

Section IV.4 - Potable Water Element

This section is an Evaluation of the Objectives and Policies under each Goal. Areas of deficiency within this element are further addressed in Section IV.4 (a).

Goal 4.0 Provide residents of the Unincorporated Area, customers, and large users of Broward County utility districts a cost-effective and equitable potable water supply system which provides an adequate supply of water meeting all applicable federal, state and local water quality standards and does not compromise the sustainability of the county's water resources to supply water in the future.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>Objective 4.1. The Office of Environmental Services (OES) shall identify and, where feasible, correct existing potable water facilities' deficiencies by 2015.</p>				
<p>Policy 4.1.1. The OES should maintain funding for the systems improvements identified in the Capital Improvements Element to alleviate potable water deficiencies consistent with the priorities established in the Water and Wastewater Master Plan.</p>	<p>\$100 million in expenditures for fiscal years 2001 and 2002.</p>	<p>Table 14-E of the Capital Improvements Element called for \$100 million in expenditures for fiscal years 2001 and 2002 combined.</p>	<p>OES expended \$72 million in fiscal years 2001 and 2002 for capital improvements.</p>	<p>Ongoing. OES is well into a comprehensive improvement project totaling over \$580 million in cost. The main purpose is to replace outdated water and sanitary sewer piping</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
				systems and extend water and/or sanitary sewer service to developed, unserved areas. Recommend policy update. See below.
<p>Policy 4.1.2. In the absence of legal constraints on the use of revenues, projects and programs shall be funded in order to correct system deficiencies and maintain an adequate level of service standard.</p>	See Policy 4.1.1.	See Policy 4.1.1.	See Policy 4.1.1.	See Policy 4.1.1. Recommend policy update. See below.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>Policy 4.1.3. The OES shall develop and maintain an inventory of all its potable water facilities serving Unincorporated Area residents, customers, and large users.</p>	<p>Develop and maintain facilities inventory using computer based systems.</p>	<p>OES used paper-based maps to inventory all its potable water facilities.</p>	<p>OES now uses GIS (Graphical Information System) software to inventory all its potable water facilities. OES now uses a computer based system called MAXIMO for maintenance management.</p>	<p>Yes.</p>
<p>Policy 4.1.4. The OES shall provide for the periodic update of the Water and Wastewater Master Plan in order to assure that potable water facilities are available to meet the existing needs its customers. This policy applies only to the OES service area.</p>	<p>Update Master Plan</p>	<p>1988 Master Plan required updating.</p>	<p>Instead of just an update, a completely new Master Plan was published in 2002.</p>	<p>Yes.</p>
<p>Policy 4.1.5. Update within twelve (12) months after adoption of the Water and Wastewater Master Plan Update, the Planning Services Division (PSD) shall process amendments</p>	<p>Process Amendments</p>	<p>None.</p>	<p>As part of this EAR, the OES has made recommended changes to the Potable Water Element. PSD will process amendments to this Element at the next</p>	<p>Yes, ongoing.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
to the Potable Water Element (PWE), if applicable, to address capacity surpluses and deficiencies for the long-term planning horizon and any other relevant issues.			available update window.	
Objective 4.2. Potable water facilities shall be provided to meet the County's short-term and long-term future needs.				
Policy 4.2.1. The level of service (LOS) standard for potable water facilities shall be the Florida Department of Environmental Protection Permitted Capacity of the facility. The LOS standard for water treatment plants shall be measured by maximum daily flow.	OES - OES to use the Florida Department of Environmental Protection permitted capacity for LOS standard.	OES used the Florida Department of Environmental Protection Department (Public Health Department) permitted capacity for potable water treatment plants and the LOS standard of maximum daily flow.	Same as baseline condition.	Yes
Policy 4.2.2. Broward County, and the Broward County Health Department, Florida Department of Health, shall continue to utilize the potable water demand rates in Table 4-A, which were adopted by the	OES - OES to use Table 4-A to access adequacy of service and concurrency for all new retail	OES used Table 4-A to assess adequacy of service and concurrency for all new retail customers. OES used flow estimate information contained in	Following the principal of using best available information, OES has used values different from Table 4-A to access adequacy of service and concurrency since December, 1999. These different values	Yes. Recommend policy update. See below.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
Board of County Commissioners to assess adequacy of service and concurrency at the time of plat approval for all properties that are required to be platted and for those properties within the Unincorporated Area that are not required to be platted, at the time of site plan approval.	customers.	the FDPEP permit application to access adequacy of treatment plant capacity for Coconut Creek, a bulk purchaser of potable water.	came from information generated for the Master Plan update, and a detailed study of actual customer usage completed in 1997.	
Policy 4.2.3. The Broward County Health Department, Florida Department of Health shall continue to utilize the development review process of the Broward County Land Development Code to require applicants for development permits to utilize existing potable water facilities if lines are "available" as defined by Chapters 62-550, 62-555, and 62-560, Florida	See policy 4.2.3.	The Broward County Health Department, Florida Department of Health utilizes the development review process of the Broward County Land Development Code to require applicants for development permits to utilize existing potable water facilities if lines are "available" as defined by Chapters 62-550, 62-555, and 62-560, Florida Administrative Code	Same as baseline.	Yes, ongoing.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
Administrative Code (FAC).		(FAC).		
<p>Policy 4.2.4. Planning for additional capacity and/or a reduction in per capita demand shall begin when 80 percent of the facility's Florida Department of Environmental Protection Permitted Capacity is demanded, and construction of additional capacity and/or implementation of a conservation program shall begin when permitted capacity will not meet current demands plus five years of anticipated growth in order to guarantee provision of the adopted LOS standard. Systems approaching build out shall be exempt from this requirement. Systems approaching build out are defined to be systems that are built to the ultimate</p>	<p>Development of a 10-Year Water Supply Facilities Workplan to be updated every 5 years.</p>	<p>No long-term water supply facility workplan had been adopted by the County.</p>	<p>Broward County's DPEP and OES are collaborating in the development of a 10-Year Water Supply Facilities Workplan. DPEP is working in conjunction with local municipal utilities to identify short- and long-term water supply needs and assess the provider utility's ability to meet those needs. OES is analyzing the future water supply needs of the County's retail and wholesale customers and developing a facility workplan to meet these needs.</p>	<p>Partial. Ongoing. Recommend policy update. See below.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
capacity required to accommodate all projected growth within the system's service area.				
<p>Policy 4.2.5. An assessment of the impacts of the construction and operation of water treatment plants and support services on adjacent natural resources shall be prepared during site review when considering the siting of new water treatment plants and the expansion of, or increase in capacity of, water treatment plants.</p>	See policy 4.2.5.	An assessment of the impacts of the construction and operation of water treatment plants and support services on adjacent natural resources are prepared during site review when considering the siting of new water treatment plants and the expansion of, or increase in capacity of, water treatment plants.	Implemented. Same as baseline.	Yes.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>Policy 4.2.6. In the event of a dispute involving the siting of, the expansion of, or the increase in capacity of, water treatment plants, the affected parties, if all affected parties agree, may opt to use the dispute mediation process of the South Florida Regional Planning Council (SFRPC).</p>	<p>See policy 4.2.6.</p>	<p>In the event of a dispute involving the siting of, the expansion of, or the increase in capacity of, water treatment plants, the affected parties, if all affected parties agree, may opt to use the dispute mediation process of the South Florida Regional Planning Council (SFRPC).</p>	<p>Same as baseline.</p>	<p>Yes.</p>
<p>Policy 4.2.7. Within twelve (12) months after the adoption of the Water and Wastewater Master Plan Update, the OES shall re-examine the feasibility of amending the potable water facilities LOS standard. The LOS standards that may be considered include treatment plant peak daily demand capacity, water storage capacity, and water pressure for distribution</p>	<p>Reexamine the feasibility of amending the potable water facilities LOS standard.</p>	<p>Not applicable.</p>	<p>This document contains recommendations on revising the OES potable water facilities LOS standard.</p>	<p>Yes</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
facilities.				
<p>Policy 4.2.8. In order to protect and conserve the Biscayne Aquifer, the DPEP in coordination with the OES shall investigate utilization of alternate potable water sources to supplement and broaden the county's future water supply sources. These potential sources could include the Floridan Aquifer, Aquifer Storage and Recovery (ASR), desalinization, capture and storage of excess storm water currently lost to tide and other technologies which may be addressed in the Lower East Coast Regional Water Supply Plan of the South Florida Water Management District (SFWMD).</p>	<p>Develop a water supply plan.</p>	<p>No County-wide plan had been established to guide water resource management decisions or encourage the development of alternative water supplies.</p>	<p>In June 1997, Broward County initiated a county-wide Water Resource Plan (IWRP) to increase efficient management of local water supplies and encourage the development of alternative water supplies. A primary component of this plan was integration of the County's secondary canal system. The objective is to increase the amount of freshwater capture, storage and redistribution of rainfall within the County's canal system for the purpose of recharge of the Biscayne Aquifer and to reduce the discharge of freshwater to tide. As such, funding provided through the IWRP has been used to identify and construct secondary canal improvement for greater efficiency in the use</p>	<p>Yes, ongoing. Recommend policy update. See below.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
			<p>and management of local water supplies. The OES is currently testing a pilot aquifer storage and recovery project and has implemented a reuse program at the north regional facility. The DPEP and the OES are also collaborating in the development of 10-Year Water Supply Facilities Workplan in which future water supply needs will be quantified and a plan to meet these needs will be defined. This plan will include the development of various alternative water resources as a sustainable and reliable means of meeting future water demands.</p>	

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
Policy 4.2.9. Broward County shall encourage maximizing the use of existing potable water facilities and reducing redundant facilities.	Development of a regional water supply plan.	No regional plan had been developed to guide in the coordination of water management strategies to improve the efficient use of water supplies in Broward County.	Utility integration is a primary component of the County's Integrated Water Resource Plan (IWRP), initiated in 1997. The objective is to increase the efficient management of water supplies and the ability of provider utilities to meet potable water demands through utility interconnects and interlocal agreements.	Yes, ongoing.
Policy 4.2.10. Broward County shall promote the implementation of an integrated geographic information system in order to make available standardized land use and potable water supply facilities information for local and regional planning.	Creation of a GIS database with local land use and water supply facility coverages.	The GIS database contained limited coverages for municipal, private, and tribal utilities.	GIS coverages for water supply facilities were generated for municipal and private utilities as part of the utility and secondary canal needs assessments completed during Phase II (2000-2002) of implementation of the County's Integrated Water Resource Plan (IWRP).	Yes, will continue to be updated.
Policy 4.2.11. The OES shall provide for the	Update Master Plan	1988 Master Plan required updating.	Instead of just an update, a completely new Master	Yes. Recommend

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>periodic update of the Water and Wastewater Master Plan in order to assure that potable water facilities are available to meet its future needs. This policy applies only to the OES service area.</p>			<p>Plan was published in 2002.</p>	<p>policy update. See below.</p>
<p>Objective 4.3. Maximize the use of existing potable water facilities and encourage compact urban growth patterns.</p>				
<p>Policy 4.3.1. The OES shall continue to utilize the development review process of the Land Development Code to require applicants for development permits within the County's utility districts to enter into an agreement to "tie-in" to existing facilities or construct improvements to the County's potable water system necessitated by the proposed development when adequate facilities,</p>	<p>Use the development review process of the Land Development Code</p>	<p>OES used the land development review process to notify the Florida Department of Environmental Protection Department (Public Health Department) which proposed developments are within the OES retail service area. It is the Florida Department of Environmental Protection Department (Public Health Department) that determined if connection will or will not be required</p>	<p>Same as the baseline condition.</p>	<p>Yes</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
based on the adopted level of service standard, are not available and no fiscally feasible plan to construct or expand said facilities is proposed.		for a particular development. OES performed a level of service analysis when a new development submits engineering drawings detailing proposed connection to the OES system, and required the developer to construct whatever improvements are necessary to meet OES' level of service standards.		
Policy 4.3.2. The OES and the DPEP shall continue to coordinate the provision of potable water through agreements with the municipalities and other service providers in Broward County.	Development of a Water Supply Plan	Prior to 1997, no County-wide water supply plan had been established to help guide and coordinate water resource management throughout Broward County.	Upon initiation of the County's Integrated Water Resource Plan (IWRP) in 1997, utility needs assessments were conducted and interlocal agreements for potable water supply were analyzed. The report identified additional opportunities to increase water management efficiency through utility	Yes, ongoing

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
			<p>interconnects and the transfer of water demand to western wellfields.</p> <p>OES has a “sale for resale” agreement with the City of Coconut Creek to provide potable water to most of the City and a portion of the City of Parkland served by Coconut Creek. OES has an agreement with the City of Hollywood to provide potable water in bulk for OES retail service areas 3A and 3BC. Further, OES has arrangements with four municipalities to provide retail water service in areas where OES provides potable water service.</p>	
<p>Policy 4.3.3. Broward County shall, through the Broward County land use plan, recommend the denial of future land use map amendments where densities or intensities are</p>	<p>See policy 4.3.3.</p>	<p>Broward County recommends the denial of future land use map amendments where densities or intensities are increased if:</p> <ol style="list-style-type: none"> 1. Potable water 	<p>Implemented. Same as baseline.</p>	<p>Yes. Ongoing.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>increased if:</p> <p>1. Potable water facilities are not available and a consumptive use permit for the Florida Department of Environmental Protection Permitted capacity from the South Florida Water Management District (SFWMD) has not been issued; and</p> <p>2. Plans to extend potable water facilities so that they become available are not included within a financially feasible capital improvements program and/or there is not a reasonable expectation that the consumptive use permit will be issued.</p>		<p>facilities are not available and a consumptive use permit for the Florida Department of Environmental Protection Permitted capacity from the South Florida Water Management District (SFWMD) has not been issued; and</p> <p>2. Plans to extend potable water facilities so that they become available are not included within a financially feasible capital improvements program and/or there is not a reasonable expectation that the consumptive use permit will be issued</p>		
<p>Policy 4.3.4. As an alternative to new potable water facility construction,</p>	<p>Development of a Water Supply Plan</p>	<p>Prior to June 1997 no formal plan had been developed to encourage or</p>	<p>The Utility Needs Assessment completed as part of the County's</p>	<p>Yes, ongoing.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
Broward County shall identify opportunities to increase the efficiency and optimize the use of existing facilities.		guide utilities in coordinating water resource planning or management.	Integrated Water Resource Plan identified opportunities to maximize the use of existing resources through utility interconnects, the transfer of water demands to more western wellfields, and interlocal agreements. In 1996, OES and the City of Hollywood entered into an agreement whereby OES purchases treated potable water for Hollywood, thereby allowing OES to abandon an outdated facility and Hollywood to more fully utilize existing plant capacity.	
Policy 4.3.5. Broward County shall encourage the use of coordinated regulatory and programmatic approaches and financial incentives to promote compact, efficient urban growth patterns.	See policy 4.3.5.	Broward County encourages the use of coordinated regulatory and programmatic approaches and financial incentives to promote compact, efficient urban growth patterns.	Implemented. Same as baseline.	Yes. Ongoing.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>Objective 4.4. Conserve and protect potable water resources with primary focus on the Biscayne Aquifer by optimizing the utilization of water resources through effective water management practices.</p>				
<p>Policy 4.4.1. The DPEP shall develop a basin-wide water management protocol that optimizes flood protection, water quality, storm water storage, wetlands sustainability, and groundwater recharge functions while protecting groundwater from saltwater intrusion. By assessing the existing surface water management system, wellfield characteristics, groundwater levels, saltwater intrusion limits, flows and canal stages a model will be developed to better utilize the water resource.</p>	<p>Development of hydrologic surface and ground water models to improve water management decisions for better utilization of water resources.</p>	<p>No hydrologic models had been developed to specifically address water management issues in urban Broward County.</p>	<p>A County-wide Integrated Water Resource Plan (IWRP) was initiated in June 1997 to coordinate water resource management throughout the County and maximize the efficient use of local water resources. A catalog of existing wetlands, water resource infrastructure, and canal systems was developed and incorporated in the development of an integrated surface and groundwater model for Central Broward County. Model extension to the southern and northern regions of the County will result in a seamless County-wide hydrologic model for the purpose of identifying opportunities for</p>	<p>Yes, ongoing.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
			freshwater storage, recharge of the Biscayne Aquifer and improved flood control.	
<p>Policy 4.4.2. The DPEP shall work with the OES, the Independent Drainage Districts and the SFWMD to investigate application of the basin-wide protocols throughout the county where appropriate.</p>	<p>Development of a County-wide water supply plan.</p>	<p>No County-wide plan had been established to coordinate or encourage specific water planning efforts.</p>	<p>The WRD has conducted workshops with water managers, utility directors and drainage engineers from Northern Broward County to determine which of the projects, identified in the Water Resource Plan Utility and Secondary Canal Needs Assessment, local water managers wished to pursue. Broward County and the SFWMD supported project design and construction through cost share funding. Similar workshops are scheduled for May 2003 to discuss projects in Central and South Broward. The WRD is coordinating with the SFWMD to develop and implement landscape Best</p>	<p>Yes, ongoing. Recommend policy update. See below.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
			Management Practices (BMPs) to improve water conservation and quality. Broward County is also participating in the Secondary Canal Improvement Project as part of CERP to develop water management strategies that increase storage of rainfall and provide additional recharge of local wetlands and the Biscayne Aquifer	
<p>Policy 4.4.3. The OES should develop a plan to maintain the Centralized Wellfield System to protect and maximize the raw water supply while protecting the Biscayne Aquifer from further saltwater intrusion.</p>	Develop Plan.	<p>No formalized plan has been established although the DPEP protected groundwater quality through implementation of Chapter 27, Article XIII Wellfield Protection Ordinance, Broward county Code of Ordinances, and maintained saltwater monitoring wells. OES has also maintained</p>	<p>DPEP continues to implement a program to protect groundwater quality and in January 2003 a 4-yr grant was obtained to provide funding for a comprehensive study of potential sources of contamination to wellfields. In addition, fifteen additional saltwater monitoring wells were constructed between 1998</p>	Yes, ongoing.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
		<p>an active recharge program to maximize raw water supply for County wellfields, conducts comprehensive salt water intrusion monitoring for OES wellfields and maintains a capital improvement program to locate and develop new wells as necessary.</p>	<p>and 1999.</p> <p>In 1997 the County-wide Integrated Water Resource Plan (IWRP) was initiated to increase the efficiency of water management. One of the primary objectives of the Plan is to maintain and protect the Biscayne Aquifer by enhancing the amount of freshwater recharge from the secondary canals to the County's urban wetlands, wellfields and the coastal zone.</p> <p>OES continues to maintain and enhance its recharge program through improvements to the Broward County storm water management system to maximize raw water supply for County wellfields. OES continues its comprehensive salt water intrusion monitoring</p>	

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
			program for OES wellfields and maintains a capital improvement program to locate and develop new wells as necessary.	
<p>Policy 4.4.4. Broward County shall continue to maintain Chapter 36, "Water Resources and Management," Article II, "Water Emergencies," Section 36-55, "Restrictions on landscape irrigation," Broward County Code of Ordinances, which imposes year-round, county-wide landscape irrigation restrictions</p>	No measurable target.	Broward County Ordinance 91-8 restricts the hours of lawn irrigation to between 5:00 PM and 9:00 AM, seven days a week.	Same as Baseline Condition.	Ongoing.
<p>Policy 4.4.5. The Broward County Zoning Code Services Division (ZCSD) shall continue to enforce Chapter 39, "Zoning," Article VIII, "Functional landscaping and xeriscaping code," Broward</p>	See policy 4.4.5	The Broward County Zoning Code Services Division (ZCSD) continues to enforce Chapter 39, "Zoning," Article VIII, "Functional landscaping and xeriscaping code," Broward County Code of	Implemented. Same as baseline.	Yes.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
County Code of Ordinances, which addresses landscaping and incorporates the SFWMD's xeriscape guidelines.		Ordinances, which addresses landscaping and incorporates the SFWMD's xeriscape guidelines		
<p>Policy 4.4.6. The Broward County Building and Permitting Division (BPD) shall enforce Chapter 46, "Plumbing," Section 46-14.13, Table 46R2, The South Florida Building Code, Broward Edition, which contains standards for ultra-low volume plumbing fixtures to be used in all new construction. See Table 4-B, Plumbing Standards.</p> <p>The Broward County Board of Rules and Appeals has approved the standards in Table 4- B for ultra-low plumbing fixtures at 80 psi, effective September 1, 1992 in Broward County:</p>	See policy 4.4.6	The Broward County Building and Permitting Division (BPD) continues to enforce Chapter 46, "Plumbing," Section 46-14.13, Table 46R2, The South Florida Building Code, Broward Edition, which contains standards for ultra-low volume plumbing fixtures to be used in all new construction. See Table 4-B, Plumbing Standards.	Implemented. Same as baseline.	Yes.

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>Policy 4.4.7. The OES shall continue to implement its conservation-oriented rate structure within its OES utility systems.</p>	<p>Maintain conservation rate structure</p>	<p>A conservation rate structure for OES utility customers was established in 1990.</p>	<p>OES maintains a three- tier increasing block rate structure to encourage water conservation. Additionally, OES imposes an additional surcharge during formally declared Phase I, II, III, or IV water restrictions.</p>	<p>Yes.</p>
<p>Policy 4.4.8. The OES shall continue to implement a leak detection program to reduce the amount of unaccounted-for water loss within its OES utility systems.</p>	<p>The measure of “unaccounted-for “water is the difference between the amount of water produced by the WTP and the amount of water billed for, expressed as a percentage of water produced by the WTP. An</p>	<p>District 1 – 13.1% District 2 – 22.0% District 3A – Unknown District 3BC - Unknown</p>	<p>For the one year period ending January, 2003, the system wide average was 11.2%</p>	<p>Yes.</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
	acceptable measure is 15%.			
<p>Policy 4.4.9. The OES shall continue to implement a year-round public information and education program promoting water conservation.</p>	Continuation of public education program promoting water conservation.	A public education program promoting water conservation was established in 1998.	OES publishes an annual Customer Confidence Report to all OES retail users to provide a summary of water quality conditions and encourage water conservation. In addition, OES distributes flyers and brochures relating water conservation information to its customers and conducts presentations to area schools year-round. Tours of water treatment plants are encouraged for all interested parties. OES is currently evaluating the feasibility of implementing additional programs to increase conservation throughout OES service areas.	Yes. Ongoing
<p>Policy 4.4.10. The DPEP</p>	Develop	The County did not have	In 1997 the DPEP, in	Yes. Ongoing.

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<p>in coordination with the OES shall study and develop a program to promote conservation of water resources by 1998. The conservation program may include plumbing retrofit, toilet rebate, water use audits, promotion of xeriscape, installation of rain sensors, and education.</p>	<p>program.</p>	<p>an education and outreach program to promote water conservation.</p>	<p>coordination with OES, began development of a water conservation outreach and educational program called Water Matters. Kick-off of the program occurred in October 2002. The program promotes water conservation indoors and in the backyard, with emphasis on landscape Best Management Practices (BMPs). In June 2003, the County and SFWMD will begin to offer a water conservation course called "Know the Flow" to registered property managers which will focus on water conservation and quality through irrigation techniques and other landscape BMPs.</p> <p>The County also follows the South Florida Building Code which requires ultra-low volume plumbing</p>	<p>Recommend policy update. See below.</p>

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			fixtures on all new construction. Additionally, Section 39-78 of the Broward County Ordinances requires low-volume irrigation. Xeriscape principles have also been adopted by the County using SFWMD plant guides. OES is currently developing an expanded water conservation plan in coordination with the FDEP Water Conservation Initiative	

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<p>Policy 4.4.11. The Broward County Health Department, Florida Department of Health shall reduce potential groundwater pollution sources by continuing to implement Chapter 34, "Water and Sewers," Article II, "Water and Sewer Connection Ordinance," Broward County Code of Ordinances.</p>	<p>See policy 4.4.11.</p>	<p>The Broward County Health Department, Florida Department of Health attempts to reduce potential groundwater pollution sources by continuing to implement Chapter 34, "Water and Sewers," Article II, "Water and Sewer Connection Ordinance," Broward County Code of Ordinances.</p>	<p>Implemented. Same as baseline.</p>	<p>Yes. Ongoing.</p>
<p>Policy 4.4.12. The Broward County Health Department, Florida Department of Health shall continue to protect the groundwater supply from potential sources of contamination pursuant to Chapter 34, "Water and Sewers," Article II ½, "Water and Septic Tank Ordinance," Broward County Code of Ordinances</p>	<p>See policy 4.4.12.</p>	<p>The Broward County Health Department, Florida Department of Health continues to protect the groundwater supply from potential sources of contamination pursuant to Chapter 34, "Water and Sewers," Article II ½, "Water and Septic Tank Ordinance," Broward County Code of Ordinances</p>	<p>Implemented. Same as baseline.</p>	<p>Yes. Ongoing.</p>

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<p>Policy 4.4.13. The DPEP shall protect groundwater quality by continuing to implement Chapter 27, Article XIII Wellfield Protection Ordinance, Broward County Code of Ordinances, which regulates the storage, handling, usage, disposal or production of hazardous materials and solid waste within designated zones of influence as identified in the Code.</p>	<p>No measurable target.</p>	<p>The Pollution Prevention Division implemented a program to protect groundwater quality through licensing, inspections, enforcement, and monitoring of groundwater.</p>	<p>The program continues to be implemented and in January 2003 a 4-year state grant was obtained that provides funding for the comprehensive study of potential sources of contamination to wellfields.</p>	<p>Yes, ongoing.</p>
<p>Objective 4.5. Potable water facilities shall be designed, constructed, maintained and operated in such a manner as to protect the functions of natural groundwater recharge areas and natural drainage features and not exacerbate saltwater intrusion.</p>				
<p>Policy 4.5.1. The design for the construction, operation and maintenance, of new or expanded potable water facilities shall consider the short-term and long-term impacts to natural groundwater recharge</p>	<p>No measurable target</p>	<p>These requirements are administered through the SFWMD permitting process and consumptive use rules detailed in Section 40E-2.091 of the Florida Administrative Code.</p>	<p>The consumptive use rules for permitting of wellfields are currently being amended by the SFWMD. These revised rules are referred to as "B List" water use rules.</p>	<p>Yes, ongoing.</p>

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<p>areas, wetlands, surface and groundwater levels, and exacerbation of saltwater intrusion. The design shall also consider whether or not the construction, operation and maintenance will significantly harm the aquifer system. Adverse impacts of construction, operation, and maintenance shall be avoided or at least minimized.</p>				
<p>Objective 4.6. Provide the customers and large users of the OES a cost effective, equitable and adequate potable water system meeting all applicable federal, state, and local standards; and provide the residents of unincorporated Broward County a cost-effective, equitable and adequate potable water system meeting all applicable federal, state, and local standards.</p>				
<p>Policy 4.6.1. The OES shall endeavor to provide service to unincorporated Broward County and incorporated areas contiguous to the OES service area when service is not anticipated to be</p>	<p>Endeavor to provide service to unincorporated Broward County and incorporated areas</p>	<p>Unknown.</p>	<p>The 2002 Master Plan studied providing service to areas contiguous to the OES retail service area. Most areas have now been claimed by other utilities. OES has commissioned a basis of design report to</p>	<p>Yes</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
provided by others.	contiguous to the OES service area when service is not anticipated to be provided by others.		look at providing potable water service to the Broadview Park area. Broadview Park is currently served by a private utility that is not providing a reasonable level of service to its customers.	
Policy 4.6.2. The OES shall continue to coordinate the provision of potable water services through agreements with municipalities and other service providers in Broward County.	Continue to coordinate the provision of potable water services through agreements with municipalities and other service providers in Broward County.	Unknown.	OES has a “sale for resale” agreement with the City of Coconut Creek to provide potable water to most of the City and a portion of the City of Parkland served by Coconut Creek. OES has an agreement with the City of Hollywood to provide potable water in bulk for OES retail service areas 3A and 3BC. Further, OES has arrangements with four municipalities to provide retail water service in areas where OES provides potable water service.	Yes
Policy 4.6.3. In order to	Investigation	Based on 1990 Census	OES is developing a 10	Yes. Ongoing

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
<p>protect and conserve the Biscayne Aquifer, the OES shall investigate utilization of alternate potable water sources to supplement and broaden its future water supply sources. These potential sources could include the Floridan Aquifer, ASR, desalinization, capture and storage of excess storm water currently lost to tide and other technologies which may be addressed in the SFWMD's Lower East Coast Regional Water Supply Plan.</p>	<p>of the feasibility of utilizing alternative sources of potable water.</p>	<p>data, population growth in the OES service areas was projected to be relatively stable and the ability to meet water demands did not require the use of alternative sources. New population projections based on the 2000 Census show population increased population growth that require OES to determine if alternative sources of water supply are needed to meet future demands.</p>	<p>Year Water Supply Facilities Work Plan to address existing and future water demands and the need for alternative water sources to meet those demands.</p>	
<p>Policy 4.6.4. Consistent with bonding requirements, the OES will take no action by which the rights and benefits of its customers might be impaired or diminished.</p>	<p>Consistent with bonding requirements, the OES will take no action by which the rights and benefits of its customers</p>	<p>OES has not taken any action by which the rights and benefits of its customers might be impaired or diminished.</p>	<p>Same as baseline condition.</p>	<p>Yes</p>

Objective/Policy	Measurable Target	Baseline Condition	Current Condition	Objective Achieved?
	might be impaired or diminished.			
<p>Policy 4.6.5. The OES shall provide for the periodic update of the Water and Wastewater Master Plan in order to assure that potable water facilities are available to meet its future needs. This policy applies only to the OES service area.</p>	<p>Provide for the periodic update of the Water and Wastewater Master Plan in order to assure that potable water facilities are available to meet its future needs.</p>	<p>1988 Master Plan required updating.</p>	<p>Instead of just an update, a completely new Master Plan was published in 2002.</p>	<p>Yes. Recommend policy update. See below.</p>
<p>Policy 4.6.6. All codes and ordinances referenced in this Element are as adopted as of October 1, 1996.</p>	<p>See policy 4.6.6.</p>	<p>Not adopted.</p>	<p>All codes and ordinances referenced in this Element are as adopted as of October 1, 1996.</p>	<p>Yes.</p>

Section IV.4 (a) – Potable Water Element – EAR Recommendations

New /Revised Policy	Current Condition or Area of Deficiency	Recommendation
<p>Policy 4.1.1. <u>In the absence of legal constraints on the use of revenues, the OES should maintain funding for system improvements identified in the Capital Improvements Element to alleviate potable water deficiencies consistent with the Capital Projects Prioritization system established by OES on July 3, 2001.</u></p>	<p>This policy should be changed to reflect the OES priority system, not priorities established in the Master Plan. Table 14-E be updated to reflect fiscal years 2003 through 2007 and that it not mention specific projects. Further the table should be based on expenditures.</p>	<p>Recommend policy language update indicated.</p>
<p>Policy 4.1.2</p>	<p>This policy should be combined with Policy 4.1.1</p>	<p>Recommend policy language update indicated. See revised policy 4.1.1.</p>
<p>Policy 4.1.4.</p>	<p>This is redundant with Policy 4.2.11.</p>	<p>This policy should be deleted.</p>

New /Revised Policy	Current Condition or Area of Deficiency	Recommendation
<p>Policy 4.2.2. <u>OES shall use the information contained in Table 4-A-1 to access adequacy of service and concurrency for potential OES retail customers. For Coconut Creek, a bulk purchaser of potable water, OES will use the flow information contained in the FDEP permit application to access adequacy of service and concurrency.</u></p>	<p>This Policy should be revised to reflect the use of a different table for OES retail service area. Further, this Policy should be revised to reflect the use of flow estimate information contained in the FDEP permit application to access adequacy of treatment plant capacity for Coconut Creek, a bulk purchaser of potable water.</p>	<p>Recommend policy language update indicated.</p>
<p>Policy 4.2.4. <u>Planning for additional capacity and/or a reduction in per capita demand shall be included in the 10-Year Water Supply Facilities Workplan as required in Chapter 163 of Florida Statutes to increase the coordination of local land use and future water supply planning.</u></p>	<p>Planning for additional capacity and/or reduction in per capita demand shall be included in the 10-Year Water Supply Facilities Workplan as required in Chapter 163 of Florida Statutes to increase the coordination of local land use and future water supply planning.</p>	<p>Recommend policy language update indicated.</p>
<p>Policy 4.2.8. <u>In order to protect and conserve the Biscayne Aquifer, the DPEP in coordination with the OES, shall continue to investigate utilization of alternate water sources to supplement and broaden the county's future water supply sources as described in the 10 Year Water Supply Facilities Workplan. These potential</u></p>	<p>In order to protect and conserve the Biscayne Aquifer, the DPEP in coordination with the OES shall continue to investigate utilization of alternative water resources to supplement and broaden the county's future water supply sources. These potential sources could include the Floridan Aquifer, Aquifer Storage and</p>	<p>Recommend policy language update indicated.</p>

New /Revised Policy	Current Condition or Area of Deficiency	Recommendation
<p>sources could include the <u>increased use of reclaimed wastewater, improved methods of conservation</u>, Aquifer Storage and Recovery (ASR), improved operations to increase stormwater reuse and aquifer recharge by improvements to the secondary canal infrastructure, and other technologies which may be addressed in the Lower East Coast Regional Water Supply Plan of the South Florida Water Management District (SFWMD).</p>	<p>Recovery (ASR), desalinization, capture and storage of excess storm water currently lost to tide and other technologies which may be addressed in the Lower East Coast Regional Water Supply Plan of the South Florida Water Management District (SFWMD).</p>	
<p>Policy 4.2.11. The OES shall update the <u>Retail Water and Wastewater Master Plan after the 2010 census data and resulting revised population projections are available.</u></p>	<p>The Master Plan should be redone again after the 2010 census data and resulting revised population projections are available.</p>	<p>Recommend policy language update indicated.</p>
<p>Policy 4.4.2. The DPEP shall <u>continue to coordinate</u> with the OES, the Independent Drainage Districts and the SFWMD to investigate application of the basin-wide protocols throughout the county where appropriate.</p>	<p>The DPEP shall continue to coordinate with OES, the Independent Drainage Districts and the SFWMD to investigate application of the basin-wide protocols throughout the county where appropriate.</p>	<p>Recommend policy language update indicated.</p>

New /Revised Policy	Current Condition or Area of Deficiency	Recommendation
<p>Policy 4.4.10. <u>OES will gather a comprehensive water use profile for OES service area customers including demographic data, customer class, land use, rate profiles, usage patterns and seasonal variations to increase the effectiveness of conservation efforts by focusing methods on those elements with the greatest water savings potential. Using the data generated, OES will expand and/or implement the those programs that promote conservation of water resources. In addition, DPEP in coordination with the OES, shall expand and continue to implement programs that promote conservation of water resources through efforts such as plumbing retrofit, toilet rebates, water use audits, installation of rain sensors, promotion of xeriscape and landscape Best Management Practices (BMPs), and education as applicable.</u></p>	<p>The DPEP in coordination with the OES shall expand and continue to implement programs that promote conservation of water resources through efforts such as plumbing retrofit, toilet rebates, water use audits, installation of rain sensors, promotion of xeriscape and landscape Best Management Practices (BMPs), and education.</p>	<p>Recommend policy language update indicated.</p>
<p>Policy 4.6.5.</p>	<p>This is redundant with Policy 4.2.11.</p>	<p>This policy should be deleted</p>