the following penalties:

(1) First violation, \$25.00.

(2) Second and subsequent violations, a fine not to exceed \$500.00 and/or imprisonment in the county jail not to exceed 60 days.

(b) Each day in violation shall constitute a separate offense. In the initial stages of a **water** shortage or **water** shortage emergency, law enforcement officials may provide violators with no more than one written warning. The city, in addition to the criminal sanctions contained in this section, may take any other appropriate legal action, including but not limited to emergency injunctive action, to enforce this subdivision.

(Code 1986, § 77.07)

Sec. 74-308. - Acceptance of service constitutes acceptance of plan.

No **water** service shall be furnished to any person by a public or private utility unless such person agrees to accept all the sections of this subdivision. The acceptance of **water** service shall be in itself the acceptance of this subdivision.

Sec. 74-295. - Title; purpose.

(a) This subdivision shall be known as the "City of Key West's **Water** and Irrigation Conservation Ordinance."

(b) This subdivision sets restrictions, constraints and prohibitions on persons in Key West in order to enhance the city's **water** resources and provides a permanent **water** conservation measure. Unless otherwise provided, nothing in this subdivision shall be construed to relieve any person from compliance with any applicable regulations enacted by the city or any other political subdivision of the state.

(c) The purpose of this subdivision is to establish a regulatory framework to ensure that **water** and landscape irrigation conservation will be consistent throughout the city.

Sec. 74-296. - Definitions.

The following definitions shall apply:

Impervious means land surfaces that do not allow the penetration of **water**, including paved roads, sidewalks, driveways, parking lots and highly compacted areas such as shell or clay.

Irrigation means the direct application of **water** by means other than precipitation.

Irrigation systems means equipment and devices that deliver **water** to plants being irrigated including, but not limited to pipelines, control structures, pipes and ditches, pumping stations, emitters, valves

and fittings. This does not include the transfer of **water** through **water** management systems from one location to another.

Sec. 74-297. - Restrictions.

(a)Irrigation of any residential, commercial, institutional, governmental or industrial landscape areas shall be restricted to the hours of 5:00 p.m. to 9:00 a.m.

(b)It shall be unlawful to operate or cause the operation of any irrigation system or device in a manner causing potable **water** to be wasted. Such unlawful operations shall include, but not be limited to, unnecessary **watering** of impervious areas, other than that which may occur incidental to the proper operation of the primary irrigation system.

(c)Upon the effective date of Ordinance [No. 02-28, January 1, 2003,] new installations of automatic irrigation systems shall be equipped with a **water** sensing device that shall automatically discontinue irrigation during periods of rainfall.

(Ord. No. 02-28, § 3, 11-19-2002)

Sec. 74-298. - Exemptions.

The following activities shall be exempt from the provisions of [section 74-297\(a\)](#):

(1)Landscape irrigation by hand **watering** using a self-canceling nozzle.

(2)Landscape irrigation by systems from which the sole source is treated wastewater effluent.

(3)The operation of irrigation systems for system repair and maintenance.

(4)Flushing of **water** mains required for normal **water** main clearance and maintenance and for maintenance of **water** quality; provided, however, where practical, contractors shall direct flushed **water** into pervious areas, flush at the minimum rate necessary for cleaning, and disperse the **water** in such a manner to benefit local vegetation.

(5)Landscape irrigation for purposes of **watering** in fungicides, insecticides and herbicides as required by the manufacturer or by federal or state laws; provided, however, this exemption applies only to licensed pest control operators and shall be limited to manufacturer's recommendations.

(6)Landscape irrigation for the purpose of **watering** newly planted grass and foliage for the first 45 days after initial installation.

(7)Irrigation activity for dust emissions required by court or administrative action.

(8)Irrigation of agriculture where the use of **water** is permitted by a consumptive or **water** use permit issued by the South Florida **Water** Management District.

Sec. 108-957. - Conservation of potable [water](#) supply.

The city shall assist in regulating development for purposes of complying with policies of the South Florida **Water** Management District directed toward conservation of potable **water** supply and to achieve a reduction in the current rates of **water** consumption. Therefore, development plans shall be required to comply with the following potable **water** supply performance criteria:

- (1) Where nonpotable alternative sources of irrigation **water** are available, potable **water** supplies shall not be used to meet irrigation needs.
- (2) All new development shall be required to use **water**-saving plumbing fixtures.
- (3) In order to reduce demand for irrigation **water**, which in turn often places greater demand upon potable **water** sources, at least 70 percent of all landscaping material obtained from off-site sources for use on any site should be native plant material adapted to soil and climatic conditions existing on the subject site. Further, at least 50 percent of all trees used in landscaping shall be drought tolerant native species adapted to soil and climatic conditions existing on site in order to lessen **water** demand. Refer to [section 108-518](#) for recommended plant material.
- (4) The city shall require, to the extent lawful, reuse of **water**, including use of cisterns for collecting rainwater, for use in spray irrigation. In addition, the city may require mandatory hookup to systems distributing reclaimed **water** within 500 feet of the site.

Sec. 110-86. - Applicability.

In order to promote and preserve natural hydrological conditions and to preserve **water** quality, natural habitats, and environmentally sensitive areas, sections [110-87](#) through [110-91](#) shall be applied to wetlands and transitional wetlands, regardless of their zoning, and to all areas designated conservation on the future land use map.

Sec. 108-514. - Review of landscape plans.

The administrative official shall review all landscape plans to verify that the following drought tolerant fundamentals have been utilized:

- (1) Consideration for the site's soil characteristics, topography, drainage, and microclimatic conditions should be made when making plant selection.
- (2) Organic mulches (pine and cypress) and inorganic mulches (rock, stone and gravel) shall be specified in planting beds to a minimum depth of three inches. Mulches will help in holding moisture, cooling the surface, reducing weed growth, slowing erosion, and, in the case of organic mulches, even improve the soil quality as they decompose.
- (3) Drought tolerant, native and noninvasive exotic plants shall be used. This conserves **water** resources and increases a plant's chance of survival. Plants shall be installed and maintained in a professional and responsible manner so as to allow for the plant's optimum growth and longevity.

Sec. 108-515. - Irrigation plan required.

- (a) The landscape plan shall be accompanied by an irrigation plan showing the following information:

- (1)The name, address and phone number of the irrigation contractor responsible for the design.
- (2)A schedule of materials, including heads, piping, meters, cocks, etc., with sizes and quantities specified.
- (3)Include a scaled drawing showing location of all heads, piping, meters and cocks.
- (4)Indicate the source of **water** to be used (i.e., on-site well, city **water** or reclaimed **water**). The irrigation system shall be designed to connect to the city's reclaimed **water** system if and when it becomes available within 100 feet of the site.
- (5)Backflow preventers shall be indicated on the design.
- (b)The irrigation design shall provide for 100-percent coverage of all planted areas, and irrigation zones shall accommodate plants with similar **watering** requirements.
- (c)All irrigation systems shall include a rain sensor device or switch which will override the irrigation cycle of the system when adequate rainfall has occurred.
- (d)Shrubs, trees, ground covers, and low mass plantings shall be **watered** with bubblers of low volume emitters placed in separate zones from turf sprinklers.
- (e)In an effort to conserve **water**, very narrow areas where sprinkler heads would overspray, mulches, gravel or other nonliving forms of ground cover shall be utilized.

Sec. 108-1126. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Conservation area means lands designated as "conservation areas" on the future land use map and in policy 1-2.4.1 of the comprehensive plan pertaining to goals, objectives, and policies. These areas are environmentally sensitive and include the following:

- (1)Outstanding **waters** of the state;
- (2)Freshwater wetlands;
- (3)Tidal wetlands of the state;
- (4)Mangrove; and
- (5)Upland hammocks.

Sec. 108-346. - Open space, landscaping and removal of exotic vegetation.

(a)Open space shall be comprised of permeable open surfaces, excluding principal structures and impermeable surfaces. No parking or paved areas shall be included as open area. Active recreation areas may be counted as open area.

(b)Residential uses shall provide a minimum of 35 percent open space. Nonresidential uses shall provide a minimum of 20 percent open space. The total open space provided by mixed uses shall be based on the percent of total square feet of floor area on site allotted to the respective residential and nonresidential uses.

(c)Open space and spaces between buildings required by this article, shall be located and improved so as to reasonably serve the purposes for which the requirements are intended. These purposes include provision of adequate light and air, appropriate separation between buildings and uses, enhancement of privacy, sufficient area for recreation and leisure pursuits in residential areas, and to facilitate surface **water** drainage.

(d)The natural landscape of the site shall be preserved as much as possible for purposes of enhancing the general appearance of the site as well as to prevent excessive stormwater runoff, erosion, siltation and dust. Prior to the issuance of a certificate of occupancy for a new development, the owner/applicant shall remove all nuisance and invasive exotic vegetation from the site for which a development order or permit is requested. Nuisance plants include those plants which may or may not be native, and their growth habits are hard to control or they exhibit some undesirable features. Invasive exotic vegetation is those plants which have been introduced into the area and may have undesirable growth habits or maintenance constraints.

Water Code- Generally

Includes Sections:

74-301	86-4	110-122
110-184	86-9	
110-188	118-357	
110-190	118-360	
110-191	110-498	

Sec. 74-301. - Definitions.

The following words, terms and phrases, when used in this subdivision, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

District means the South Florida **Water** Management District.

Shall is always mandatory and not merely directory.

Water resource means any and all **water** on or beneath the surface of the ground, including natural or artificial watercourses, lakes, ponds, or diffused surface **water**, and **water** percolating, standing, or flowing beneath the surface of the ground.

Water shortage emergency means that situation when the powers which can be exercised under F.A.C. ch. 40E-21, part II, are not sufficient to protect the public health, safety, or welfare or the health of animals, fish or aquatic life or a public **water** supply or commercial, industrial, agricultural, recreational or other

Cross reference— Definitions generally, § 1-2.

Sec. 110-184. - **Water**-related and **water**-dependent uses.

(a)All **water**-related uses shall be built on uplands landward of the high velocity hurricane storm surge zone (V zone) and the coastal construction control zone established by the state department of environmental protection and enacted as the Florida Keys Coastal Management Act of 1974, excepting structures approved by the state department of environmental protection. Within the coastal building zone all construction activities shall be predicated on plans compliant with applicable state and local building codes. Dredging and filling of wetlands or open **water** in order to accommodate **water**-related uses shall not be permitted.

(b)Along the coastal, nearshore or estuarine shoreline seaward of the high velocity storm surge zone, no development shall be permitted other than **water**-dependent structures, native shoreline vegetation, elevated accessways of wood or other material which allow light to pass through and air and/or **water** to circulate underneath and to support plant life, subject to the approval of the state or federal agencies having jurisdiction. Hardening of the shoreline shall not be permitted unless the upland property is

critically imperiled and the use of vegetation has failed to stabilize the shoreline. The design specifications of any shoreline hardening structure shall:

- (1) Comply with best management principles and practices consistent with state and federal standards and be accomplished by use of the least environmentally damaging methods and designs possible;
 - (2) Avoid a vertical slope which generates erosive tendencies, especially to adjacent unprotected shoreline properties. Use natural rock boulders, pervious interlocking tile systems with filter fabric on the landward side, or similar stabilization methods, all of which must be approved by public agencies having jurisdiction;
 - (3) Not be located waterward of the mean high **water** line except when it is shown to be in the overriding public interest;
 - (4) First be approved by other public agencies having jurisdiction; and
 - (5) Incorporate a program of shoreline vegetation or revegetation in order to build, enhance, and stabilize a restored shoreline.
- (c) No non-**water**-dependent uses shall be permitted on submerged lands or wetlands. Development on uplands adjacent to wetlands shall preserve a buffer measured from the nearest upland/wetland boundary. The buffer area shall be coordinated with South Florida **Water** Management District permitting guidelines. Within the buffer area all exotic vegetation shall be removed, and native plants shall be planted. The purpose of the buffer area is to protect ambient **water** quality and to prevent degradation of **water** quality from pollutants from surface **water** runoff within coastal **waters**. Similarly, no structures which constrict **water** circulation shall be permitted.

Sec. 110-188. - Restrictions in coastal high hazard area.

(a) The city shall enforce the land use controls within the coastal high hazard area, within the LDR-C and MDR-C districts, including but not limited to enforcing:

- (1) Density requirements for development within the Federal Emergency Management Agency (FEMA) floodprone map V zone.
- (2) Regulations which mandate that all development and redevelopment within the Federal Emergency Management Agency floodprone area V zone areas comply with the following regulatory techniques for hazard mitigation:
 - a. State and local regulations establish coastal construction control lines, as well as applicable state and local construction codes regulating construction activity in coastal areas.
 - b. Surface **water** management improvements which mitigate against loss of floodplain and comply with adopted surface **water** management level of service standards for drainage cited in [chapter 94](#) pertaining to concurrency management.
 - c. No development or redevelopment within the Federal Emergency Management Agency floodprone map V zone shall occur on septic tanks.

d. Publicly funded infrastructure shall not be built within the Federal Emergency Management Agency floodprone map V zone unless the facility is for the protection of public health and safety.

e. Development plans shall comply with wetland and transitional wetland preservation regulations in sections [110-86](#) through [110-91](#)

(b) A multiagency development plan review process shall be initiated by the city for all proposed development or redevelopment having potential adverse impacts on **water** quality, wetlands, shoreline stabilization, natural habitats, fish or wildlife, hurricane evacuation, or other adverse impacts on coastal resources. The development plan review for such developments shall be coordinated with state, county, federal, or regional agencies having jurisdiction. A primary function of this review process shall be to effectively reconcile hazard mitigation issues prior to issuance of any development orders.

Sec. 110-190. - Multiagency review of coastal management issues.

As part of the staff analysis and evaluation of development plans, the city planner shall coordinate with members of a multiagency technical review committee comprised of the following agencies: the U.S. Coast Guard; the U.S. Fish and Wildlife Service; the U.S. Army Corps of Engineers; the state department of environmental protection; the South Florida **Water** Management District; the South Florida Regional Planning Council; the county; and other federal, state, and regional agencies as may be appropriate in managing the following activities:

(1) The city shall coordinate all development and resource conservation measures impacting the **waters** of the Atlantic Ocean and Florida Bay with such agencies as well as other applicable public agencies. These activities shall include but not be limited to review of proposed development potentially impacting natural resources, including development petitions for docks, shoreline stabilization, dredging, or other alteration of natural resources under federal or state jurisdiction.

(2) All applications for development activity impacting **waters** of the state as well as tidally influenced salt ponds or other lands under the jurisdiction of the state shall be coordinated with agencies having appropriate jurisdiction.

(3) The city shall coordinate with technical staff within the state department of environmental protection and the South Florida **Water** Management District in order to ensure implementation of sound principles and practices of coastal resource management during the development review process as well as in the formulation of policies impacting coastal resource management.

(4) The city shall coordinate with the South Florida **Water** Management District, the state department of environmental protection, as well as other appropriate state agencies in matters surrounding stormwater management, drainage, **water** quality and quantity, and consumptive use permitting.

(5) The city shall ensure that all issues surrounding development impacts on wetlands or other resources under federal and/or state jurisdiction are managed based on timely coordination, exchange of information, and appropriate followup by the city and all agencies having jurisdiction over the issue. The city shall request jurisdictional determinations from all appropriate agencies prior to the issuance of development orders or building permits for all sites within the city.

(6)The city shall coordinate with the county on issues surrounding hurricane evacuation, stormwater management on county roadways, public access, and other coastal issues of mutual concern.

(Ord. No. 97-10, § 1(3-11.4(J)), 7-3-1997)

Sec. 110-191. - Impacts of development on coastal waters.

Development plans shall comply with the following performance criteria:

(1)Surface **water** management systems shall be consistent with the city's adopted drainage level of service (reference comprehensive plan policy 4-1.1.1) and applicable federal, state, and regional standards.

(2)A vegetated pond with sloping wetland buffers shall be established and maintained as part of the surface **water** management requirements. Prior to construction of the surface **water** management system for any phase of a project, the developer shall prepare a design and management plan for the vegetated/littoral zone that will be developed as part of these systems. The plan should:

a.Include typical cross sections of the surface **water** management system showing the average groundwater elevation and the minus three-foot contour (i.e., below average elevation) or a 75-foot distance from the wetland buffer, whichever is greater;

b.Specify how vegetation is to be established within this zone, including the extent, method, type and timing of any planting to be provided;

c.Include the removal of all exotic vegetation; and

d.Provide a description of any management procedures to be followed in order to ensure the continued viability and health of the stormwater management system. The wetland zone as established shall consist entirely of native aquatic vegetation and should be maintained permanently as part of the **water** management system. As a minimum, ten square feet of vegetated wetland zone per linear foot of wetland shoreline shall be established as part of the **water** management plan. The developer's vegetated/littoral zone management plan shall include a plan acceptable to the city for the longterm management and maintenance of stormwater, lake and lakefront shoreline. The burden for perpetual maintenance rests with the property owner. If the city establishes a citywide utility district, the city may implement a city management strategy to be funded through an equitable assessment of property owners. Should it be necessary to establish or replenish shoreline vegetation or littoral zones, the developer should use plants that are highly salt tolerant as part of the aquascape. Aquatic planting that is necessary shall be illustrated on the required landscape plan submittal for development plan review as provided in [section 108-243](#)(c) and (d).

(3)Outstanding Florida **waters** and class III **waters** shall be protected by incorporating the following into the city's land development regulations:

a.Dredging and filling activities shall be limited to the state department of environmental protection, the U.S. Army Corps of Engineers, and the South Florida **Water** Management District and any other applicable agency approved dredging.

b.Ensure good **water** quality by coordinating with the U.S. Fish and Wildlife Services, the state department of environmental protection, and the South Florida **Water** Management District in monitoring the quality of stormwater runoff and all discharge processes where these agencies have jurisdiction. The city shall notify the appropriate agency with jurisdiction as potential issues or problems are identified by the city. The city's amended land development regulations shall provide performance criteria designed to ensure that new development provides effective and adequate stormwater management improvements concurrent with the impacts of new development. All new development shall comply with drainage level of service criteria.

c.Prohibit the use of these **waters** for **water**-dependent activities that are contrary to the public interest and do not satisfy a community need. Upon adoption of the comprehensive plan, all marinas within the city shall be retrofitted with pumpout stations. Use of pumpout facilities shall be mandatory for all vessels and liveaboard units. An implementing regulatory program shall require participation by the state and county since the vessels and liveaboards are located on **waters** of the state.

d.Prohibit modification of marine grassbeds unless required by an overriding public interest, and the activity is approved by federal, state, and/or regional agencies having jurisdiction.

e.Where modification of grassbeds is permitted by agencies having jurisdiction, the city shall ensure that:

1.A determination of overriding public interest has been demonstrated prior to modification of grassbeds.

2.Project runoff and nutrient introduction shall be controlled to prevent an increase in **water** turbidity.

3.Projects damaging grassbeds during construction shall incorporate mitigative techniques which reestablish benthic conditions favorable to natural regeneration. Mitigation should only be allowed at a 3:1 or 4:1 ratio as recommended by the marine resources division of the state department of environmental protection.

4.Special attention shall be given to stipulations cited in subsections (3)e.1 through (3)e.3 of this section during the development review process. The city shall coordinate closely with state and federal agencies during the permitting processes to ensure that the intent of these policies is carried out.

f.Protect aquatic and wetland wildlife and vegetative species.

Sec. 86-4. - Consistency with comprehensive plan.

The land development regulations, pursuant to F.S. §§ 163.3201 and 163.3202, are adopted to assist in carrying out the desired general policies of the comprehensive plan for managing the use of land and **water** within the city. The land development regulations are and shall remain consistent with the comprehensive plan as mandated by F.S. ch. 163, part II: "County and Municipal Planning and Land Development Regulation." The land development regulations shall be amended as necessary to ensure consistency with the city comprehensive plan.

Sec. 86-9. - Definition of terms

*Public **water** and sewer service* means **water** and sewer systems, including pipes, rights-of-way and treatment plants, owned and operated by the city or operated under a franchise granted by the city.

Water-dependent uses means activities which can be carried out only on, in or immediately adjacent to **water** areas because the use requires access to the **water** body for: waterborne transportation, including ports or marinas; recreation; electrical generating facilities; or **water** supply.

Water-related uses means activities which are not directly dependent upon access to a **water** body, but which provide goods and services that are directly associated with **water**-dependent or waterway uses and/or provide supportive services to persons using a duly permitted marina.

Sec. 118-357. - Fill.

The subdivision shall be graded and, where necessary, filled to comply with the surface **water** management requirements prescribed in article VIII of [chapter 108](#) pertaining to surface **water** management. The fill shall be free of muck; peat; clay; unstable soils; organic matter such as logs, stumps, trees, clippings and cuttings; any form of junk, rubbish, trash, liquid or solid wastes; and any form of debris that is subject to consolidation, disintegration, erosion or encourages the presence of insects, termites, or vermin. The type of fill within the rights-of-way shall be satisfactory to and meet with the approval of the city engineer who shall require soil tests of the backfill and the underlying material at the cost of the applicant and who shall require the development's project engineer to certify the type of material and method of placement.

Sec. 118-360. - Land clearing and excavation.

(a) Land clearing, excavation, and fill permits as required by the Code of Ordinances shall be obtained from the building official or other designated staff prior to commencement of clearing, grading or filling work. Similarly, all requisite permits from the county, the state, the South Florida **Water** Management District, or the federal government shall be obtained and presented to the city prior to commencement of any clearing, filling or excavation.

(b) Applicants shall be required to clear all rights-of-way and to plan and construct all grades for streets, alleys, lots and other areas, in a manner which is consistent and compatible with all performance criteria of [chapter 102](#); articles III, IV and V of [chapter 108](#); [section 108-956](#); and article II of [chapter 110](#), as stipulated, and all such plans and construction activities shall be consistent with surface **water** management requirements of article VIII of [chapter 108](#) pertaining to surface **water** management.

(c) In the interest of preserving existing trees and other natural beauty, the planning board or other designated staff may vary the requirements of this division where aesthetic and environmental conditions will be enhanced but will not adversely affect property drainage of the area.

Sec. 110-498. - Criteria for compliance.

All irrigation wells shall comply with [section 74-337](#) and the following criteria:

(1)A permit shall be required for the construction of irrigation wells within the city. Application shall be made to the building department.

(2)All irrigation wells shall be constructed by a **water** well contractor licensed under F.A.C. ch. 17-531 to engage in the business of construction, repair, or abandonment of wells.

(3)All irrigation wells shall be constructed in accordance with all applicable state regulations and good engineering practices. The provisions of F.A.C. 17-532.500 are incorporated in this subsection by reference.

(4)The permittee shall demonstrate to the city that the issuance of a permit for an irrigation well will not cause adverse impacts on adjacent land use, as exemplified by but not limited to the following:

a.Significant reduction in **water** levels in an adjacent waterbody or wetland; or

b.Significant potential for land collapse or subsidence caused by a reduction in groundwater levels.

(5)In this regard, all irrigation wells shall be constructed such that the **water**-bearing zone from which the well obtains its **water** is either connected to the freshwater lens or other **water**-bearing zones so connected. Proof of such shall be provided prior to approval.

(6)Within 30 days after completion of the construction of any irrigation well as permitted in this article, a written report containing geophysical logs, geologic samples and logs, and well pumping tests shall be submitted to the city engineer for approval.

(7)Use of an irrigation well shall not be permitted until approved, as evidence by a written release for the use of the irrigation well by the city engineer.

Sec. 110-122. - Definitions.

edimentation means the settling out of the soil particles which are transported by **water** or wind. Sedimentation occurs when the velocity of **water** or wind in which soil particles are suspended is slowed to a sufficient degree and for a sufficient period of time to allow the particles to settle out of suspension or when the degree of slope is lessened to achieve the same result.

Soil erosion means any removal and/or loss of soil by the action of **water**, gravity, or wind. Erosion includes both the detachment and transport of soil particles.