

DRAINAGE AND NATURAL AQUIFER GROUNDWATER RECHARGE

Goal 7.0. To optimize the utilization of water resources through provision of stormwater management for Broward County which reduces damage and inconvenience from flooding, promotes recharge to the Biscayne Aquifer, improves and protects water quality in surface and ground waters, and protects the functions of wetlands in urban areas.

Objective 7.1. Broward County shall implement drainage improvements to remove existing Group One deficiencies by 2010, and South County (SC) and Central County (CC) deficiencies by 2015.

Policy 7.1.1. Broward County shall continue to include Group One capital improvements needs in the Broward County Capital Program.

Policy 7.1.2. Broward County shall continue to include SC capital improvements needs in the Broward County Capital Plan

Policy 7.1.3. Broward County shall include CC capital improvements needs in the Broward County Capital Plan.

Objective 7.2. Stormwater management facilities shall be provided to meet the County's short-term and long-term future surface water management needs.

Policy 7.2.1. Broward County and other appropriate drainage districts shall continue to implement land development regulations which implement the minimum design criteria for stormwater management identified in Table 7-A as the level of service standard to assess adequacy of service and concurrency during the development review process where jurisdictionally appropriate.

**TABLE 7-A
STORMWATER MANAGEMENT LEVEL OF SERVICE STANDARDS**

Road Protection	Residential streets not greater than fifty feet wide rights-of-way to have crown elevations no lower than the elevation for the respective area depicted on the ten year "Flood Criteria Map." Rights-of-way greater than fifty feet wide to have an ultimate edge of pavement no lower than the elevation for the respective area depicted on the ten year "Flood Criteria Map."
Buildings	To have the lowest floor elevation no lower than the elevation for the respective area depicted on the "100 Year Flood Elevation Map," or the FEMA Base Flood Elevation, whichever is higher.

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**TABLE 7-A
STORMWATER MANAGEMENT LEVEL OF SERVICE STANDARDS**

Off Site Discharge	Not to exceed the inflow limit of SFWMD primary receiving canal or the local conveyance system, whichever is less.
Storm Sewers	Design frequency minimum to be three-year rainfall intensity of the State Department of Transportation Zone 10 rainfall curves.
Flood Plain Routing	Calculated flood elevations based on the ten-year and one-hundred year return frequency rainfall of three day duration shall not exceed the corresponding elevations of the ten year "Flood Criteria Map" and the "100-Year Flood Elevation Map."
Antecedent Water	The higher elevation of either the control level elevation or the elevation depicted on the map "Average Wet Season Water Levels."
On Site Storage	Minimum capacity above antecedent water level and below flood plain routing elevations to be design rainfall volume minus off site discharge occurring during design rainfall.

These levels of service standards shall be used to determine adequacy at the time of plat approval for all properties that are required to plat and for those properties where jurisdictionally appropriate that are not required to plat, at the time of site plan approval.

Policy 7.2.2. Broward County shall continue to utilize the development review process to assure that in the Group One and SC areas, the "existing level of service standard" shall be applicable and no reduction of service shall occur in these areas. Upon completion of the drainage improvements for the Group 1 and SC areas, all future development shall meet the LOS standards described in Policy 7.2.1.

Policy 7.2.3. The Development and Environmental Regulation Division shall continue to utilize the development review process of the Land Development Code to assure the completion of the drainage system for the Unincorporated Area as development proceeds.

Policy 7.2.4. Broward County shall continue to utilize its regulatory authority under Chapter 27, Broward County Code of Ordinances to assure that the construction and operation of stormwater management systems comply with all applicable provisions within Article V, "Water Resource Management", of the aforementioned Chapter 27, which includes water quality standards.

Policy 7.2.5. Broward County shall continue to comply with the National Pollution

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Discharge Elimination System - Municipal Separate Storm Sewer System (NPDES-MS4) Permits issued by the Florida Department of Environmental Protection and, as the lead copermitee.

Policy 7.2.6. Broward County will continue to implement the NPDES-MS4 Permit conditions including monitoring of outfalls and improving stormwater management practices.

Policy 7.2.7. The impact of the construction and operation of stormwater management facilities and support services on adjacent natural resources shall be considered during the siting of new stormwater management facilities and the expansion of, or increase in capacity of, stormwater management facilities.

Policy 7.2.8. Broward County shall provide for the periodic update of dependent district reclamation plans, where appropriate, in order to assure that stormwater management facilities are available to meet future needs.

Policy 7.2.9. Broward County shall continue to oversee the issuance of environmental resource and surface water management permits.

Policy 7.2.10. Broward County shall seek to improve drainage and stormwater management through integration of water resources and infrastructure as part of the Countywide Integrated Water Resources Plan (IWRP), with emphasis on integration of the secondary canal systems and aquifer recharge. Efforts might include identification of recommended projects, quantification of hydrologic benefits, and cost share funding of project feasibility analysis and preliminary design.

Policy 7.2.11. Broward County shall encourage nonstructural solutions to water resource problems and give consideration to nonstructural alternatives whenever structural works are proposed.

Policy 7.2.12. Broward County shall participate and implement the Community Rating System (CRS) as per Federal Emergency Management Administration (FEMA) requirements through 2010.

Objective 7.3. Continue to maximize the use of stormwater management system facilities so as to encourage compact urban growth patterns.

Policy 7.3.1. The Development and Environmental Regulation Division shall continue to require new developments to provide adequate areas and easements for provision of a stormwater management system in accordance with applicable county drainage standards and criteria.

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Objective 7.4. Stormwater management facilities shall be designed, constructed and operated in a manner that conserves and enhances potable water resources.

Policy 7.4.1. Broward County shall work with the South Florida Water Management District and the independent drainage districts to implement applicable portions of the Lower East Coast Water Supply Plan 2005-2006 Update intended to reduce losses of excess stormwater to tide, recharge the surficial aquifer and provide additional storage of surface waters.

Policy 7.4.2. Broward County shall address stormwater management issues on a watershed (basin) basis as a means of providing cost effective water quality and water quantity solutions to specific watershed problems.

Policy 7.4.3. Broward County shall develop a County-wide Water Management Master that optimizes flood protection, water quality treatment and protection, stormwater storage, wetlands sustainability, and ground water recharge functions. The Master Plan shall be developed as part of the County's efforts to meet water supply needs and water resource goals through 2025 with the application of the County's integrated surface water and groundwater model that incorporates the existing surface water management system, well field characteristics, water demands, ground water levels, flows and canal stages.

Policy 7.4.4. Broward County will work with the independent drainage districts, municipalities, and the SFWMD, to investigate implementation of the proposed County-wide Water Management Master Plan.

Policy 7.4.5. Broward County shall provide information to users in the service areas of alternative water sources of appropriate quality available for non-potable water needs.

Policy 7.4.6. Broward County shall manage the construction and operation of its facilities which dam, divert, or otherwise alter the flow of surface waters to minimize damage from flooding, soil erosion or excessive drainage.

Objective 7.5. Maintain and enhance ground water recharge to the surficial aquifer system so as to maintain all of the functions of the Biscayne Aquifer, including potable water supply, the abatement of saltwater intrusion, and reduced seepage from the Water Conservation Areas, while ensuring the necessary water quality protections.

Policy 7.5.1. Broward County shall encourage the use of BMPs in accordance with its regulations and those of the South Florida Water Management District.

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Policy 7.5.2. Broward County shall continue to implement regulations governing stormwater management in conjunction with the Wellfield Protection Regulations.

Policy 7.5.3. Broward County will continue to implement regulations that prohibit direct stormwater discharges to surface and ground water within Zone 1 and Zone 2 of wellfield zones of influence as designated on the Wellfield Protection maps.

Policy 7.5.4. Broward County shall continue to administer and implement Wellfield Protection, Article XIII, Chapter 27, Broward County Code of Ordinances and revise, as necessary, to reflect results from modeling studies and revisions to delineation criteria.

Policy 7.5.5. Broward County shall maintain an updated integrated geographic information system inventory of public water supply wellfields to facilitate local and regional planning efforts.

Policy 7.5.6. Broward County in cooperation with the United States Geological Survey (USGS) and SFWMD shall install additional monitoring wells and rehabilitate existing wells to continue monitoring groundwater levels and the extent of salt water intrusion into the Biscayne Aquifer.

Policy 7.5.7. The WWS shall assure that recharge resulting from agricultural uses is replaced as new development occurs.

Policy 7.5.8. Broward County shall work cooperatively with the SFWMD, municipalities, and drainage/water control districts to develop and implement plans for additional surface water storage so as to improve the volume of regional water available for the purpose of maintaining canal levels and recharge to the Biscayne Aquifer.

Policy 7.5.9. In order to protect and conserve the Biscayne Aquifer, Broward County shall investigate utilization of alternative potable water resources to supplement and broaden the county's future water supply sources. These potential sources include the Floridan Aquifer, Aquifer Storage and Recovery (ASR), desalination, capture and storage of excess storm water, surface water storage, reclaimed water, and other technologies addressed in the Lower East Coast Water Supply Plan 2005-2006 Update of the SFWMD.

Policy 7.5.10. The Broward County Planning Council and the Planning and Redevelopment Division (PRD) shall, for land use plan amendment applications in the flood prone portions of Broward County, require an applicant for a land use plan amendment, for their respective future land use map series, to provide sufficient data

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and analysis for the County to make a determination that the subsequent development:

1. shall be served by adequate stormwater management and drainage facilities,
2. shall not adversely affect ground water quality, environmentally sensitive lands, or wetlands and
3. shall not lead to increased saltwater intrusion or area wide flooding.

Policy 7.5.11. Broward County shall utilize, preserve, restore, and enhance natural water bodies and functions by encouraging non-structural and structural erosion control devices and discourage the channelization, installation of seawalls or other alteration of natural rivers, streams and lakes.

Policy 7.5.12. Protect the water storage and water quality enhancement functions of wetlands, floodplains, and aquifer recharge areas through acquisition, enforcement of rules, and the application of land and water management practices which provide for compatible uses.

Policy 7.5.13. Broward County shall protect aquifers from depletion through water conservation and preservation of the functions of high recharge areas including but not limited to the water conservation areas and water preserve areas.

Post Adoption Revisions

1. This Element was amendment through Ordinance No.2001-26 on June 26,2001.
2. This Element was amendment in Cycle 2006-2 through Ordinance No.2006-63 on June December 12, 2006.
3. This Element was amendment in Cycle 2008-1 through Ordinance No.2008-41 on September, 09, 2008.