SOUTHERN WATER USE CAUTION AREA REVIEW

PROGRAM COMPONENTS	PROGRAM COMPONENT SUMMARY	MOST IMPACTED AREA	CITATIONS
Water Supply Mission Components	The Southern Water Use Caution Area (SWUCA) was designated in 1992 to address declines in aquifer levels occurring throughout the groundwater basin. Due to growing demands from public supply, agriculture, mining, power generation, and recreational users, groundwater withdrawals in the SWUCA have steadily increased for nearly a century before peaking in the mid-1970s. These withdrawals resulted in declines in aquifer levels throughout the groundwater basin, which in some areas exceeded 50 feet. While groundwater withdrawals have since stabilized as a result of management efforts, depressed aquifer levels continue to result in saltwater intrusion, reduced flows in the Upper Peace River, lowered lake levels for some lakes in the Lake Wales Ridge areas of Polk and Highlands Counties.	Drawdowns in aquifer levels in the SWUCA, due primarily to groundwater withdrawals, affect the rate of saltwater intrusion into the Upper Floridan aquifer along the coast, especially in the Most Impacted Area (MIA).	Section 373.0363, F.S. 2010 Regional Water Supply Plan, Southern Planning Region Chapter 2, Part A, pp.17-18. SWUCA Recovery Strategy, March 2006 SWUCA Recovery Strategy Five-Year Assessment for FY2007-2011

Goals
• **Resource (e.g. salt intrusion, potentiometric surface, MFLs, Domestic wells, Freeze protection use and resource impacts, MALs, etc.)**
  • **Existing legal user protection**
  • **Future water resource development project water availability**
	Meet the minimum flow requirements for the Upper Peace River.
	
	Slow the rate of saltwater intrusion.
	
	Provide for improved lake levels and water quality along the Lake Wales Ridge.
	
	Ensure sufficient water supplies for all existing and projected reasonable and beneficial uses.
	
	The Recovery Strategy:
	• significantly restricts future groundwater development within the SWUCA;
	• requires a plan to primarily
		The saltwater intrusion minimum aquifer level (SWIMAL) recognizes the long-term nature of the problem, and is designed to maintain the rate of movement at the "current" rate over the next 50 years, such that a minimum number of wells are at risk of water quality degradation.
		
		Long-term goal is to reduce annual average groundwater withdrawals.
		
		Short term measures include well backplugging and providing alternative sources such as surface or reclaimed water to wells that experience water quality degradation.
		
		Until the SWIMAL is met, the
			SWUCA Recovery Strategy, March 2006
			
			SWUCA Recovery Strategy Five-Year Assessment for FY2007-2011
			
			Rule 40D-80.074(2), F.A.C.

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	utilize alternative water sources instead of groundwater. MFLs have been adopted for 41 water bodies within the SWUCA.	Recovery Strategy: • prohibits new development in the MIA; • requires water level improvement (environmental net benefit) to the MIA before any groundwater development can occur within the SWUCA. MFL water bodies include 11 river segments and two springs, and 27 lakes and the Upper Floridan aquifer within the MIA.	SWUCA Recovery Strategy Five-Year Assessment for FY2007-2011 Section II, p. 6.
Linkage to regional water supply plan • **Limited water availability demonstrated** • **Causal relationships documented** • **Analysis of alternatives and comparative performance of options** • **Strategy (long-term) developed considering scientific and socio-economic issues** • **Water supply development and water resource development projects linkage** • **Funding** • **Others**	Regional water supply planning has been a primary tool to ensure water resource sustainability within the SWUCA. Financial incentives for conservation and development of alternative water supplies: - Cooperative Funding - Water Supply and Resource Development Initiatives SWFWMD entered into an agreement with the Peace River Manasota Regional Water Supply Authority (PRMRWSA) in 2003 to co-fund a major expansion of the PRMRWSA's facilities in DeSoto County, which are critical components to promoting the use of alternative water supplies to meet growing public supply demands in coastal communities while reserving limited groundwater supplies for agriculture and other inland users. The Facilitating Agricultural Resource Management Systems (FARMS) cost share program is designed to serve as an incentive to the agricultural community to install and maintain irrigation BMPs that will promote surface water and groundwater resource sustainability on private farmland. One of the goals of the FARMS program is to offset	Because brackish groundwater withdrawals from the Upper Floridan aquifer in the SWUCA have the potential to exacerbate saltwater intrusion, requests for brackish groundwater will be evaluated similarly to requests for fresh groundwater withdrawals. Proposed withdrawals, either fresh or brackish, cannot impact Upper Floridan aquifer water levels in the MIA. Requests for withdrawals of groundwater from the Upper Floridan aquifer for new uses will be considered only if the requested use is reasonable and beneficial, incorporates maximum use of conservation and there are no available alternative sources of water. If all these conditions are met and the withdrawals are projected to impact water levels in the MIA, it will be necessary for those impacts to be offset through Net Benefit (described below) prior to issuance of a water use permit.	2010 Regional Water Supply Plan, Southern Planning Region Chapter 8, Part B, pp. 149-50. 2010 Regional Water Supply Plan, Tampa Bay Region 2010 Regional Water Supply Plan, Heartland Region SWUCA Recovery Strategy, March 2006 SWUCA Recovery Strategy Five-Year Assessment for FY2007-2011 Section 373.0363, F.S. Chapter 40D-26, F.A.C. 2010 Regional Water Supply Plan, Southern Planning Region Chapter 8, Part B, pp. 149-50.

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	40 million gallons per day of groundwater within the SWUCA by 2025 through production-scale agricultural BMP projects that reduce water use, improve water quality, and/or conserve, restore or augment the area's water resources and ecology. The Quality of Water Improvement Program (QWIP) and Back-Plugging Funding Assistance Initiative are designed to serve as an incentive to landowners to properly abandon and back-plug poor water quality wells. Plugging abandoned artesian wells eliminates the waste of water at the surface and the degradation of groundwater from inter-aquifer contamination.		
Related to minimum flow / level recovery strategy	The 2006 Recovery Strategy estimated that long-term average annual withdrawals from the Upper Florida needed to be reduced by 50 mgd in the SWUCA to meet SWIMAL. The Recovery Strategy has four major goals to achieve by the year 2025: 1. Restore minimum levels to priority lakes in the Ridge area; 2. Restore minimum flows to the upper Peace River; 3. Reduce the rate of saltwater intrusion in coastal Hillsborough, Manatee and Sarasota counties by achieving the proposed minimum aquifer level for saltwater intrusion. Once achieved, future efforts should seek further reductions in the rate of saltwater intrusion and the ultimate stabilization of the saltwater-freshwater interface; and 4. Ensure that there are sufficient water supplies for all existing and projected reasonable-beneficial uses. Introduced the "Net Benefit" concept to provide additional flexibility in achieving recovery goals.	As of Jan. 1, 2007, SWFWMD established a Salt Water Intrusion Minimum Aquifer Level (SWIMAL) within the MIA. Reductions within the MIA have much more of a positive effect, than reductions outside the MIA. Therefore, if reductions to average annual withdrawals occur within or near the MIA, the SWIMAL could likely be met with less than 50 mgd in reductions. Cumulative impact analysis evaluates changes in permitted groundwater quantities and water resource development projects benefitting the Upper Floridan aquifer in and around the MIA. Cumulative recovery strategy efforts appear to have generally stabilized aquifer levels in MIA, but the recovery of impacted levels is still necessary. It is estimated that between 10 mgd and 50 mgd in further reductions to	Section 373.0363, F.S. Section 373.042, F.S. SWUCA Recovery Strategy, March 2006 Section 1, p. 5 and Section 5, p. 54. Rule 40D-8.041, F.A.C. (Minimum Flows) Rule 40D-8.626, F.A.C. (Minimum Aquifer Level) Rule 40D-80.074, F.A.C. SWUCA Recovery Strategy Five-Year Assessment for FY2007-2011 Section III, p. 8.

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	The MFL for the upper Peace River is a minimum "low" flow, which focuses on returning perennial conditions to the upper Peace River. Specifically, the MFL is based on maintaining the higher of the water elevations needed for fish passage. MFLs for "Category 3" lakes (i.e., lakes that do not have contiguous cypress-dominated wetlands) in the Ridge area in Polk and Highlands Counties are generally based on levels determined to be necessary to meet the following parameters (unless other public health, safety or welfare, or adverse environmental impact considerations override these parameters): (1) lake mixing and susceptibility to sediment re-suspension, (2) water depth associated with docks, (3) basin connectivity, (4) species richness, (5) coverage of herbaceous wetland vegetation, (6) coverage of aquatic macrophytes, and (7) non-consumptive uses.	groundwater withdrawals or similar quantities of aquifer recharge may be necessary to achieve recovery in the SWIMAL.	
Geographic area	Approximately 5,100 square miles, including all of DeSoto, Hardee, Manatee and Sarasota counties, and parts of Charlotte, Highlands, Hillsborough and Polk counties.	708 square miles located along the coast of southern Hillsborough, Manatee, and northwestern Sarasota counties.	Rule 40D-2.801, F.A.C. subsection (3)(b)
Monitoring Program • **Hydrologic** • **Biologic** • **Linkage to recovery strategy** • **Linkage to water shortage trigger**	SWFWMD uses its extensive hydrologic monitoring network to monitor resource conditions to measure progress toward recovery. Primary resource monitoring includes: - long-term groundwater levels and surface water levels and flows; - coastal groundwater quality; - estimated and permitted groundwater use; - status of MFL water bodies; Six sentinel long-term Upper Floridan aquifer monitoring		SWUCA Recovery Strategy, March 2006 Section 3, p. 36. SWUCA Recovery Strategy Five-Year Assessment for FY2007-2011

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• Compliance with goal • Methodology	wells enable observation of recovery progress through a comparison of recent to historical water level trends.		
Regulatory Program Components	In 1992, SWFWMD modified WUP rules to better manage water resources within the SWUCA. The recovery strategy was adopted in 2006, which included the following primary objectives: (1) slow the rate of saltwater intrusion into the confined Upper Floridan aquifer along the coast; (2) stabilize lake levels in Polk and Highland counties; (3) limit regulatory impacts on the region's economy and existing legal users. The primary intent of the rules was to establish MAL and allow renewal of existing permits, while gradually reducing permitted quantities as a means to recover aquifer levels to the established minimum.	No general WUP by rule for withdrawals of water that do not meet or exceed any permitting threshold within the MIA.	Rule 40D-2.041, F.A.C. Subsection (3)(a)5
Source restricted ("capped") • Surface water • Ground water • Method to cap defined			
Existing legal user (ELU) rights • Renewal and modification programs • New program(s) and ELU • Offset projects for ELU	Renewal or modification of a WUP with no proposed increase in quantities or change in Use Type that affects a water body that is below the MFL is evaluated to determine compliance with Rule 40D-2.301. When evaluating beneficial use of water, emphasis is given to reasonable water need, water conservation and use of AWS. SWFWMD uses reasonable-beneficial use requirement to evaluate permits. No WUPs for surface water withdrawals from streams or lakes where MFLS are not achieved, unless applicant demonstrates that:	In addition to the generally applicable thresholds for WUP requirements (paragraphs (4)(a)-(d)), a WUP is required within the MIA when withdrawal is from wells having a cumulative outside diameter greater than 6 inches at the surface (applies to wells constructed after 04/11/94). For example, two 3-inch wells within the MIA requires a WUP, but would not necessarily require a WUP outside the MIA.	Applicants Handbook Part B Section 3.9.2.6.2.1 Rule 40D-2.041, F.A.C. Subsection (4)(e) Rule 40D-2.381, F.A.C. Applicants Handbook Part B Section 2.4 Applicants Handbook Part B Section 3.9.2.6.2.2.5.

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	- withdrawal will not adversely affect MFL; and - a "Net Benefit" can be implemented.		
New allocations of water • **Including re-allocation strategy (aka resource redistribution or terminated base condition water)** • **Threshold limit** • **Modeling criteria**	"New quantities" within the SWUCA means groundwater that is not authorized to be withdrawn by the applicant or used for the intended use by the applicant as of Jan. 1, 2007.	Since 1990, there have been no increases in permitted groundwater withdrawals from the Floridan aquifer in the MIA in order to stabilize groundwater levels.	Rule 40D-2.021, F.A.C. Subsection (9)
	For water bodies that are predicted to be impacted by the proposed use where the actual flow/level is at or above the MFL, new quantities are limited to that quantity that does not cause the actual flow/level to fall below the MFL on a Long-Term average basis.	Requests for new quantities outside the MIA will be granted only if the withdrawals have no effect on groundwater levels in the Upper Floridan aquifer in the MIA.	Applicants Handbook Part B Section 3.9.2.6.2.1
	For water bodies that are predicted to be impacted by the proposed use where the actual flow/level is below the MFL, new quantities of groundwater are evaluated to determine compliance with Chapter 40D-2. If proposed withdrawal will negatively impact the SWIMAL, the Upper Peace River, or Ridge Lakes (or any water body with an established MFL), Applicant can propose to implement Net Benefit. • For the Upper Peace River – no cumulative impact if current 10-yr moving average monthly water level in the area is above 53.3 ft NGVD, within the initial median for the 10-yr moving avg monthly water level of available info during 1990-1999. • For Ridge Lakes - no cumulative impact if current 10-yr moving average monthly water level in the area is above 91.5 ft NGVD, within the initial median for the 10-yr moving avg monthly water level of available info during 1990-1999.	Cumulative assessment is based upon best available information.	Applicants Handbook Part B Section 3.9.2.6.2.2.3
	Net Benefit will offset predicted		Applicants Handbook Part B

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	impact of proposed withdrawal, plus provide an additional positive effect on the water body equal to or greater than 10% of predicted negative impact. Three forms of Net Benefit: **A. Mitigation Plus Recovery** (1) permanently retire from use the historically used quantity associated with one or more WUPs (or may be a portion of a WUP) within the SWUCA that impacts the same MFL water body; (2) recharging the aquifer and withdrawing water such that there remains a net positive impact on the Floridan aquifer potentiometric surface at least 10% or greater than the impact of the proposed withdrawal; (3) undertaking other actions to offset the proposed impact plus 10%. **B. Use of Quantities Created by District Water Resource Development Projects as a Net Benefit.** New quantities from water resource development projects that are not reserved or otherwise designated for recovery are available to use by a permit applicant, if the applicant has contributed to the project and demonstrates that: - the proposed withdrawal affects the same MFL water body source associated with the project; - the quantity developed in excess of the of the quantity reserved or otherwise designated for the MFL has been determined; - the proposed Net Benefit quantities will not interfere with quantities reserved or otherwise designated by SWFWMD for water resource development. **C. Groundwater Replacement Credit in SWUCA.** Offset groundwater withdrawals with		Section 3.9.2.6.2.2.4

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	alternative water supplies.		
Conservation • **Relationship to ELU** • **Drought credit system** • **Plan required, with progress reporting** • **Use class specific** • **Detailed requirements**	Permittees with a WUP within the SWUCA for irrigation may earn Water-Conserving Credits to withdraw additional quantities of groundwater for use at the site where the credits are earned and for the source for which they were earned. Water-Conserving Credits are earned if less than the allowable amount of groundwater is applied to actual planted acreage as set forth in the WUP Applicant's Handbook Part B Chapter 3. Withdrawals under the Water-Conserving Credits shall meet the Conditions for Issuance set forth in Rule 40D-2.301, F.A.C Standard water conservation plan or a goal-based water conservation plan.		Rule 40D-2.621, F.A.C. Applicants Handbook Part B Section 2.4.8.5 Applicants Handbook Part B Section 2.4.8.6 Applicants Handbook Part B Section 3.9.2.4
Supplemental irrigation allocation • **Allocation and actual usage** • **Metering** • **Crop reporting** • **Frost / freeze and market conditions**	The standard annual average quantities is a statistical irrigation quantity that is the maximum annual irrigation amount permitted by SWFWMD over 365 days. Assumes effective rainfall. For pasture, SWFWMD uses a 60% statistical rainfall probability to calculate the drought annual average quantities. For plastic mulched seasonal crops, SWFWMD calculates the drought annual average quantities assuming zero effective rainfall. For crops other than pasture that can utilize effective rainfall, SWFWMD uses a 2-in-10 (i.e., 20%) chance that there will be less rainfall to calculate drought annual average quantities. This quantity does not include crop protection. Drought annual average quantities is equivalent to annual average quantities outside SWUCA. For crops that can utilize		Applicants Handbook Part B Section 3.9.2.1

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	effective rainfall, SWFWMD uses a 5-in-10 (i.e., 50%) chance that there will be less rainfall to calculate standard annual average quantities. This does not include crop protection. Rainfall bases set forth in Table 3-1 are used to determine Water Use Allocation. For improved pastures, authorization is based on the three driest months of the year, if applicant documents an operable irrigation system exists or is proposed and is capable of delivering the requested amount. Metering is required for individual WUPs of 100,000 gpd or greater annual average with one or more facilities in the SWUCA. As of January 1, 2003, facilities not previously required to be metered within SWUCA, required metering. Once metering is required, metering will always be required. Irrigation crop reports are required within SWUCA. If permittee exceeds allocated quantities, a report is required that explains why there was an exceedance, measures taken to attempt to meet allocated quantities, and a plan for bringing permit into compliance. Reporting requirements for permittees with 100,000 gpd annual average quantities or greater for Landscape/ Recreation Use		Applicants Handbook Part B Section 3.9.2.2 Applicants Handbook Part B Section 3.9.2.3 Applicants Handbook Part B Section 4.1.1 Applicants Handbook Part B Section 4.1.1.2 Applicants Handbook Part B Section 4.4.1 Applicants Handbook Part B Section 4.4.2 Applicants Handbook Part B Section 4.4.13
Competition			
Redistribution of existing	Self-Relocation is available. This is a permit modification that authorizes a permittee to move all or a portion of its withdrawal located within the		Applicants Handbook Part B Section 3.9.2.6.2.2.2 Rule 40D-2.021, F.A.C. Subsection (12)

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allocations	SWUCA to a new location or locations owned or controlled by the permittee within the SWUCA, with no change in ownership, control, or Use Type, and no increase in quantities. Self-Relocation does not include changes in withdrawal location or Use Type that are authorized by the terms of the existing permit.		
Alternative water supply program	Applicants for WUPs with 100,000 gpd or more are required to evaluate use of alternative water supply (AWS). If applicant in SWUCA, demonstrates that AWS are vulnerable to being insufficient or unavailable, the WUP will put non-AWS on standby status. AWS can be used to demonstrate "Net Benefit" through Groundwater Replacement Credit.		Applicants Handbook Part B Section 2.1.1 Applicants Handbook Part B Section 2.1.1.4. Applicants Handbook Part B Section 3.9.2.6.2.2.4
Permit duration	Generally 20 years, unless pre-existing adverse impacts are being addressed through a minimum flow and recovery strategy that must be eliminated by the 10th year.		Rule 40D-2.321, F.A.C. Applicants Handbook Part B Section 1.5
Prohibited use class(es) identified • **E.g. Aesthetic**	Irrigation for unimproved pasture will not be approved. Augmentation for purely aesthetic purposes (e.g., creating and maintaining water levels in constructed ponds) shall not be permitted. Existing permits that include aesthetic augmentation may be renewed if criteria in section 2.4.9.2.b though g are implemented.		Applicants Handbook Part B Section 2.4.3.1.11 Applicants Handbook Part B Section 3.9.2.7.1
Program adopted as a "package" • **"Self-destruct" clause**			