



# Florida Department of Environmental Protection

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Secretary

## LONG RANGE PROGRAM PLAN

Department of Environmental Protection

Tallahassee

September 30, 2015

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Dear Directors:

Pursuant to Chapter 216, Florida Statutes, our Long Range Program Plan (LRPP) for the Department of Environmental Protection is submitted in the format prescribed in the budget instructions. The information provided electronically and contained herein is a true and accurate presentation of our mission, goals, objectives and measures for the Fiscal Year 2016-17 through Fiscal Year 2020-21. The internet website address that provides the link to the LRPP located on the Florida Fiscal Portal is <http://www.dep.state.fl.us/admin/asp/index.htm>. This submission has been approved by Jonathan P. Steverson, Secretary.

  
Leonard C. Zeiler Jr., Chief of Staff



# Florida Department of Environmental Protection

## Long Range Program Plan



**Fiscal Years:  
2016-2017  
through  
2020-2021**

# Florida Department of Environmental Protection



## AGENCY MISSION:

Create strong community partnerships, safeguard Florida's natural resources and enhance its ecosystems.

**GOALS AND OBJECTIVES /**  
**AGENCY SERVICE OUTCOMES AND PERFORMANCE PROJECTION TABLES**

**GOAL #1 – PROTECT PUBLIC HEALTH AND SAFETY**

**OBJECTIVE 1A – Environmental Assessment and Restoration Program:** Increase the protection, conservation and restoration of Florida's water resources to meet existing and future public supply and natural systems needs.

**OUTCOME:** Percent of Florida’s freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) flowing streams; 2) combined lakes. (See Objectives 2A, 3B)

Baseline Year: FY 2011-2012	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
55% / 70%	55% / 70%	55% / 70%	55% / 70%	55% / 70%	55% / 70%

**Projection Methodology and Influencing Factors**

Excessive nutrient (nitrogen and phosphorus) levels and impaired biological conditions are the most significant problems affecting surface waters in Florida. Historically, the Department used narrative criteria to determine when a waterbody does not meet water quality standards because of an excessive level of nutrients, which is triggered when nutrient concentrations cause an imbalance of natural populations of flora or fauna or the discharge of nutrients causes violations of other water quality standards. The Department’s federally approved numeric nutrient criteria (NNC) represents a more refined approach to determining nutrient impacts, which will supplement and strengthen the narrative criteria.

Water quality trends over the last 20 years have shown improvements in nutrients and chlorophyll-*a* in estuaries and streams, with some degradation in lakes and springs. The application of the NNC, over time, will indicate that some waters determined in the past to meet the narrative criteria do not meet NNC, while others that have failed the narrative criteria in the past now meet NNC. This is because the implementation protocols for NNC are sensitive to biological health, not merely water chemistry, and to subtle trends in nutrient impacts. Thus, they provide a more accurate understanding of water quality

On October 27, 2014, based on the Department's progress in adopting Florida-specific numeric nutrient criteria, the U.S. Environmental Protection Agency (EPA) withdrew all federal nutrient criteria for Florida and deferred to the Department's criteria. (While several parties challenged this action, both a U.S. District Court and circuit court of appeals have upheld EPA's decision, with the most recent determination coming on July 7, 2015, in a decision by the 11<sup>th</sup> Circuit Court of Appeals.) Adoption of NNC, and the related adoption of dissolved oxygen criteria in 2013, requires the Department to expand how the outcome measure reflecting surface water quality is calculated and reported.

Given the adoption of NNC, it is more appropriate, and a more accurate depiction of water quality, to report the results for total nitrogen, total phosphorus and dissolved oxygen individually. The Department has prepared a Validity and Reliability Form to explain the rationale for the new methodology and a modest change in the wording of the measure and how data is reported.

Department staff has compiled the data necessary for the new calculations for the three-year period 2012-2014, and the results are as follows:

<b>Percent of Florida's Freshwater Surface Waters that Meet Priority Water Quality Criteria (Nutrients and Dissolved Oxygen)</b>			
<b>Resource</b>	<b>Total Nitrogen</b>	<b>Total Phosphorus</b>	<b>Dissolved Oxygen</b>
Small Lakes	91.6 ±2.3%	94.8 ±1.8%	88.2 ±2.4%
Large Lakes	90.3 ±2.3%	77.6 ±5.9%	98.5 ±0.5%
Streams	67.3 ±2.8%	74.9 ±2.2%	77.1 ±2.6%
Rivers	70.6 ±2.3%	85.5 ±1.7%	95.5 ±1.3%

*The percentages in the tables reflect the sampling results meeting the given criterion. The number following the percentage in each cell represents the statistically derived margin of error (confidence interval).*

As with the current measure calculation, the table represents statewide measures of water quality based on relatively small, but statistically valid, sample sizes. The measures come with calculated levels of confidence. For example, the 91.6% total nitrogen result for small lakes in the table above has a confidence interval of ±2.3%. This interval indicates that the room for error in the results is limited and if the same analysis were conducted many times the results would be expected to fall within that 4.6% (±2.3%) interval.

The Department proposes to revise how the outcome measure is calculated and reported, as illustrated in the table above. Documentation of the proposed change is included in the related Validity and Reliability Form included in the Long Range Program Plan submittal. Until the proposed measure is approved, there is no reasonable basis for changing the future year projections for the existing measure.

**OUTCOME:** Percent of groundwater quality monitoring network wells that reflect good water quality (no exceedances of ground water quality standards). (See Objectives 2A, 3B)

Baseline Year: FY 2006-2007	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
85%	85%	85%	85%	85%	85%

Projection Methodology and Influencing Factors

The Department determined the following percentages of groundwater wells met water quality standards during fiscal years 2009-2010 through 2014-2015:

- 2009-2010 – 85%
- 2010-2011 – 82%
- 2011-2012 – 85%
- 2012-2013 – 81.5%
- 2013-2014 – 80%
- 2014-2015 – 81.3% (±4.55%)

For this measure, the determination of whether groundwater wells meet water quality standards is based on statewide sampling for seven common analytes: arsenic, cadmium, chromium, fluoride, lead, nitrate+nitrite and sodium. Of the seven analytes examined, sodium is responsible for far more water wells failing groundwater standards than any other and the failure rate generally has been increasing since 1994. This situation is likely due to extended drought conditions and increased groundwater withdrawals associated with continuing growth and development, with the subsequent intrusion of mineralized or saline waters into aquifers -- commonly referred to

as saltwater intrusion.

Improvements in groundwater quality, as reflected in this metric, will be difficult to achieve in light of drought conditions, continuing growth and development, increasing groundwater withdrawals and sea level rise. The exceedance rates for analytes other than sodium during these years were either stable or decreasing. These are long-term trends that are unlikely to change rapidly but, with the exception of sodium, reflect generally good groundwater quality overall. This statewide measure is based on a relatively small but statistically valid sample with a calculated level of confidence. For example, the 81.3% result for FY 2014-2015 has a confidence interval of  $\pm 4.55\%$ . This interval indicates that the room for error in the results is limited and if the same analysis were conducted many times the results would be expected to fall within that 9.10% ( $\pm 4.55\%$ ) interval. The result for the reporting year falls within an interval that includes the outcome standard and future year targets. Given this fact, and considering the marginally lower ground water quality over the last three years, there is no basis for projecting improvement over the next five years.

Sodium results drive this measure. Because those results are substantially different from and unrelated to the results for the other analytes (pollutants), they have the effect of masking water quality associated with those pollutants. Consideration is being given to splitting the measure into two parts. The change would allow continued tracking of saltwater intrusion and promote a better understanding of the effect of the pollutants (arsenic, cadmium, chromium, fluoride, lead, nitrate+nitrite) on groundwater. However, no change is proposed at this time, thus no Validity and Reliability Form is being submitted.

**OBJECTIVE 1B – Water Resource Management Program:** Increase the protection, conservation and restoration of Florida's water resources to meet existing and future public supply and natural systems needs.

**OUTCOME:** Percent of public water systems with no significant health drinking water quality problems.

Baseline Year: 2002	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
93.5%	94%	94%	94%	94.5%	95%

Projection Methodology and Influencing Factors

The Department's Drinking Water Program has been meeting this goal annually for a number of years and should continue to do so. Federal rules, which the state must adopt, are subject to routine reevaluation and, when changed, pose a significant compliance challenge as drinking water systems adjust to new monitoring and reporting requirements. Compliance is based on water quality standards for bacteria and disinfection by-products, among others, and is calculated as the number of water quality violations divided by the number of active systems in a given year. The Department has been able to improve system compliance over the last few years and a moderate additional improvement is expected over time, although this could be affected by the potential federal rule changes noted previously.

**OBJECTIVE 1C – Office of Emergency Response:** Reduce and control adverse impacts to public health and the environment from releases of hazardous materials and discharges of pollutants.

**OUTCOME:** Percent of pollutant discharge sites remediated by the responsible party/owner (Remediation by the responsible party/owner is defined as any action or contractual arrangement related to cleanup of a site). (See Objectives 3A, 4A)

Baseline Year: FY 2008-2009	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
76%	76%	76%	76%	76%	76%

**Projection Methodology and Influencing Factors**

One of the Department’s goals is to mitigate the impact to the environment in the event that a spill of hazardous materials occurs. This is accomplished by on-site cleanup activities and recovery of the cost of the cleanup and environmental damage from the responsible party. The Department’s Office of Emergency Response implemented the Oil and Hazardous Materials Incident Tracking (OHMIT) system in 2006 to improve records management and statistical reporting capabilities. The ability to record and track activity in real-time through the OHMIT system provides a sophisticated means of analyzing trends and projecting future results.

**OBJECTIVE 1D – Waste Management Program:** Ensure appropriate and timely cleanup of contamination.

**OUTCOME:** Percent of contaminated sites with cleanup completed.

Baseline Year: FY 2013-2014 (Projected)	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
47%	57%	58%	59%	60%	61%

**Projection Methodology and Influencing Factors**

The projected five year outcomes for the Waste Management Program listed in the Performance Projection Tables above were developed based on several factors:

- Past experience in implementing the program;
- Changes in federal regulations, state statutes and administrative rules, as well as major regulatory deadlines or milestones to be implemented over the next five years;
- An extensive review and overhaul of the state-funded petroleum restoration program to improve its efficiency and effectiveness and implement a competitive procurement process for site rehabilitation services; and
- The Department’s continued focus on mission-critical activities.

The Department’s priority continues to be to maintain cleanup continuity on as many active cleanup sites as possible and to find new and innovative ways to close sites faster and reduce the site backlog. This can be achieved by eliminating programmatic inefficiencies, effectively using funding for drycleaning solvent contaminated site cleanup, implementing competitive procurement for contracted site rehabilitation services in the large state-funded petroleum restoration program, and continuing to use the Low-Scored Site Initiative to close more sites with a very low threat to human health and the environment.

Increased enforcement of non-government funded waste cleanup sites has resulted in a greater number of determinations that there is no viable responsible party for the cleanup, which means that these sites are turned over to the state lead cleanup group. The increase in the number of sites added to the state lead cleanup list results in a decrease in the completion of “other sites” and necessitates the adjustment of the projections for these sites in the table above.

The number of known contaminated sites varies every year as new discoveries are made or accidental discharges may occur. The amount of time that is needed to complete cleanup activities is generally based on a number of factors such as the size and complexity of the site and the local site geology. As a result, the number of sites

identified for cleanup activities can temporarily increase as the rate of site cleanup and closure may not keep pace with the rate of new site discoveries. The Department’s focus on the utilization of Risk Based Corrective Actions is expected to increase the cost-effectiveness of the selected cleanup strategies and ultimately increase site closure rates. Conversely, focusing on the lowest cost approaches, where appropriate, and switching from active cleanup strategies to longer-term natural attenuation approaches will decrease the rate of site closures for a period of time.

**OBJECTIVE 1E – Air Resources Management Program:** Provide an air monitoring network that retrieves quality assured data.

**OUTCOME:** Percent change in per capita annual emissions of priority pollutants (nitrogen oxides, sulfur dioxide, carbon monoxide, volatile organic compounds), compared to the level five years ago.

Baseline Year: FY 2002-2003	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
2.5%	-4.1%	-4.2%	-4.3%	-4.4%	-4.5%

Projection Methodology and Influencing Factors

The above projected outcomes are based on the assumption, supported by permitting actions and new regulations, that annual emissions per capita of the listed pollutants are being reduced despite historical population growth trends in the state.

**OBJECTIVE 1F – Air Resource Management Program:** Increase the time that monitored population will breathe good quality air.

**OUTCOME:** Percent of time that population breathes good or moderate quality air.

Baseline Year: FY 2002-2003	FY 2015-2016	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020
99.1%	99.4%	99.5%	99.6%	99.7%	99.71%

Projection Methodology and Influencing Factors

In Objective 1F, “good and moderate quality air” are defined in *Section 40 of the Code of Federal Regulations (Part 58, Appendix G), as part of the Air Quality Index (AQI)*. The “good and moderate” categories of the AQI include pollutant concentration less than the National Ambient Air Quality Standard. "Monitored Population" means population in any county that has one or more air monitors. The time the population breathes good or moderate quality air is determined by reviewing the percentage of days where the AQI was reported as “good or moderate”.

The above projections are based on the assumption, supported by decades of history, that the air quality in Florida is unlikely to change significantly. Ambient monitoring data has shown that even as the state population increases and as the EPA tightens standards, the reductions in emissions respond to maintain a high level of good or moderate air quality.



**GOAL #2 – RESTORE AND PROTECT THE EVERGLADES**

**OBJECTIVE 2A – Water Resource Management Program and Environmental Assessment and Restoration Program:** Increase the protection, conservation and restoration of Florida's water resources to meet existing and future public supply and natural systems needs.

***Water Resource Management Program:***

**OUTCOME:** Percent of reclaimed water (reuse) capacity relative to total domestic wastewater capacity; percent of treated domestic wastewater reuse for beneficial purposes. (See Objective 3B)

Baseline Year: FY 2013-2014 (Projected)	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
60% / 45%	63% / 45%	63% / 46%	63% / 46%	64% / 46%	64% / 46%

Projection Methodology and Influencing Factors

Florida’s annual reuse inventory provides a summary of facility listings and types of reuse activities and their capacities and is the basis for reporting this measure. It can be found at: <http://www.dep.state.fl.us/water/reuse/inventory.htm>. Rule 62-610, Florida Administrative Code, requires owners (permittees) of domestic wastewater facilities having permitted capacities of 0.1 million gallons per day and above that provide reclaimed water for reuse to submit annual reports in a required format. The data from the annual reports, which are entered into a Department database, are used to determine reuse capacity. As the Department continues to encourage reuse of reclaimed water, the statewide percentage of total domestic wastewater capacity is expected to slowly increase. Section 403.086, F.S., requires that ocean outfall facilities provide 60% reuse by December 31, 2025. This requirement will eventually increase the percent of reclaimed water capacity relative to total domestic wastewater capacity. However, this change is not anticipated to occur with significance until the statutorily established deadline approaches.

***Environmental Assessment and Restoration Program:***

**OUTCOME:** Percent of Florida’s freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) flowing streams; 2) combined lakes. (See Objective 1A, 3B)

Baseline Year: FY 2011-2012	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
55% / 70%	55% / 70%	55% / 70%	55% / 70%	55% / 70%	55% / 70%

**OUTCOME:** Percent of groundwater quality monitoring network wells that reflect good water quality (no exceedances of water quality standards). (See Objective 1A, 3B)

Baseline Year: FY 2006-2007	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
85%	85%	85%	85%	85%	85%

**OBJECTIVE 2B – Water Policy and Ecosystems Restoration Program:** To complete the scheduled restoration strategies milestones by the dates referenced in the Restoration Strategies Regional Water Quality Plan and associated documents.

**OUTCOME:** This is a pass/fail measure. Percent of scheduled restoration activities completed over the last year as required by the Restoration Strategies Water Quality Plan and associated documents.

Baseline Year: FY 2012-2013	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
100%	100%	100%	100%	100%	100%

Projection Methodology and Influencing Factors

To address water quality concerns associated with existing flows to the Everglades Protection Area, the South Florida Water Management District (SFWMD), Department and EPA engaged in technical discussions starting in 2010. The primary objectives were to establish a Water Quality Based Effluent Limit (WQBEL) that would achieve compliance with the State of Florida’s numeric phosphorus criterion in the Everglades Protection Area and to identify a suite of additional water quality projects to work in conjunction with the existing Everglades Stormwater Treatment Areas (STAs) to meet the WQBEL.

Based on the collaborative effort described above, a suite of projects have been identified that would achieve the WQBEL. The Restoration Strategies Regional Water Quality Plan ([http://www.dep.state.fl.us/everglades/files/sta/restoration\\_strat\\_regional\\_plan.pdf](http://www.dep.state.fl.us/everglades/files/sta/restoration_strat_regional_plan.pdf)) describes those resulting projects and the evaluation tools and assumptions that were utilized in the technical evaluation. The projects have been divided into three flow paths (Eastern, Central and Western), which are delineated by the source basins that are tributary to the existing Everglades STAs. The identified projects primarily consist of Flow Equalization Basins, STA expansions, and associated infrastructure and conveyance improvements.

Each project milestone verifies timely progress and implementation of the Restoration Strategies Regional Water Quality Plan, with the ultimate goal (post 2025) of meeting the WQBEL standard for total phosphorus in discharges to the Everglades Protection Area. Additional information on the required activities and schedule can be found on page 5 at the following link: [http://www.dep.state.fl.us/everglades/files/sta/CO\\_EFA\\_12-1149\\_08152012.pdf](http://www.dep.state.fl.us/everglades/files/sta/CO_EFA_12-1149_08152012.pdf)

**GOAL #3 – PROTECT FLORIDA’S WATER RESOURCES**

**OBJECTIVE 3A – Office of Emergency Response:** Reduce and control adverse impacts to public health and the environment from releases of hazardous materials and discharges of pollutants.

**OUTCOME:** Percent of pollutant discharge sites remediated by the responsible party/owner (remediation by the responsible party/owner is defined as any action or contractual arrangement related to cleanup of a site). (See Objectives 1C, 4A)

Baseline Year: FY 2008-2009	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
76%	76%	76%	76%	76%	76%

**OBJECTIVE 3B – Environmental Assessment and Restoration Program and Water Resources**

**Management Program:** Increase the protection, conservation and restoration of Florida's water resources to meet existing and future public supply and natural systems needs.

***Environmental Assessment and Restoration Program:***

**OUTCOME:** Percent of Florida’s freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) flowing streams; 2) combined lakes. (See Objectives 1A, 2A)

Baseline Year: FY 2006-2007	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
55% / 70%	55% / 70%	55% / 70%	55% / 70%	55% / 70%	55% / 70%

**OUTCOME:** Percent of groundwater quality monitoring network wells that reflect good water quality (no exceedances of water quality standards). (See Objectives 1A, 2A)

Baseline Year: FY 2006-2007	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
85%	85%	85%	85%	85%	85%

***Water Resource Management Program:***

**OUTCOME:** Percent of reclaimed water (reuse) capacity relative to total domestic wastewater capacity; percent of treated domestic wastewater reused for beneficial purposes. (See Objective 2A)

Baseline Year: FY 2013-2014 (Projected)	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
60% / 45%	63% / 45%	63% / 46%	63% / 46%	64% / 46%	64% / 46%

**OUTCOME:** Percent of Florida’s 825 miles of sandy beaches that protect uplands, wildlife and recreation.

Baseline Year: 2002	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
81%	82%	82%	80%	82%	82%

**Projection Methodology and Influencing Factors**

This outcome is a measure of the percentage of beaches that are providing upland benefit, meaning they are not critically eroded or they are restored and currently under management. The miles of critically eroded shoreline, which are used as the basis for this measure, are adjusted annually by the Department based on storm impacts or natural recovery. The ability to achieve these objectives assumes no extraordinary storm events like those in 2004 and 2005 occur, and that maintenance and management of previously restored shoreline is implemented.

**GOAL #4 – PROTECT FLORIDA’S NATURAL AND ENVIRONMENTAL RESOURCES**

**OBJECTIVE 4A – Office of Emergency Response:** Reduce and control adverse impacts to public health and the environment from releases of hazardous materials and discharges of pollutants.

**OUTCOME:** Percent of pollutant discharge sites remediated by the responsible party/owner (remediation by the responsible party/owner is defined as any action or contractual arrangement related to cleanup of a site). (See Objectives 1C, 3A)

Baseline Year: FY 2008-2009	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
76%	76%	76%	76%	76%	76%

**OBJECTIVE 4B – Waste Management Program:** Promote sound waste management practices.

**OUTCOME:** Percent of municipal solid waste recycled.

Baseline Year: FY 2013-2014 (Projected)	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021
50%	60%	65%	70%	75%	75%

Projection Methodology and Influencing Factors

The projected five year outcomes for the Waste Management Program listed in the Performance Projection Tables were developed based on several factors:

- Past experience in implementing the program;
- Changes in state statutes and administrative rules, as well as major regulatory deadlines or milestones to be implemented over the next five years;
- Fiscal challenges facing government at all levels, the public and the regulated community; and
- The Department’s continued focus on mission critical activities.

The waste reduction program continues to focus on the statewide recycling goal of 75 percent of municipal solid waste by 2020 pursuant to section 403.7032, F.S. The 2010 Legislature enacted comprehensive recycling legislation setting benchmarks for the goal, and the 2012 Legislature revised the factors used to calculate progress. The first benchmark was for the 34 counties over 100,000 in population to recycle 40 percent of recyclable solid waste by December 31, 2012, with the goal increasing every two years through 2020. The statewide recycling rate for calendar year 2014 was 50 percent. The Department’s Recycling Business Assistance Center is working to expand and enhance the markets for recyclables in Florida. The Department is promoting its Recycling Recognition Program to encourage private businesses, institutions, schools, public organizations and citizens to increase recycling in order to reach the 75 percent goal.

## LINKAGE TO GOVERNOR'S PRIORITIES

The Florida Department of Environmental Protection (Department) is pleased to present its Long Range Program Plan (LRPP) for Fiscal Year (FY) 2015-2016 through FY 2019-2020. This marks the 13th year that the agency has provided the information in accordance with the LRPP process prescribed by the Governor's Office.

### *Department of Environmental Protection Summary Overview*

The Department is the lead agency in state government for environmental management and stewardship, and is responsible for protecting Florida's air, water and land. The vision of the Department is to create strong community partnerships, safeguard Florida's natural resources and enhance its ecosystems. The Department is divided into three primary areas: Regulatory Programs, Land and Recreation, and Ecosystem Restoration. Florida's environmental priorities include restoring and protecting the water quality in our aquifers, springs, lakes, rivers and coastal waters; restoring America's Everglades; ensuring effective statewide water management and source water protection reducing waste; improving air quality; conserving and restoring environmentally sensitive lands; and providing residents and visitors with recreational opportunities, now and in the future. The Department is committed to providing superior customer service, carrying out its responsibilities cost-effectively, and continuously measuring and improving environmental results.

### *Governor Scott's Priorities*

Governor Scott is proud of our State's commitment to protecting the environment, preserving natural resources, and providing nature-based recreational opportunities for Floridians and visitors. He believes Florida's high quality of life can be sustained through sound economic and environmental policies. The Governor's key policy priorities are:

1. Improving Education
  - World Class Education
2. Economic Development and Job Creation
  - Focus on Job Growth and Retention
  - Reduce Taxes
  - Regulatory Reform
  - Phase out Florida's Corporate Income Tax
3. Maintaining Affordable Cost of Living in Florida
  - Accountability Budgeting
  - Reduce Government Spending
  - Reduce Taxes
  - Phase out Florida's Corporate Income Tax

### *Department of Environmental Protection's Priorities*

The Department has developed a set of strategic goals that support its vision and priorities, provide direction to its employees and complement the Governor's priorities. The Department's six strategic goals are:

- Focus taxpayer resources on projects that provide a direct benefit to the environment and communities.
- Partner with communities and businesses to protect natural resources and promote economic

growth.

- Establish and consistently use clear metrics to evaluate and strengthen the department's programs, activities and services.
- Improve the quality of natural resources through long term planning restoration and maintenance.
- Empower employees to solve problems through innovation and efficiency.
- Proactively communicate a clear and consistent message both internally and externally.

*Governor Scott's Economic Priorities and Department of Environmental Protection Priorities:*

Florida's future economic growth is directly tied to its ability to preserve its natural resources and provide a reliable and affordable supply of fresh water to its growing population. Florida's economic success has historically been built on tourism and agriculture, but the vitality of all industries depends on a healthy environment supporting a desirable place to live and do business. The Department plays an important role in ensuring environmental sustainability and well-being, while encouraging resource conscious opportunities for business location and expansion and associated economic growth.

One key way the Department fosters economic and sustainable growth is promoting, and often underwriting, responsibly planned wastewater, drinking water, stormwater and solid waste management facilities. High quality local environmental infrastructure assures healthy natural resources, attracts job-creating business and industry, increases property values and supports the exceptional quality of life that Floridians and visitors demand.

The Department continuously examines and adapts its business processes to make sure customers—permit applicants, local governments and citizens—get prompt, professional service. For example, the agency has significantly streamlined permitting, reducing the average time to take final agency action on permit applications by nearly 65 percent since 2010. The Department continues to expand its outreach and compliance assistance actions, promoting environmental stewardship to prevent environmental harm before it takes place.

### ***Contribution and Alignment of the Department's Priorities with Governor Scott's Priorities***

The following section highlights the Department's priorities and associated programs that most closely align with and support two of the Governor's key priorities.

#### **GOVERNOR'S PRIORITY #2 – ECONOMIC DEVELOPMENT AND JOB CREATION**

##### Regulatory Reform

Governor Scott believes in common sense and accountability in state regulation. While it is important to retain effective regulations, it is equally critical to remove unnecessary and burdensome regulations.

##### *Department of Environmental Protection's Support of This Priority:*

Regulatory reform, whether eliminating ineffective regulations, streamlining permitting actions or increasing education and outreach is fundamental to the Department's actions. The Department has participated in the Governor's review of agency regulations and is repealing those that provide no environmental value. As already noted, the Department will continue rolling out new e-permitting and other e-business tools throughout the year. Transacting business through direct exchanges of information speeds up agency response, saves staff time, improves data quality and public access, and provides the opportunity to make better management decisions.

#### **GOVERNOR'S PRIORITY #3 – MAINTAINING AFFORDABLE COST OF LIVING IN FLORIDA**

##### Accountability Budgeting

Governor Scott recognizes that government exists only through the authority and resources granted by its citizens. Therefore, its greatest obligation is to be entirely accountable in all that it does. Florida government must fully embrace a system of Accountability Budgeting that allows all Floridians to easily access information on every tax dollar spent and the resulting measurable benefits.

##### *Department of Environmental Protection's Support of This Priority:*

The Department's priorities, goals and objectives reflected in these budget documents establish clear accountability for measuring success. The performance measures emphasize outcome over process and demonstrate what the Department has accomplished and what remains to be done; results are accessible to the public and available to inform policy makers. The Department continues to adapt its performance measures to account for better data and evolving science and to better ensure public accountability and effective use of tax payer resources.

##### Reduce Government Spending

Governor Scott understands that it is important not only to ensure that government lives within its means but also to return valuable tax dollars to the hardworking families and businesses that make our state a great place to live, work and play.

##### *Department of Environmental Protection's Support of This Priority:*

The Department continues vigilant oversight of expenses, elimination of unnecessary external regulations and internal processes, and increased outreach to the regulated community to prevent noncompliance and reduce permit processing time. Preventing violations and speeding up permitting decisions saves money

by avoiding or preempting unnecessary expenditures.

The Department is committed to continuous improvement. Regular workload and staffing analyses focus on core mission performance, enabling the agency to reduce unnecessary expenditures, target cuts that must be made and redistribute resources where they are most needed. Increasing e-permitting and other e-business will reduce costs in the long run and improve services immediately. The objective is to cut costs without compromising environmental protection.



## **TRENDS AND CONDITIONS ANALYSIS**

### **Introduction**

The Department's LRPP is goal-based, with a five-year planning horizon designed to establish agency priorities and policies for the future. The Department has evaluated all services, activities and expenditures to determine whether they should be continued, modified or eliminated. The plan gives context to the agency budget and presents a snapshot of where the agency is, where it intends to go, and how it intends to get there.

The responsibilities of the Department are wide-ranging and include:

- Providing reliable and valid laboratory analyses and technical interpretations (Chapters 403 and 373, F.S.).
- Conducting and reporting on geoscience research to support natural resource conservation needs including water, minerals and aggregate; maintaining geological samples and data that characterize Florida's natural systems (Chapter 377, F.S.).
- Regulating inland oil and gas exploration and production; conducting and reporting on research to support that regulation (Chapter 377, F.S.).
- Providing programming, network services, desktop support, data management, data storage and data integration to support agency information technology needs (Chapter 282, F.S.).
- Increasing the miles of critically eroded beaches under active beach management to protect, preserve and restore the state's beach coastal systems (Chapters 161, 253, 258, 373 and 403, F.S.).
- Assessing and improving the quality and ecological health of Florida's rivers, streams, lakes, wetlands, estuaries, coastal systems and groundwaters (Chapters 20, 370, 120, 211, 369, 373, 374, 376, 378, 380, 403 and 487, F.S.).
- Increasing available water supplies, including alternative water supplies, and promoting efficient water use and conservation to meet existing and future water supply needs (Chapters 20, 120, 373, 376 and 403, F.S.).
- Assuring adequate collection, treatment, disposal and reuse by Florida's domestic and industrial wastewater facilities (Chapter 403, F.S.).
- Assuring appropriate management of stormwater to reduce flooding and protect surface water and groundwater quality (Chapters 373 and 403, F.S.).
- Assuring adequate treatment, distribution, and delivery of drinking water by Florida's public water systems (Chapter 403, F.S.).
- Securing, equitably distributing, and managing funds to assist local governments and other entities finance wastewater, stormwater, drinking water, alternative water supplies, and other water-related infrastructure and activities and beach projects (Chapters 161 and 403, F.S.).
- Promoting sound waste management and ensuring appropriate and timely cleanup of environmental contamination (Chapters 376 and 403, F.S.).
- Increasing recreational opportunities for public use within the state park and greenways and trails systems (Chapters 258, 260 and 375, F.S.).
- Protecting Florida's submerged lands and coastal uplands (Chapters 253, 258 and 373, F.S.).
- Identifying strategies to maximize the protection and conservation of ocean and coastal resources while recognizing their economic benefits (Chapters 161 and 380, F.S.).
- Carrying out Florida's responsibilities under the federal Clean Air Act, including assuring compliance with ambient air quality standards and enforcing U.S. Environmental Protection Agency emission standards for hazardous air pollutants (Chapters 403, 316, 320 and 376, F.S.).
- Coordinating the siting of electrical power plants, electric transmission lines and natural gas

transmission pipelines (Chapter 403, F.S.).

- Reducing and controlling adverse impacts to public health and the environment from releases of hazardous materials and discharges of pollutants (Chapters 252, 376 and 403, F.S.).
- Acquiring land for conservation, recreation and water resource protection (Chapters 253 and 259, F.S.).
- Serving as Florida's land steward for administering the management of its publicly owned lands and land records (Chapters 253, 258 and 259, F.S.).

The Department is charged with the protection and restoration of Florida's natural and environmental resources. To this end, a wide range of strategies is implemented: regulation, cleanup, restoration, land acquisition and conservation, education, recreation, technical assistance, financing, research, and planning. In achieving its mission over the next five years, Department staff will continue to exemplify the values of openness, accountability, and dedication to the public interest and focus on creative solutions beyond simple prescriptive regulation to solve environmental problems.

Change is the one constant in environmental protection, and the rate of technological change in every aspect of government and the private sector presents opportunities, challenges and risks. Technology-driven gains in productivity and efficiency are accompanied by exponentially increasing streams of data demanding ever-faster analysis and decision-making. Data are no substitute for judgment, however, and it will be human choices and leadership that set new directions in governance to enhance Florida's quality of life.

## **AGENCY OVERVIEW AND PROGRAM DISCUSSION**

The Department is among the most diverse agencies in state government. More than 2,974.5 agency employees serve the people of Florida. The Department's responsibilities go well beyond the routine functions of environmental agencies in many other states that protect air quality, water quality and ensure proper waste management. It also is responsible for nationally recognized state system, 10 state greenways and trails and other spectacular outdoor areas open for public enjoyment. The agency manages the *Florida Forever land acquisition and management program, through which* sensitive lands are purchased for conservation and recreation, preserving these lands from future development; it also administers all state-owned submerged lands under Florida's public trust doctrine.

The Department is uniquely challenged by the sheer area of Florida and the diversity of its natural resources. In a state as vast as Florida, government services must be brought as close to the people as possible. The Department accomplishes this through its six regionally located district regulatory offices, five regionally situated state park offices, and field-based initiatives and programs around the state. These offices are staffed with professionals who are charged with helping Floridians serve as good stewards of the state's air and water quality and its unique wild lands and habitats.

The pages immediately following describe the Department's efforts to address major initiatives and priorities: Water Ecosystem Restoration; Regulatory Effectiveness; Land Conservation, Management, Recreation and Acquisition; Communication; Employee Investment and Continuous Improvement.

The remainder of the analysis focuses on the Department's nine programs and 19 Service Categories. Nine legislatively approved programs carry out various activities in order to achieve identifiable goals. Each program contains one or more Service Categories, or Budget Entities, which represent the lowest level to which program funding is provided. While these programs have been established for a single media (air resource management, waste management, water resource management, etc.), the services within each program work cooperatively. Each service must be considered a piece of a much larger whole: protection and restoration of Florida's environment. For additional programmatic, organizational and contact information, please visit the Department's website at [www.dep.state.fl.us](http://www.dep.state.fl.us).

## **MAJOR INITIATIVES FOR ACHIEVING THE DEPARTMENT'S PRIORITIES**

### *Numeric Nutrient Criteria*

Monitoring and assessment of Florida's surface and ground waters are cornerstones of the Department's water quality protection program, and Florida has collected significantly more water quality data than any other state. The Department uses this data to assess whether individual waterbodies have significant nutrient (nitrogen and phosphorus) problems; adopt nutrient restoration goals; calculate protective effluent limits for wastewater dischargers; and adopt basin-wide restoration plans. Florida's most significant surface water quality problem is excess nutrient levels. For that reason, the Department determined that it would be necessary to establish specific numeric nutrient criteria and began the complicated scientific, technical and administrative work of developing criteria in 2002. In 2009, the U.S. Environmental Protection Agency (EPA) issued a formal determination that Florida needed such criteria and began to promulgate federal criteria for Florida.

Florida continued its effort to develop state numeric nutrient criteria and selected a "dose-response" approach, investigating the effects of nutrients on biological communities, to develop scientifically sound criteria. This process required extensive methods development, staff training, and quality assurance oversight to ensure the defensibility of the resulting products. Highly technical procedures have been used, including habitat assessment for streams and lakes, benthic invertebrate indices for streams and lakes, a vegetation index for lakes, and a periphyton index for streams. Extensive documentation of nutrient criteria study results, including statistical analyses and interpretation, can be found at: <http://www.dep.state.fl.us/water/wqssp/nutrients/>. The resulting numeric nutrient criteria are added to Florida's longstanding narrative nutrient criteria, which consider the balance, or imbalance, in natural populations of aquatic flora and fauna.

The Department, after extensive work and public discussion, has crafted water quality standards, by rule, to limit phosphorus and nitrogen in order to restore and protect Florida's lakes, rivers, streams, springs and estuaries. The rules set numeric standards to prevent harm to natural populations of aquatic plants and animals and to assure the protection of other designated uses. Adoption of these rigorous criteria was the result of years of scientific work, negotiations with an array of stakeholders, several rounds of litigation, and multiple EPA approvals. On October 27, 2014, based on DEP's progress in adopting Florida-specific numeric nutrient criteria, EPA withdrew all federal nutrient criteria for Florida and deferred to DEP's criteria. While several parties challenged this action, both a federal district court and circuit court of appeals have upheld EPA's decision, with the most recent determination coming on July 7, 2015, in a decision by the Eleventh Circuit Court of Appeals.

#### *Five Year Strategy:*

The Department is now focused on implementation of the numeric nutrient criteria. Because nutrient impacts express themselves differently in different waterbody types and conditions, the Department will continue working with stakeholders to collect floral and faunal measurements to augment existing nutrient data, enabling site-specific application of the nutrient criteria. Priorities for implementation include:

- Ongoing training of Department staff, local government staff, and various stakeholders on practical implementation of the rule to ensure that necessary, quality-assured data are available for decision-making.
- Continue collection of data necessary to initiate the adoption of site specific alternative criteria (also known as SSAC), for nutrients, for targeted surface waters.

- For nutrient Total Maximum Daily Loads (TMDLs—specific waterbody restoration targets) adopted in the future, take the necessary additional administrative steps to adopt them as localized interpretations of narrative nutrient criteria.
- Provide assistance to stakeholders seeking to conduct the Use Attainability Analyses required in order to reclassify waterbodies, where appropriate, which would also include adoption of at least one SSAC for either nutrients or dissolved oxygen.

The Department will establish previously adopted nutrient TMDLs as interpretations of the narrative nutrient criteria because the TMDLs:

- Establish site specific and sensitive responses to nutrient enrichment for a particular area;
- Are generated using data appropriate for a site specific assessment;
- Establish a protective endpoints equivalent to numeric criteria; and
- Are more appropriate than a statewide criterion because they are sensitive to unique local conditions.

As of August 2015, Florida has adopted 207 nutrient TMDLs. The state has also adopted 15 Basin Management Action Plans encompassing nearly 9.7 million watershed acres specifically to restore waterbodies impaired by excess nutrients.

### *America's Everglades*

America's Everglades is an international treasure. Known as the River of Grass for the sawgrass that flourishes throughout the marsh, the Everglades is a one-of-a-kind ecosystem that supports a diverse wildlife population with its mosaic of habitats, including sawgrass prairies, hardwood hammocks, cypress swamps, coastal lagoons, mangroves and pinelands. This unique ecosystem stretches southward from the Kissimmee Chain of Lakes, to Lake Okeechobee, then through the remaining Everglades and on to the waters of the Florida Bay, an area covering 18,000 square miles.

Everglades restoration is an enormous undertaking, and involves a combination of research, planning, engineering, construction, operation, land acquisition, and monitoring utilized to different degrees in different areas of the overall ecosystem based on the particular needs of those areas. The remaining projects and activities will take place over the course of decades. The summaries below give a broad overview of the current circumstances and projects and the work anticipated over the next five years. Much more information, including the plans referenced in the text below, is available on the Department's Everglades Restoration website at [www.dep.state.fl.us/everglades/default.htm](http://www.dep.state.fl.us/everglades/default.htm).

#### Restoration Efforts

The Department and the South Florida Water Management District are implementing several ongoing, overarching ecosystem restoration programs. These programs include the Restoration Strategies Regional Water Quality Plan (Everglades Forever Act; Section 373.4592, F.S.); the Comprehensive Everglades Restoration Plan (Sections 373.026, 373.470, 373.1501 and 373.1502, F.S.); the Northern Everglades and Estuaries Protection Program (Section 373.4595, F.S.), and Foundation Projects including Kissimmee River Restoration, Modified Waters Deliveries to Everglades National Park, the C-111 South Dade Project, and Herbert Hoover Dike Repair and Rehabilitation Project. The Office of Ecosystem Projects is actively involved in all stages of policy, planning, funding, regulation, and implementation of these projects.

### Restoration Strategies Regional Water Quality Plan

Florida is building on its \$1.8 billion dollar investment to restore water quality, particularly by reducing and controlling the total phosphorus loads entering the Everglades Protection Area. Under the first phase of the Everglades Construction Project, the State constructed ~60,000 acres of stormwater treatment areas (STAs). Florida has committed to spending up to an additional \$880 million to improve conveyance features, expand existing STAs by ~7,000 acres and construct ~110,000 acre feet of storage upstream of these STAs to optimize operations. These actions, identified in the Restoration Strategies Regional Water Quality Plan, are intended ultimately to achieve the established phosphorus criterion.

### Comprehensive Everglades Restoration Plan

Florida has partnered with the U.S. Army Corps of Engineers in implementing the largest ecosystem restoration project in the nation's history: the 30-year, Comprehensive Everglades Restoration Plan (CERP). CERP, funded by an unprecedented 50-50 state/federal cost-share, is improving the quality, quantity, timing and delivery of water to the ecosystem. Costs for CERP have increased from \$7.8 billion to \$13.5 billion, based on 2009 estimates from the 2010 CERP Report to Congress. To date, Florida has invested \$1.95 billion dollars toward the State's share of CERP. CERP consists of 68 projects developed by an interdisciplinary team with extensive research experience in the South Florida ecosystem using the best available data and state-of-the-art scientific and engineering methodologies.

### Northern Everglades and Lake Okeechobee

Florida recognized the importance of the Northern Everglades in June 2007 by passing the Northern Everglades and Estuaries Protection Program (NEEP). This legislation expands the Lake Okeechobee Protection Program to safeguard and restore the entire Northern Everglades system, focusing on the Caloosahatchee and St. Lucie river basins, and calls for the development of far-reaching plans to protect and improve the quality, quantity, timing, and distribution of water north of Lake Okeechobee.

### *Five Year Strategy:*

Over the next five years, the strategy for restoring the greater Everglades involves permit application review and issuance, funding, targeted land acquisition, design, engineering, construction, and operations or implementation efforts associated with the following projects<sup>1</sup>:

#### *Everglades Forever Act & Restoration Strategies*

- C-139 Annex Restoration
- Science Plan for the Everglades Stormwater Treatment Areas
- STA Operations & Maintenance
- STA 1 West 4,700 Acre Expansion
- STA 1 West 1,000 Acre Expansion
- Eastern Flow-path Flow Equalization Basin (L-8 FEB)
- Everglades Agricultural Area A-1 Flow Equalization Basin (A-1 FEB)
- S-5A Divide Structure Modifications
- S-375 Structure Expansion (G-716)
- L-8 Divide Structure (G-541)
- Bolles/Cross Canal (G-341 Conveyance)

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1 - Some or all of these features are dependent on authorizations and/or funding from the federal government, the SFWMD Governing Board, and the Florida Legislature. Priorities may shift among items and priorities (identified by our customers) over the course of the 5-year planning period and are subject to change.

### Foundation Projects

- Herbert Hoover Dike Culvert Repair and Rehabilitation
- Herbert Hoover Dike Dam Safety Modification Study Modified Water Deliveries to Everglades National Park
- C-111 South Dade (Contracts 8 and 9)
- Tamiami Trail Modifications: Next Steps Project
- Kissimmee River Restoration Construction
- Kissimmee River Restoration Headwaters Revitalization
- Kissimmee Basin Modeling and Operations Study
- Operational Changes to the Water Conservation Area Regulation Schedules to address High Water Levels
- S-356 Incremental Field Tests Combined Operations Plan for C-111 South Dade and Modified Water Deliveries to Everglades National Park Projects CERP/Critical
- Central Everglades Planning Project
- C-43 West Basin Storage Reservoir
- Biscayne Bay Coastal Wetlands – Deering Estates, Cutler Flow Way and remaining portion of the L-31E culverts
- Broward Water Preserve Areas: C-11 Impoundment and WCA 3A/3B Seepage Management
- Indian River Lagoon South: C-44 Reservoir, C-44STA and Allapatah Flats
- Picayune Strand Restoration Project – Merritt, Faka Union and Miller Pump Stations with associated hydrologic improvements
- Site 1 Impoundment Phase 1 and Phase II features
- Loxahatchee River Restoration Project
- Southern Corkscrew Regional Ecosystem Restoration Watershed Critical Project
- Water Quality Feasibility Studies
- Western Everglades / Seminole Big Cypress Critical Project
- Lake Okeechobee Watershed Project (also NEEPP) (overlaps with CERP)
- Taylor Creek/Nubbin Slough Stormwater Treatment Areas
- Dispersed Water Management projects on SFWMD owned lands
- Emergency and Interim Water Storage to address releases from Lake Okeechobee to the Caloosahatchee and St. Lucie River Estuaries
- C-43 Boma – Water Quality Treatment and Testing
- Lake Hicpochee
- Rolling Meadows Wetland Restoration
- Fisheating Creek Feasibility Study
- New Alternative Treatment Technologies
- Lake Okeechobee Basin Management Action Plan Development
- Lakeside Ranch STA Phase I Performance and Phase II Design/Construction
- Hybrid Wetland Treatment Technology Performance (Lemkin Creek & Grassy Island)
- Istokpoga Marsh Improvement District Water Quality Project
- Various other projects identified in the Northern Everglades Lake Okeechobee Phase II Technical Plan and St. Lucie and Caloosahatchee River Watershed Protection Plans

Continued implementation of the south Florida ecosystem restoration program will ensure the future supply and quality of water to meet Florida's economic and quality of life goals.

### ***Regulatory Reform***

A cornerstone of Governor Scott's priorities is accountability in state regulation. Critical regulations that safeguard the environment and public health must be maintained. The Department has participated in the Governor's review of agency regulations and is repealing those that provide no environmental value.

The Department has also streamlined its permitting processes, achieving a nearly 65 percent improvement in the time to reach final permitting decisions since 2010. One key to streamlining permitting is the Department's business portal ([www.dep.state.fl.us/secretary/portal/default.htm](http://www.dep.state.fl.us/secretary/portal/default.htm)), where an increasing number of permit, exemption, payment, and reporting transactions can be conducted online.

The Department continues to expand its outreach and compliance assistance actions, promoting environmental stewardship and trying to prevent air and water quality problems rather than reacting to them once the damage is done. These efforts include providing pre-application assistance to property owners and businesses applying for permits, and offering compliance seminars for consultants and industry representatives to promote better understanding of state and federal rules governing environmental impacts.

#### *Five Year Strategy:*

Over the next five years the Department will:

- Take advantage of every opportunity to streamline permit processing through the adoption of exemptions, certifications, and general permits that retain or advance environmental and public health protection.
- Consolidate and eliminate rules and permit processes that are duplicative or no longer have environmental value.
- Expand online permitting, reporting, payments, and other business transactions through its Business Portal.
- Exploit other technologies to solve problems suited to technological solutions without losing site of the common sense, low-tech solutions.
- Continue to expand the agency's Management Dashboard to measure performance and environmental outcomes, and adapt programs and strategies to promote continuous improvement and better outcomes.
- Focus on those regulations essential to safeguarding the environment and public health.
- Increase outreach and educational efforts, while expanding assistance to regulated homeowners, businesses, industries and industry representatives, contractors, engineering and environmental consultants, and other stakeholders to prevent noncompliance and environmental harm.
- Focus compliance inspections predominantly on the highest risk environmental activities and facilities.
- Target enforcement against chronic and egregious violators to deter future noncompliance and deliver the message to potential violators that there will be consequences if found in violation of environmental rules and statutes.

### ***Increased Recreational Opportunities***

The Department is charged with the protection, administration, management, supervision, development and conservation of Florida's natural and cultural resources. This mandate is accomplished by acquisition and management of public outdoor recreation and conservation areas in ways that contribute to a healthy ecosystem.



**State Lands:** Since 1963, Florida has invested approximately \$8 billion to conserve some 3.9 million acres of land for environmental preservation, conservation and outdoor recreation purposes. The Division of State Lands administers these programs on behalf of the Governor and Cabinet, who sit as the Board of Trustees of the Internal Improvement Trust Fund. The division also provides administrative oversight for approximately 12 million acres of public lands including lakes, rivers, islands, and coastal/territorial waters.

**Division of Recreation and Parks:** Florida's award-winning state parks and trails are gems of natural beauty and cultural diversity

The park system consists of 174 properties comprising over 800,000 acres of land and water. Parks provide diverse recreational opportunities, including camping, hiking, swimming, fishing, snorkeling or tubing down a crystal clear river. Besides providing hundreds of thousands of acres for public recreational use, the state park system is the largest steward of public historic properties in Florida. The Florida Park Service manages 2,761 historic and archaeological sites and buildings, including eight National Historic Landmarks. These resources provide a broad array of unique interpretive and educational opportunities for residents and visitors and fulfill the division's statutory responsibility of providing perpetual preservation historic sites.

**Coastal and Aquatic Managed Areas:** The Office of Coastal and Aquatic Managed Areas (CAMA) is the principal manager of submerged lands and their associated marine and aquatic resources in Florida, specifically those with exceptional biological, aesthetic and scientific value as aquatic preserves. These areas offer prime opportunities for fishing, boating, swimming, paddling and other water-related recreation. CAMA manages 41 aquatic preserves, including 37 saltwater and four freshwater systems, encompassing more than 2.2 million acres of sovereign submerged lands. In cooperation with the National Oceanic and Atmospheric Administration (NOAA), CAMA manages approximately 400,000 acres of submerged land and coastal uplands in three national estuarine research reserves: Apalachicola, Guana Tolomato Matanzas, and Rookery Bay. In addition, CAMA partners with NOAA and the Florida Fish and Wildlife Conservation Commission to manage the Florida Keys National Marine Sanctuary, which contains 2,900 square nautical miles of submerged lands around the 126-mile long Florida Keys and encompasses the most extensive living coral reef system in the nation.

*Five Year Strategy:*

The Department continually identifies current and future outdoor recreation needs while preserving the resources sufficient to meet those needs. Florida's outdoor recreation program emphasizes interagency cooperation and collaborative partnerships with private interests and non-governmental organizations, and supports efforts to better coordinate local, state and federal land acquisition, resource management and recreational facility development. Private recreation providers are also an important component. Coordinated at the state level, agencies and suppliers work in tandem, with ample opportunity for the public to participate in decision making. Key goals and objectives include:

- Improve communication, coordination and cooperation among Florida's many public land management agencies and outdoor recreation providers.
- Improve communication, coordination and cooperation between outdoor recreation providers and the public, non-profit organizations and other private interests.
- Provide more opportunities for resource-based, user-oriented recreation in urban and rural areas, from primitive to fully developed settings.
- Support programs to broaden the public's participation in outdoor recreation.

- Improve access to recreational opportunities for people of all ages and abilities.
- Promote a stewardship ethic, encourage volunteerism, and increase the public's understanding of the value and importance of Florida's public lands and their natural and cultural resources.

Florida's public land holdings are significant and many are open to public access. The Department works closely with other public land management agencies to take steps to ensure that public access is adequately considered, including:

- Open public land for appropriate public access as soon as possible after acquisition in ways that do not compromise resources or the missions of the managing agencies.
- Review public access and recreation plans to determine where additional public access can be provided
- Work with local governments for local acquisition and management of environmentally significant lands that do not meet criteria for state purchase. These lands play an indispensable role in meeting Florida's overall conservation and recreation needs.

Tourism is vital to a healthy and competitive Florida economy. Planning an outdoor recreation system must take into account the substantial demand that tourists and seasonal residents place on resources and facilities. In turn, all public recreation providers and land management agencies have a role in promoting and marketing Florida's outdoor recreation opportunities to residents and domestic and international travelers. Key marketing objectives include:

- Continuing to expand cooperative marketing relationships with VISIT FLORIDA to emphasize nature-based and cultural heritage tourism and promote visitation to the state's public conservation and recreation lands.
- Incorporating multilingual, multicultural and diversity considerations in marketing activities, agency websites, online brochures and interpretive materials.
- Pursuing partnerships with tourism marketing programs in rural communities located near under-visited management areas to promote greater exposure.
- Ensuring that accurate, up-to-date information on public recreation areas is available at VISIT FLORIDA welcome centers at Florida's major highway borders, which are key distribution points for maps and guides for automobile travelers.

## PROGRAM NARRATIVE

### *ADMINISTRATIVE SERVICES*

The Administrative Services areas include Executive Direction and Support Services and the Office of Technology and Information Services. These programs provide leadership, direction and support services to the agency. As the agency continues to look for new and more efficient ways to deliver its services to the people of Florida, the demand for services rendered by programs in the Administrative Services area is expected to increase. Numerous initiatives are underway to improve technology support, enhance customer service, broaden communication with the public, increase transparency and ensure accountability, technology based solutions to streamline administrative and regulatory processes, and continued maintenance of the Florida Accountability Contract Tracking System (FACTS). To the greatest extent possible, the Administrative Services programs contemplate meeting these challenges utilizing existing resources. Automation and process improvements with increased reliance on technology are the tools the Department is using to mitigate the need for additional resources.

#### Executive Direction and Support Services

The Executive Direction and Support Services provide leadership, direction and services to the agency and the public. Specific services provided are executive leadership and direction to the programs; audit and investigation services; legal counsel; internal and external communication; customer service; and planning, budget and financial services and other support services.

#### Information Technology

The Office of Technology and Information Services (OTIS) provides information technology (IT) support services to the Department's divisions and offices in Tallahassee, as well as six regulatory and five park districts distributed across the state. OTIS manages the Department's communications and networking infrastructure, messaging systems and enterprise databases. OTIS also provides or manages application development and maintenance services; geographic information systems support; an enterprise service desk; IT budget, contract management and procurement services; project management and business analysis support; and IT strategic planning and technical standards oversight. Over the next two years, OTIS will focus on the following major initiatives:

- ***Application Development Environment and Software Development Infrastructure Upgrades:*** This upcoming year, OTIS will embark on a major upgrade to its middle-tier infrastructure as well as upgrading the current version of Java as the core architecture has changed. The impact of this effort will be mitigated by performing this upgrade in parallel with the current environment. The Software Development Infrastructure will be enhanced to better serve the Department's development community with a new generation of tools and controls for tracking, issue resolution, information sharing and code development. Additionally, OTIS will continue to assess the Department's infrastructure, application portfolio and services to better forecast expenditures, avoid significant risk and effectively use resources. These activities may result in future Legislative Budget Requests and will drive parts of OTIS' Work Plan for the foreseeable future.
- ***Enterprise Self-Service Authorization (ESSA):*** A major step toward streamlining permitting is to move the permitting application process online and automate the permit review and approval process, where possible. This makes permitting quicker and easier for Florida's businesses and private citizens, improving customer service and allowing the Department to reallocate resources. The Department's ESSA system is flexible and expandable, providing for the online electronic submission of authorizations, including permits, registrations, renewals and notices of intent. ESSA leverages existing enterprise components such as DepPay (electronic credit card

processing system) and MapDirect (enterprise mapping application). DepPay saves staff time spent manually processing payments, and MapDirect provides a more accurate way for the public to identify site locations, which improves data quality. The Department has moved many key authorization processes online. The system makes use of an XML framework supported by reusable components to enable rapid development with a consistent and robust user experience. It is being adapted to a wide range of agency transactions. Over the next several years, the Department will be placing additional general permitting, registrations, certification and reporting processes online.

- **Disaster Recovery:** OTIS will be assessing or addressing the Department's ability to recover from a range of disasters and developing and implementing reaction plans to address its most critical risks. This assessment and remediation will be done in concert with the newly created Agency for State Technology. High-level milestones for this effort include:
  - Defining critical Department assets and confirming those with Executive Management;
  - Quantifying those assets and services for Disaster Recovery scoping and sizing;
  - Meeting with experienced and highly qualified Disaster Recovery service vendors;
  - Presenting high-level, then granular business plans to the CIO and Executive Management; and
  - Contracting with a vendor(s) for Disaster Recovery as a Service (DRaaS).
- **Information Security Program and Risk Management Program:** OTIS is updating the agency's Information Security Strategic Plan, having successfully incorporated the state's new security rule, Chapter 74-2, Florida Administrative Code, into a rewrite of our agency security directive DEP 390 in 2012. OTIS will need to conduct business risk and vulnerability assessments to determine agency compliance with the new state policies to ensure the Department is taking appropriate steps to bring the agency into compliance.
- **LiveCycle Forms Workflow Implementations:** The Department has launched an initiative to significantly reduce paper and automate manual processes by implementing an electronic forms and workflow tool. To date, the Department has converted the human resource onboarding process, security badge, travel and medical monitoring forms to this new electronic process. This effort will continue over the next several years and will provide efficiencies which allows process management improvements as well as increase transparency to existing processes.
- **Web Content Management System (CMS):** During the past year, OTIS has been working with the Department's Office of Communications to initiate an enterprise redesign of the Department's Internet site. Preliminary work in this area has included a review of existing content published to the Department's Internet site. In tandem with the content audit, OTIS has been developing a project plan for this enterprise wide initiative and has also solicited the services of a third-party vendor to assist with the redesign. The Internet Redesign Project began in July 2015 with the onboarding of a team of consultants to assist OTIS in identifying the project's goals, objectives, success factors and deliverables. These consultants will work closely with members of the Department's leadership team and the Office of Communications to ensure the delivery of an updated Web presence that reflects the Department's branding initiatives and that meets stakeholder requirements. This project is anticipated to be completed around August 2016.

## Department Organization

The Department's Executive Leadership directs a highly professional staff organized into three major services, each led by a Deputy Secretary. These services - Regulatory Programs, Ecosystem Restoration and Land and Recreation - have separate statutory authorities and responsibilities but are integrated across these boundaries through intra-agency teams and ad hoc working groups. The primary programs in each of the three services are summarized below. More information is available from the agency's website at [www.dep.state.fl.us](http://www.dep.state.fl.us).

## ***REGULATORY PROGRAMS***

The Department implements a diverse range of programs to protect and restore air and water quality, clean up contamination, provide technical and laboratory assistance, conduct emergency response, reduce coastal erosion and finance local environmental infrastructure. The major budgetary components comprising the Regulatory Programs are the Florida Geological Survey, Office of Emergency Response, District Regulatory Programs, Air Resource Management, Waste Management and Water Resource Management. The core components of these programs are described in the following sections.

### Florida Geological Survey

The Florida Geological Survey (FGS) collects, interprets and disseminates geoscience information. Maps, data and scientific activities of the FGS are used by local, state and federal government agencies, industry, environmental consultants, developers and the public. FGS geoscience information is used to guide regulatory, resource and land management decisions, support environmental protection, restoration and conservation efforts and is a critical input to local and regional economic development plans. FGS resources and services are routinely applied toward aquifer and springs protection, land-use planning, mineral resource characterization, sinkhole hazard mitigation and assessment, alternative water resources, aquifer vulnerability, groundwater sustainability and to address water-quality issues. Geoscience research has been demonstrated by economists to yield a high return on investment, for example for every dollar invested in geologic mapping realizes approximately a \$30 savings through application of the map to various societal needs. The FGS anticipates a continuously increasing need for geologic, hydrogeologic and energy research in response to increasing demands for water resources and in support of Florida's economic prosperity and a growing population.

### Office of Emergency Response

The Office of Emergency Response (OER) provides programmatic oversight for the environmental response and preparedness, including organizational internal readiness. Pollutant discharges or releases of hazardous materials can threaten public health, the environment and Florida's economy if they are not effectively and rapidly controlled. Field responders handle incidents involving oil and hazardous substances, including biomedical wastes that present an imminent hazard, or threat of hazard, to the health, welfare and safety of the public or environment. OER oversees hazardous materials forensics for administrative and criminal cases and also provides staffing and coordination of statewide response efforts at the State Emergency Operations Center during declared disasters.

OER's professional field responders are augmented by response assistants from the Department's regulatory district compliance and assistance programs. These responders provide incident assessment, hazard identification and response 24 hours/day, seven days/week. On a yearly basis responders handle an average of 1,800 incidents, including on-scene emergency cleanup and resource damage assessment. Responsible parties generally cleanup sites while responders provide oversight and technical assistance. However, if the responsible party is unknown or uncooperative, OER responders conduct the cleanup using contracted resources and seek reimbursement from the responsible party whenever possible. OER has overseen or otherwise been responsible for remediating an average of 800 sites on a yearly basis.

### Regulatory District Offices

The Department's six district regulatory offices in Pensacola, Jacksonville, Orlando, Tampa, Ft. Myers and West Palm Beach provide closer, more personal interaction with regulated interests and citizens across Florida. The districts are generally the Department's front line in permitting, compliance, enforcement and in helping the public, local governments and businesses better understand and protect Florida's natural resources. District offices work with citizen groups, trade associations and business organizations to identify local priorities and solve local problems. Each district office is under the charge

of a Director of District Management that manages day-to-day program responsibilities, policy implementation, office administration, budgeting and accounting, public outreach and other administrative functions. District programs also respond to policy direction from the Department's regulatory division counterparts in the Air, Waste and Water programs.

District office staff conduct essential components of the permitting, compliance, enforcement, compliance assistance and public outreach responsibilities for the following Department programs: air, domestic and industrial wastewater, drinking water, environmental resource permitting, solid and hazardous waste, storage tank regulation, and waste cleanup. District core responsibilities broadly include:

- Timely reviewing and acting on permit applications;
- On-site compliance inspections;
- Environmental monitoring;
- Reviewing air and water quality data, including waste cleanup data;
- Complaint response;
- Case referrals, penalty assessments, expert testimony and other enforcement activities;
- Technical guidance and compliance assistance to regulated entities;
- Public outreach and education; and
- Emergency response.

The district offices process the vast majority of permit applications in the Department. The average time for acting on these applications improved nearly 16 percent during 2014, and the Department is on track for a similar improvement in 2015. Timely permitting decisions promote economic activity, while good permitting decisions assure that Floridians enjoy the highest possible quality of life. The districts also conduct the majority of agency site and facility inspections. The on-site review of the practices and performance of regulated entities allows the Department to maintain compliance rates of 90 percent or better in most programs.

The Department's six district offices protect Florida's natural resources and serve as positive forces within their local communities. As Florida continues to grow and develop and remains among the top vacation destinations in the world, environmental pressures will grow as well. Strong district office operations are essential if Florida is to maintain environmentally sustainable growth and a vibrant economy.

### Water Resource Management

The Department's Division of Water Resource Management (DWRM) is responsible for programs to protect Florida's coastline, rivers, lakes, estuaries, springs, aquifers and millions of acres of open water and wetlands. It works particularly closely with the Department's Division of Environmental Assessment and Restoration and Florida's five water management districts, and its day-to-day permitting and compliance programs are implemented largely in the Department's six regulatory district offices.

### *Water Resource Protection*

Florida law requires high-level treatment and appropriate disposal or reuse from some 3,700 regulated domestic and industrial facilities that discharge billions of gallons of treated wastewater each day. DWRM also regulates the management practices of thousands of municipal, industrial and construction-related stormwater discharges. The Clean Water State Revolving Fund (CWSRF) provides low-interest loans to local governments to build wastewater and stormwater systems to protect water quality and implement conservation and reuse programs to preserve future water supplies. The Small Community Wastewater Construction Grant Program provides assistance to small, financially disadvantaged municipalities for infrastructure projects.

Protecting wetlands is critical to preserving water quality and wildlife habitat, including breeding and fledging areas. They are also vital to slowing the flow of stormwater runoff and reducing flooding. DWRM and district staff review activities that alter surface water flow or affect wetlands and other surface waters, including activities affecting sovereign (state-owned) submerged lands. The Environmental Resource Permit (ERP) program is implemented in conjunction with Florida's five water management districts and two local governments (Broward and Hillsborough counties) under agreements that clearly divide responsibilities by type and location of activity. The following table reflects statewide wetland gains and losses in the context of the ERP program from October 2009 through September 2014.

**Permitting Actions and Wetland Gains and Losses (acres) Authorized by the ERP Program**

10/09 to 09/14	Individual Permits issued (includes WMD Std GPs)	Applications Denied	Applications Withdrawn	Exemptions Verified	General Permits Verified	Acreage Permanently Lost	Acreage Temporarily Disturbed	Acreage Preserved	Acreage Created	Acreage Improved	Mitigation Bank Credits Used
NFWF MD	1,405	87	91	136	692	155.67	11.22	1,528.48	31.16	103.74	*
SWFW MD	8,119	261	699	1,791	448	1,673.77	382.11	11,214.39	2,282.72	244.59	*
SJWMD	3,109	291	635	245	701	2,321.52	352.58	13,430.76	270.64	8,271.43	638.37
SFWMD	7,116	161	567	339	356	6,491.25	*	29,654.66	6,827.36	73,769.43	*
SRWM D	339	10	62	244	520	117.43	25.56	165.83	3.41	163.97	*
WMD Subtotal	20,088	810	2,054	2,755	2,717	10,759.64	771.47	55,994.12	9,415.29	8,553.16	*
DEP	8,432	523	1,917	21,421	3,253	1,361.05	42.75	479.57	18.22	300.72	*
Grand Total	28,520	1,333	3,971	24,176	5,970	12,120.69	814.22	56,473.69	9,433.51	85,853.88	*

*Note: ERP did not exist comprehensively in Northwest Florida until 2010.*

*\*Data not currently available*

The 2012 Legislative Session brought major changes to ERP through passage of House Bill 7003, which required the Department to adopt a streamlined rule, applicable statewide, to increase consistency and clarity in ERP program implementation. The Statewide Environmental Resource Permitting (SWERP) rule became effective in October 2013. The Department is currently undertaking rule revisions and rule cleanup as a Phase II of SWERP, with an anticipated revised rule to be effective at the end of 2015. Streamlining and improved consistency will also make implementation of e-permitting easier, with several exemptions and general permits already available through the Department's Business Portal at [www.dep.state.fl.us/secretary/portal/default.htm](http://www.dep.state.fl.us/secretary/portal/default.htm) and others are currently in development. Revisions to the e-permitting application will follow after the rule is revised.

DWRM also continues to seek expansion of the State Programmatic General Permit (SPGP) under which the U.S. Army Corps of Engineers (Corps) allows the Department to grant federal authorization for certain dredge and fill and other in-water activities (e.g., private docks and boat ramps, boatlifts, mooring piles and maintenance dredging). Expanding the SPGP and securing other Corps permitting authority would further streamline the ERP program. The Department continues to work to expand the SPGP to the Water Management Districts and local governments. The St. Johns River Water Management District and Hillsborough County currently have SPGP delegation from the Corps. The Southwest Florida Water Management District is currently in discussion with the Corps regarding SPGP delegation. The St. Johns River Water Management District also implements a federal Programmatic General Permit for limited wetland filling (SAJ-111), which became effective in October 2014 with support from DWRM.

### *Water Reuse*

Florida's reclaimed water (reuse) program is by far the most successful in the United States, both in terms of total and per capita reuse. DWRM promotes reuse of highly treated wastewater for irrigation, ground water recharge, architectural uses and natural systems enhancement to ensure that Florida's water resources are productively used not wasted. DWRM's rigorous treatment and operational requirements assure public health protection. According to the 2014 Reuse Inventory, available at [www.dep.state.fl.us/water/reuse/inventory.htm](http://www.dep.state.fl.us/water/reuse/inventory.htm), approximately 65 percent of Florida's wastewater treatment capacity is devoted to reuse and about 44 percent of the wastewater is productively reused every day. The following table reflects current reuse activities in Florida ("mgd" signifies million gallons per day).

### *Drinking Water*

In addition to protecting, conserving and reusing Florida's water supply, the Department must ensure that drinking water produced from this supply is properly treated and arrives safely at the tap. Florida has more than 5,300 drinking water systems serving its nearly 19 million residents and more than 98 million annual visitors. The Department regulates the quality of the drinking water as it is treated and distributed to consumers and works with providers to safeguard ground water and surface water sources. Florida's stringent drinking water quality standards are adopted in Rule 62-550, Florida Administrative Code (F.A.C.), and almost entirely based on federal requirements that are re-evaluated continuously and regularly updated. The drinking water program is implemented in conjunction with the Florida Department of Health.

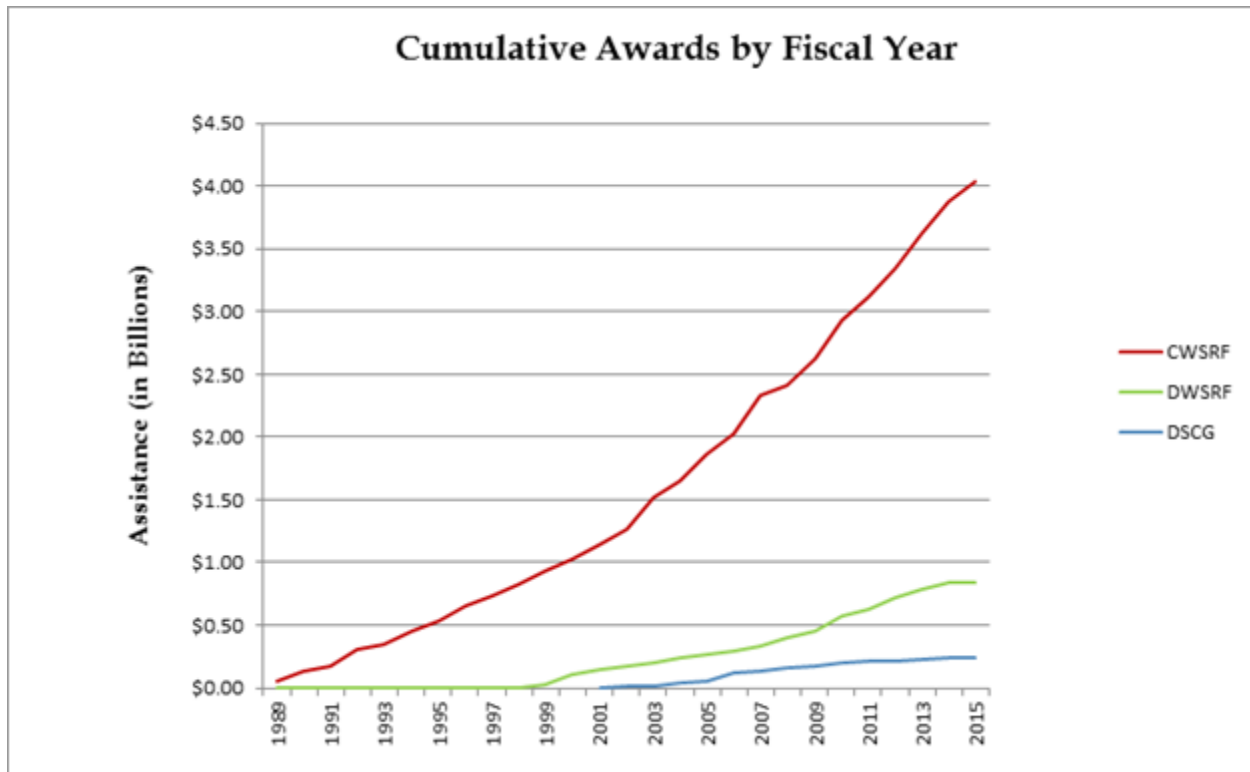
In order to help local governments and small communities provide safe drinking water, DWRM implements the Drinking Water State Revolving Fund, a low-interest revolving loan program providing more than \$60 million annually to improve drinking water infrastructure. Financial assistance information on this program and the two other funding programs referenced earlier is included in the graph below.



Reuse Type	Number of Systems (a)	Reuse Capacity (b) (mgd)	Reuse Flow (b) (mgd)	Reported Area (b, c) (acres)	Adjusted Area (b, c) (acres)
<b>Public Access Areas and Landscape Irrigation</b>					
Golf Course Irrigation	193	319.7	127.0	67,814	69,706
Residential Irrigation	134	451.2	185.1	146,798	160,608
Other Public Access Areas and Other	153	219.9	86.8	41,262	51,924
<b>Subtotal</b>	<b>245</b>	<b>990.8</b>	<b>398.9</b>	<b>255,874</b>	<b>282,238</b>
<b>Agricultural Irrigation</b>					
Edible Crops <sup>(d)</sup>	19	28.8	11.5	13,942	13,942
Other Crops	114	137.2	59.8	22,518	24,587
<b>Subtotal</b>	<b>123</b>	<b>166.0</b>	<b>71.3</b>	<b>36,460</b>	<b>38,529</b>
<b>Ground Water Recharge &amp; Indirect Potable Reuse</b>					
Rapid Infiltration Basins	179	216.3	102.2	14,976	17,436
Absorption Fields	16	6.1	2.1	491	491
Surface Water Augmentation	0	0	0	NA	NA
Injection	0	0	0	NA	NA
<b>Subtotal</b>	<b>184</b>	<b>222.3</b>	<b>104.3</b>	<b>15,467</b>	<b>17,927</b>
<b>Industrial</b>					
At Treatment Plant	102	84.5	53.7	825	5,037
At Other Facilities	42	132.1	63.5	4,774	4,403
<b>Subtotal</b>	<b>120</b>	<b>216.6</b>	<b>117.3</b>	<b>5,599</b>	<b>9,440</b>
<b>Toilet Flushing</b>	18	1.5	0.6	NA	NA
<b>Fire Protection</b>	2	2.0	0	NA	NA
<b>Wetlands</b>	10	76.7	32.1	5,440	5,440
<b>Other Uses</b>	17	9.0	2.6	276	309
<b>2014 Totals</b>	<b>428</b>	<b>1,685.1</b>	<b>727.1</b>	<b>319,116</b>	<b>353,882</b>
<b>2013 Totals</b>	<b>434</b>	<b>1,690.9</b>	<b>719.5</b>	<b>317,493</b>	<b>358,177</b>
<b>% Change</b>	<b>-1.4%</b>	<b>-0.3%</b>	<b>+1.1%</b>	<b>+0.5%</b>	<b>-1.2%</b>

*Note:*

- (a) The numbers of systems are not additive since a single system may engage in one or more reuse activity.
- (b) Discrepancies in column totals are due to internal rounding associated with the development of this summary table; totals presented in table are calculated without rounding individual values.
- (c) Some facilities did not report the acreage where reclaimed water was applied. For a better representation of the actual acreage, the averages of the reported areas were used to adjust the acreage totals to include the non-reported values.
- (d) About 81 percent of total area for edible crops is citrus – including oranges, grapefruit and tangerines.



The Department also implements a comprehensive Source Water Assessment and Protection (SWAP) program to assess potential sources of pollution to public drinking water supplies. Local governments, other interested parties and the general public can use the assessments to develop local pollution prevention strategies. SWAP results are available, county-by-county, at [www.dep.state.fl.us/swapp/search.asp](http://www.dep.state.fl.us/swapp/search.asp), with general information at [www.dep.state.fl.us/swapp/Default.htm](http://www.dep.state.fl.us/swapp/Default.htm). Assessments are refined and published as new data is obtained.

#### *Coastal Protection and Restoration*

Florida's 825 miles of sandy shoreline fronting the Atlantic, the Gulf and the Straits of Florida attract millions of people annually. Coastal areas are critical to protecting Florida's ecology, public health, safety and welfare, providing unique wildlife habitat and a buffer against storms.

There currently are 407.3 miles of sandy beaches in Florida identified as critically eroded, of which 56 percent are actively managed and maintained by local, state and federal agencies to reduce the impacts of erosion. Erosion results from hurricanes and tropical storms, imprudent coastal development, normal storm systems, and other natural processes. The largest contributors to erosion are artificial and altered inlets that interdict normal long shore movement of sand and sediment. Historic upland development, too close to the shoreline, has eliminated or destabilized protective dunes.

DWRM determines shoreline conditions and trends, restores and manages critically eroded beaches, and protects the beach and dune system through the following programs:

- Beach erosion control, through implementation of the Statewide Strategic Beach Management Plan and financial partnering with local and federal governments.
- Regulation of coastal construction that could have a material physical effect on coastal processes seaward of mean high water.
- Coastal monitoring to characterize long-term shoreline erosion trends in order to improve beach management, planning and regulatory reviews.

DWRM's beach program also plays a critical role in Florida's emergency response activities, including damage assessments, emergency permitting and coordination with other state and federal response agencies. Staff continues to participate on Natural Resource Damage Assessment teams and work on planning restoration strategies in response to the 2010 Deepwater Horizon oil spill.

### *Mining and Minerals*

DWRM administers mining and minerals regulatory programs to ensure restoration of mined lands and protection of water quality, water quantity and wetlands at mines extracting phosphate, heavy minerals, fuller's earth, limestone, dolomite and shell, gravel, sand, dirt, clay, peat and other solid resources. According to the U.S. Geological Survey's 2013 Mineral Commodity Summaries, 11 states produced more than \$2 billion's worth of nonfuel mineral commodities. Florida ranked fourth with a nonfuel raw minerals production valued at \$3.64 billion and accounts for nearly 4.76 percent of the U.S. total. Florida's principle minerals production in order of value are phosphate rock, stone (crushed), cement (portland), sand and gravel (construction) and zirconium concentrates.

Florida ranks first in phosphate rock production and according to the Florida Industrial and Phosphate Research Institute, Florida provides approximately 75 percent of the nation's phosphate fertilizer and about 25 percent of the world supply. Florida ranks ninth in production of crushed stone (in Florida, limestone and dolomite) which is primarily used for road construction. Florida ranks fifth nationally in cement production. Although Florida does not rank in the top 10 states in sand and gravel (construction) production, its production is extremely important economically to the state. Two firms produce heavy minerals (titanium, illmenite and rutile) from surface mines in Florida and Virginia. Florida's zirconium concentrates are a co-product of its heavy minerals mining operations. Lastly, of note, Florida and Minnesota are the leading producers of peat in the United States.

DWRM implements the ERP program for the protection of water resources and the control of stormwater at mines. This includes requirements to mitigate for impacts to wetlands. DWRM also requires the reclamation of land disturbed by mining operations. For phosphate mines, the requirement to reclaim disturbed land began July 1, 1975. Between July 1975 and December 31, 2010, 190,256 acres have been disturbed by mining operations and 134,901 acres (71 percent) have been reclaimed.

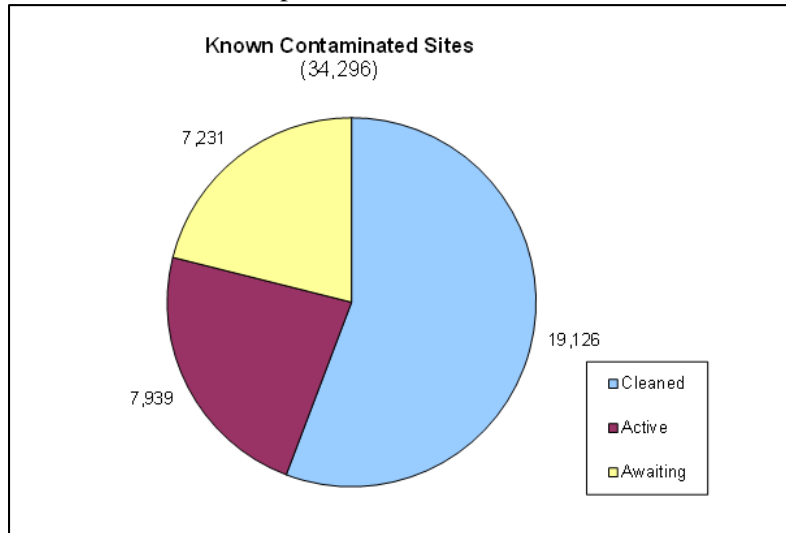
DWRM periodically receives legislative appropriations to fund reclamation of eligible phosphate lands mined before July 1975, when phosphate reclamation became mandatory. Reclamation using these funds is ongoing and thousands of acres remain to be funded and reclaimed. Per statute, no additional applications were accepted by the Department after January 2005. For FY 2015-16, the Florida Legislature appropriated \$4.2 million, which will fully fund all but one project on the Approved Prioritization List. Estimated appropriations of \$3 million are needed to complete the funding of the remaining project, consisting of 396 acres. DWRM implements an innovative Integrated Habitat Network to guide permitting and reclamation and to promote the acquisition of critical conservation lands in the central Florida phosphate-mining district.

### *Oil and Gas*

DWRM's Oil and Gas Program regulates onshore exploration, drilling and production of crude oil and natural gas. New legislation in 2013 authorizing the Oil and Gas Program to allow and regulate conversion of partially depleted oilfields into underground natural gas storage facilities will challenge the program to develop rules and train for permitting and inspection of these new facilities.

## Waste Management

The Department's Division of Waste Management (DWM) protects public health and the environment through management and regulation of solid and hazardous waste and petroleum storage tanks along with the cleanup of soil, ground water and surface water contamination. Cleanup is funded by government programs or by responsible parties through voluntary actions or enforcement. The universe of known contaminated sites and the status of cleanups are illustrated in the chart below.



The two largest taxpayer funded cleanup programs are Petroleum Restoration Program and Drycleaning Solvent Cleanup. The Department addresses other contaminated sites as well, including orphan hazardous waste sites, sites on state-owned lands, Superfund sites, Resource Conservation and Recovery Act (RCRA) sites and federal facilities contaminated sites in partnership with the U.S. Department of Defense.

The Department promotes cleanup and reuse of contaminated property and economic revitalization of local communities through designation and remediation of brownfields. The total number of brownfields increased from 25 areas in 1999 to 379 areas as of June 2015, with 228 executed Brownfield Site Rehabilitation Agreements. Voluntary cleanup of contaminated sites has increased due to Brownfield Program incentives and the Voluntary Cleanup Tax Credit program. With the July 1, 2015, authorization, the Department has issued 603 voluntary cleanup tax credit certificates totaling more than \$56.9 million since inception of the tax credit program in 1998.

The Department ensures that regulated entities comply with state environmental laws and federally delegated environmental program requirements through permitting, compliance assistance, compliance verification, enforcement, investigations, assessments and review of technical documents. Cleanup of non-government funded contaminated sites is achieved through voluntary cleanup, the Brownfield Redevelopment Program and enforcement involving responsible parties. For FY 2015-16, cleanup will be underway at more than 3,183 contaminated sites through enforcement actions or voluntary cleanup.

Priority areas for the Waste Management Program in FY 2015-16 include:

- **Permit Streamlining and Regulatory Consistency:** A major effort is underway to streamline permitting and improve consistency in compliance and enforcement involving permitting templates and increased review and oversight by DWM over district permitting and enforcement, and guidance on compliance inspection priorities. In FY 2014-15, the waste programs processed 236 solid waste permits, 30 hazardous waste permits and more than 30,800 registrations, certifications and other authorizations.

- **Recycling:** DWM continues to focus on the statewide recycling goal of 75 percent of municipal solid waste by 2020 pursuant to Section 403.7032, F.S. In 2010, the Florida Legislature enacted



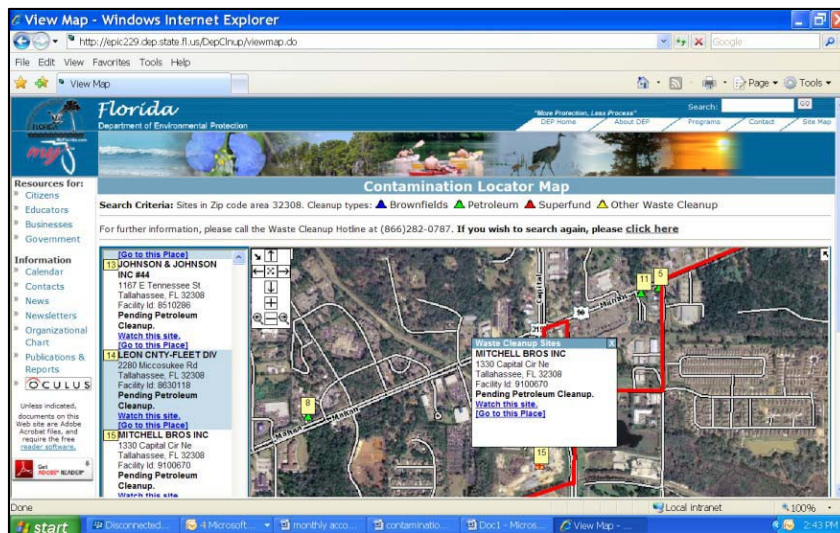
comprehensive recycling legislation setting benchmarks for the goal while the 2012 Legislature revised the factors used to calculate progress. The first benchmark was for the 35 counties with a population over 100,000 to recycle 40 percent of recyclable solid waste by December 31, 2012, with the goal increasing every two years through 2020. The statewide recycling rate for calendar year 2014 was 50 percent. The Department's Recycling Business

Assistance Center is working to expand and enhance the markets for recyclables in Florida (see [www.dep.state.fl.us/waste/rbac/](http://www.dep.state.fl.us/waste/rbac/)). Businesses can also access the Florida Recycling Loan Program for capital to purchase equipment and machinery to expand recycling capacity; information is available at [www.dep.state.fl.us/waste/categories/recycling/pages/loan.htm](http://www.dep.state.fl.us/waste/categories/recycling/pages/loan.htm).

- **Petroleum Cleanup and Discharge Prevention:** DWM has implemented major changes to the Petroleum Restoration Program to improve the efficiency and cost effectiveness of the program. This has been accomplished by implementing competitive bidding for projects over \$325,000 and by scientifically evaluating sites under management for 10 years or longer to determine if supplemental remediation is necessary to bring them to closure. In addition, the Program has begun implementing the strategic direction to have all remaining discharges assessed in five years or less. Further, to comply with the Department's strategic priorities, the Program has begun to remediate discharges located in vulnerable spring watersheds.
- **Discharge Prevention:** DWM has created a mobile application tool (<http://dep.state.fl.us/waste/categories/tanks/default.htm>) designed to assist gasoline filling station operators to prepare for a compliance inspection. The goal of the video is to help prevent releases of petroleum products into the environment. The video was released in four languages: Spanish, Creole, Hindi and English.
- **Waste Cleanup:** DWM continues to review known contaminated sites that have existed for years without completing cleanup and newer sites that are not moving steadily through site rehabilitation. The review evaluates progress and legal options to compel more timely and effective action by responsible parties and, if no responsible parties are engaged in cleanup, more rigorous efforts by the Department to determine responsibility. DWM also monitors the universe of known contaminated sites to identify those that warrant higher priority for immediate action, including a determination as to the extent of contamination on and off the source property, whether a source is continuing to release contaminants, whether contamination is spreading and whether people are exposed to contamination.
- **Information Technology (IT) Initiatives:** Investing in IT is essential to improving efficiency, providing quality data for sound management decisions, increasing transparency and making information easy for the public to access. IT projects in operation or under development in DWM include:
  - **OCULUS™** – DWM's electronic document management system provides public access to millions of documents and has saved money by reducing file room space. In early 2013, DWM outsourced scanning operations to Prison Rehabilitative Industries and Diversified Enterprises, Inc. (PRIDE) as a cost effective means of adding older documents to the electronic document management system when they need to be retained by the Department.
  - **FIRST/SWIFT** – These field applications increase the efficiency and accuracy of inspections, data entry and reporting for the Department's tanks, hazardous waste and solid waste programs.
  - **CLM** – The Contamination Locator Map is an online tool that allows anyone to locate waste contamination sites in the vicinity of any identified location in Florida; it also has a subscription system to notify subscribers when cleanup milestones have been reached at the selected site.

- **ADaPT** – This automated data processing tool evaluates and reports ground water data from permits and sampling reports associated with DWM’s programs, eliminates paper reports and saves considerable time in reviewing and reporting data. In July 2015, DWM surpassed 4.5 million data uploads, an increase of 1.1 million records from June 2014.
- **DEP Business Portal** – DWM continues to expand online services for registrations and authorizations through the Department’s Business Portal.
- **ERIC** – The Environmental Restoration Integrated Cleanup (ERIC) project, which was initiated in mid-2012, will consolidate and modernize the input, validation, analysis and reporting of cleanup data from several different DWM databases. The ERIC system was brought in to production this year and one legacy system has been migrated to the new ERIC platform. Development continues on a cost tracking component, after which focus will be on migrating all legacy systems to ERIC.

### Contamination Locator Map



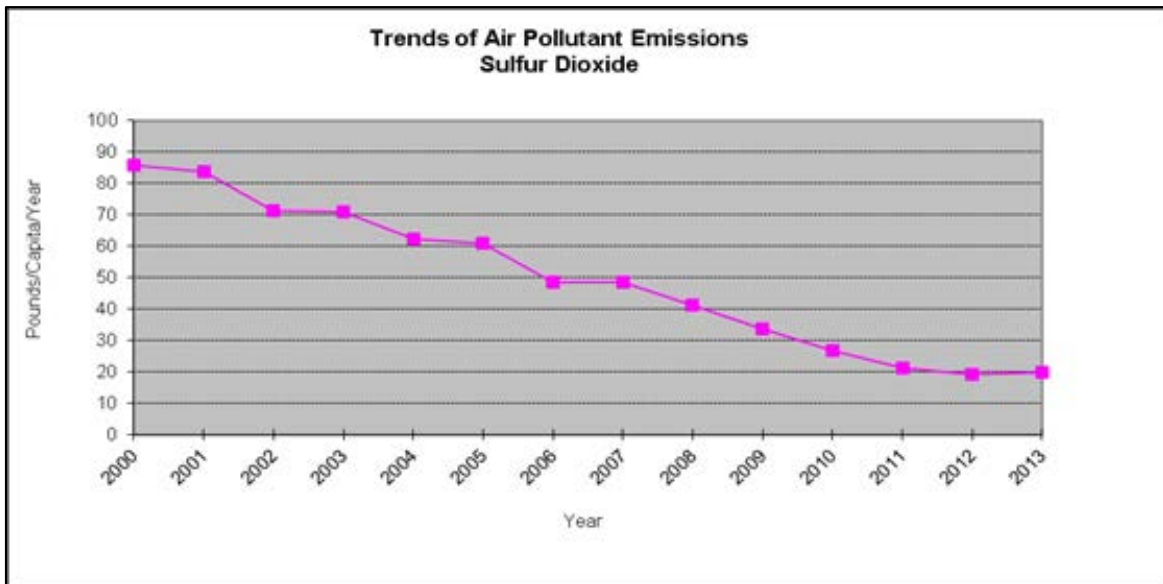
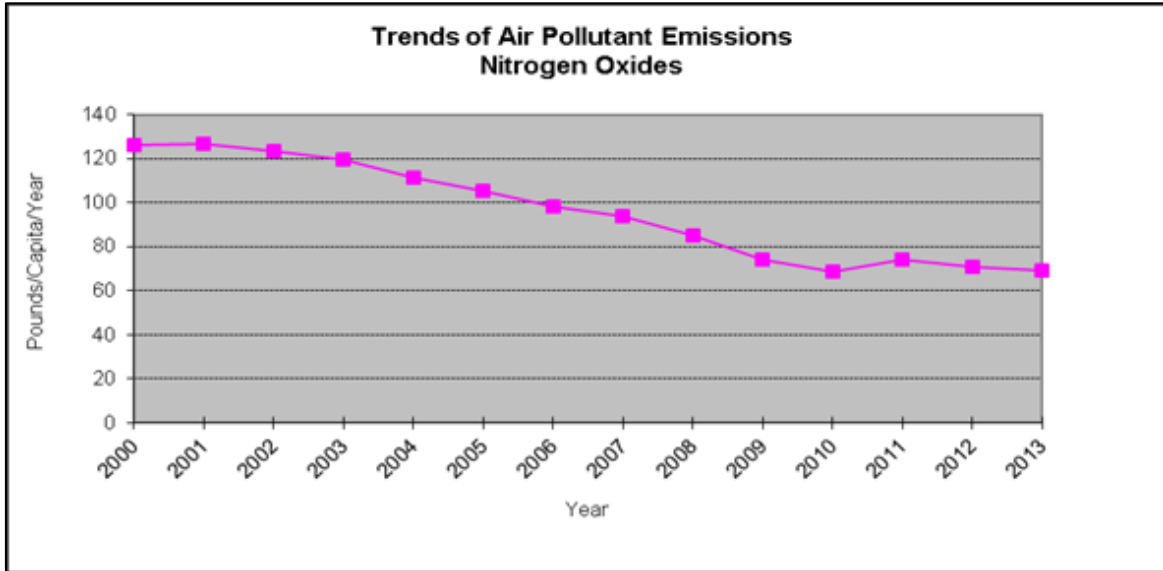
### Air Resources Management

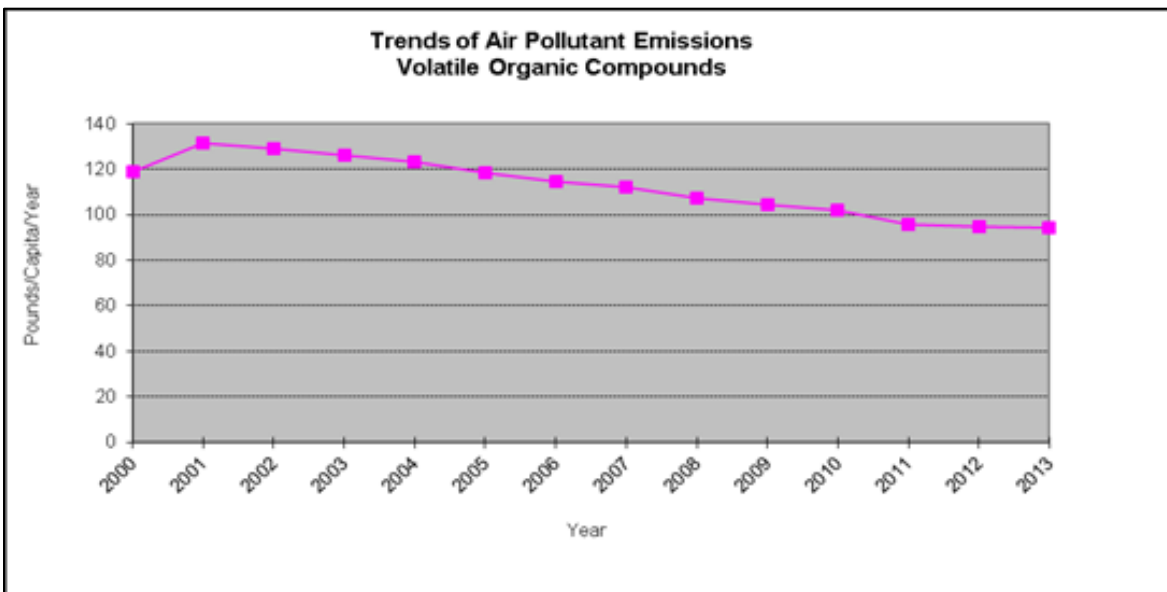
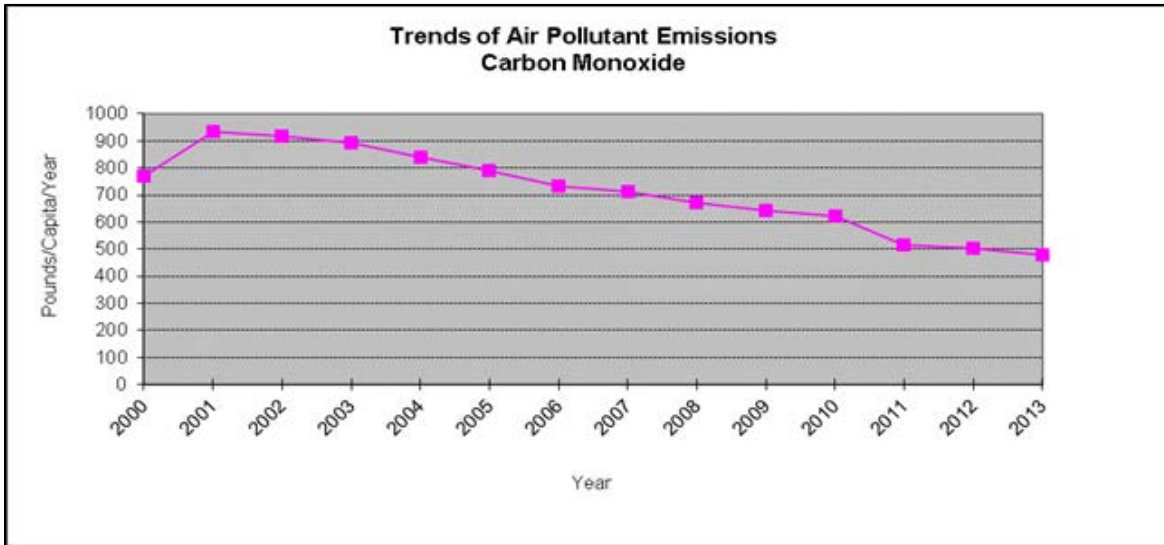
The Department’s Division of Air Resources Management (DARM) manages Florida’s air resources through consistent regulation of industry and accountability to our customers. Florida’s air program is largely driven by the federal Clean Air Act and U.S. Environmental Protection Agency (EPA) regulations, as well as state laws in Chapter 403, F.S. DARM’s primary functions include permitting, compliance assistance, compliance determinations and enforcement, emissions inventory and ambient air monitoring. DARM directly implements air regulatory actions and oversees the activities of the Department’s six regulatory districts and eight Department-approved county air pollution control programs.

DARM also uses ambient air quality data to evaluate air pollution levels and trends with respect to the National Ambient Air Quality Standards (NAAQS), which EPA established for six pollutants, referred to as “criteria” pollutants because they are based on health-related criteria: Lead (Pb), Nitrogen Dioxide (NO<sub>2</sub>), Carbon Monoxide (CO), Ozone (O<sub>3</sub>), Particulate Matter (PM) and Sulfur Dioxide (SO<sub>2</sub>).

The ambient data required to determine compliance with the NAAQS are obtained through Florida’s statewide air monitoring network, which consists of 224 monitors located in 40 counties, covering 91 percent of Florida’s population. While most monitoring occurs in densely populated areas, instruments are also located in rural areas to establish background levels of pollutants. Details on the types and locations of air monitors, along with real-time data, are available at [www.dep.state.fl.us/Air/air\\_quality/monitoring.htm](http://www.dep.state.fl.us/Air/air_quality/monitoring.htm).

Significantly, Florida has experienced declines in emissions of SO<sub>2</sub>, CO, volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) from 1985 until 2013, as illustrated in the four graphs on the following pages. The slight increase in NO<sub>x</sub> emissions from 2010 to 2011 is attributable to changes in the EPA model used to calculate on-road mobile emissions, rather than actual emissions increases.





DARM also implements the Small Business Environmental Assistance Program, which was established in 1990 by Title V of the federal Clean Air Act to provide compliance advice and technical assistance to small businesses. The program encourages partnerships with trade associations, government entities and small businesses and offers compliance tools, such as industry-specific compliance calendars and fact sheets; free and confidential phone consultations; notification of applicable requirements and facts; referrals to other environmental programs (water, waste, etc.); presentations and workshops to public and private organizations; and a hotline directory of key personnel who manage various state environmental programs and services.

*Siting Coordination Office*

The Department is statutorily designated as the lead agency to coordinate the interagency review and certification (licensing) of threshold electrical power plants, electrical transmission lines and natural gas pipelines. The Siting Coordination Office (Office), in conjunction with the Department's Office of General Counsel, performs the administrative and legal tasks of the coordination process. The Governor and Cabinet, acting as the Siting Board, are the actual licensing entity. Certification is an umbrella permit, which includes all applicable state, regional and local regulatory requirements. It is a life-of-the-facility permit authorizing construction, operation and maintenance.



The majority of the Office's work deals with threshold power plant siting. However, the Office also oversees and performs compliance reviews for electric and magnetic fields and provides recommendations to county property appraisers regarding the eligibility of certain pollution control equipment for ad valorem tax reductions.

### ***WATER POLICY AND ECOSYSTEM RESTORATION***

The Deputy Secretary for Ecosystem Restoration is responsible for four primary program areas that have enormous implications for water quality and water resource protection in Florida: establishing water quality standards, assessing water quality in accordance with those standards and implementing programs necessary to restore the quality of waters that do not meet the standards; providing financial assistance to local governments and other entities to protect and restore water resources; restoring Florida's Everglades and other related South Florida ecosystems; and managing Florida's aquatic preserves, including more than 4 million acres of valuable submerged lands and coastal uplands. In all cases, these programs are focused on making best use of taxpayer resources, partnering with local communities and businesses to protect natural resources and promote economic growth, establishing clear metrics to evaluate and strengthen the programs, and empowering staff with the best science to solve problems through innovation and efficiency.

#### Office of Water Policy

Ensuring adequate, high quality water for human use and natural systems is essential to sustaining the state's economy and quality of life. The Department and Water Management Districts under its general supervisory authority are responsible for water management in four key areas:

- Water quality
- Water supply
- Natural systems
- Flood protection and food plain management

The Office of Water Policy leads in developing appropriate water policies based on statutory direction, overseeing the Water Management Districts and coordinating Department and district water programs. Primary responsibilities of the Office of Water Policy include:

- Developing statewide water resource policies;
- Updating the "Water Resource Implementation Rule," Chapter 62-40, F.A.C., that provides guidance for Department and Water Management District water programs and activities;
- Reviewing Water Management Districts programs, plans, and rules for consistency with Chapter 62-40, F.A.C., and Chapter 373, F.S.;
- Tracking Water Management District performance on mission critical activities;
- Working with the U.S. Geological Survey to produce Water-Use in Florida Report;
- Reviewing Water Management District budgets;
- Reviewing and approving minimum flow and level (MFL) priority lists and schedules (Section 373.042, F.S.) and reviewing proposed MFL rules;
- Providing guidance on Water Management District regional water supply plans and reporting annually to the Florida Legislature on the status of water supply planning;
- Coordinating "Conserve Florida," the State's water conservation initiative; and
- Ensuring consistency among Water Management District regulatory programs.

## Office of Ecosystem Projects

The State of Florida has recognized that the greater South Florida ecosystem is unique in the world and one of Florida's greatest treasures. A century ago, water flowed down the Kissimmee River into Lake Okeechobee, then south through the vast Everglades to Florida Bay, the ultimate destination of the system's uninterrupted sheetflow. The Florida Everglades once covered almost 11,000 square miles. Subsequent draining of the marshland for agriculture, development and flood control has resulted in the Everglades being only half that size today. This "River of Grass" remains a mosaic of sawgrass marshes, freshwater ponds, prairies and forested uplands that supports a rich plant and wildlife community. Renowned for its wading birds and wildlife, the Everglades is home to dozens of State and federally threatened and endangered species.

The Office of Ecosystem Projects (Office) oversees the South Florida Water Management District's South Florida Ecosystem restoration efforts and bears significant responsibility for activities required through the Everglades Forever Act (Section 373.4592, F.S.), Comprehensive Everglades Restoration Plan (Sections 373.470, 373.1501 and 373.1502, F.S.) and Northern Everglades and Estuaries Protection Program (Section 373.4595, F.S.). The Office is responsible for all Department policy, programmatic, technical and regulatory responsibilities under these statutes. The Office's activities focus on improving water quality and restoring the ecology and hydrology of the greater South Florida's ecosystem which stretches from the Kissimmee Chain of Lakes near Orlando to the Florida Keys.

The Office represents the State's interests through policy and program development to ensure a holistic approach to restoring South Florida's ecosystem. The Office also formulates and plans projects consistent with governing rules and statutes and that meet both federal and State restoration goals. Plan elements are complex, have a multitude of stakeholders and require balancing the protection of water and ecological resources with the often competing objectives of water supply and flood control. Projects include the construction and operations of large scale civil works, including reservoirs, impoundments and stormwater treatment areas, all of which improve the quality, quantity, timing and distribution of water.

The Office coordinates closely with state and federal partners, primarily the U.S. Army Corps of Engineers and South Florida Water Management District, to ensure smooth transition from project planning to permitting of construction and long term operations of water management projects. Projects are evaluated to determine whether sufficient information has been provided to demonstrate that the benefits, goals and objectives of restoration outweigh potential environmental impacts and proposed activities comply with Florida law. Specific consideration is given to avoiding and minimizing wetland and endangered species impacts; ensuring water quality standards will be met; determining that project components maintain public health safety or welfare; and confirming that projects will achieve design objectives. Staff inspect restoration projects throughout construction to ensure compliance with permit conditions including verification that best management practices are implemented. Completed projects are periodically evaluated for compliance with water quality standards and achievement of water quality improvement.

The Office is also responsible for monitoring and enforcing the \$880 million "Restoration Strategies" consent order which is anticipated to construct the facilities required achieve the water quality needed to protect the Everglades by 2025.

Specific Office responsibilities include:

- Developing and communicating agency policy and assisting in the development of State-led Everglades and other restoration efforts;
- Representing the Department in Everglades Forever Act, Comprehensive Everglades Restoration Plan and Northern Everglades and Estuaries Protection Program coordination planning,
- Linking regulatory activities with project planning, biological assessments and engineering/

- design through internal and external consultation and guidance;
- Providing regulatory authority over South Florida ecosystem restoration projects;
- Inspecting projects and providing environmental compliance assistance;
- Participating in interagency technical teams and committees including the Everglades Technical Oversight Committee, Restoration Coordination and Verification, Restoration Strategies Science Plan Team, South Florida Ecosystem Restoration Task Force, Loxahatchee River Management Coordination Council, Biscayne Bay Regional Restoration Coordination Team and others;
- Providing technical assistance for legislative activities related to Everglades restoration;
- Providing oversight and financial contracted management of legislative appropriations for restoration activities;
- Providing technical assistance to the Department's Office of General Counsel on Everglades restoration litigation;
- Coordinating with other Department programs, state and federal agencies, industry representatives and other groups in developing and implementing water quality, biological and other research and monitoring programs in the Everglades Protection Area;
- Reviewing and preparing technical reports on topics related to Everglades restoration; and
- Reviewing and providing comments on documents distributed through the Florida State Clearinghouse to ensure consistency with the Florida Coastal Zone Management Act.

### Environmental Assessment and Restoration

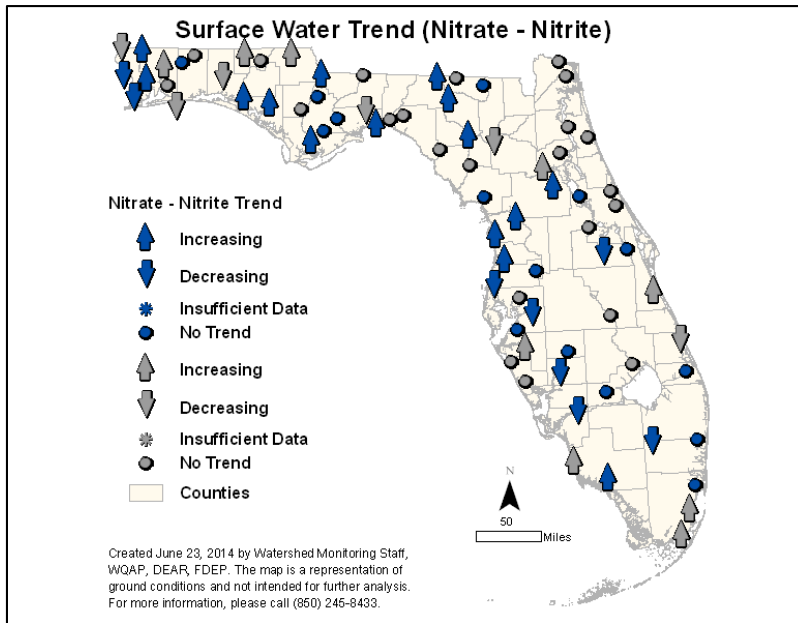
According to the most recent data available, Florida has more than 2,000 linear miles of coastline; nearly 7,750 lakes covering some 1.6 million acres; more than 1,700 rivers and streams totaling nearly 28,000 miles in length, with another 48,000 miles of canals and ditches; 33 first-magnitude springs each discharging at least 65 million gallons per day and more than 1,000 springs in total; and 1.7 million acres of estuaries. Florida's surface waters cover almost 17,900 square miles in total and include the third largest area of inland waters among the 50 states. Florida also has an untold volume of groundwater in its aquifer systems. These resources provide drinking water sources, wildlife habitat, shellfish harvesting, agricultural supplies and a wide range of recreational opportunities. Water resources are intimately linked: lakes often reflect ground water levels, spring flow provides the base flow of many streams and stream flow to estuaries is critical to maintaining salinity balance. The Department's *Integrated Water Quality Assessment* includes a wealth of other information on water resources and is available at [www.dep.state.fl.us/water/docs/2014\\_integrated\\_report.pdf](http://www.dep.state.fl.us/water/docs/2014_integrated_report.pdf).

The Division of Environmental Assessment and Restoration (DEAR) works with the Department's Division of Water Resource Management, Water Management Districts, other state agencies, local governments and the private sector to identify and reduce the impact of human activities on water quality and restore those waters that have already been degraded. Partnering with local communities and businesses, in particular, is essential to protecting and restoring natural resources and promoting economic growth.

Florida's typically slow moving, warm surface waters are susceptible to contamination from many sources. Obvious sources include domestic and industrial wastewater discharges, which have been extensively regulated and significantly reduced over the last four decades. In contrast, "nonpoint sources" of pollution are diffuse, difficult to identify and hard to regulate. They include an estimated 2.6 million septic tanks, according to the Florida Department of Health; urban and agricultural runoff, including pesticides, fertilizers and other pollutants; improper disposal of solvents, petroleum products and other forms of hazardous and solid waste; and atmospheric deposition (pollution in rain and dust).

DEAR implements a statewide monitoring network to assess the chemical and biological health of Florida's surface and ground waters. At its broadest scale, monitoring addresses statewide and regional questions to characterize overall water quality trends and conditions. For example, the following map

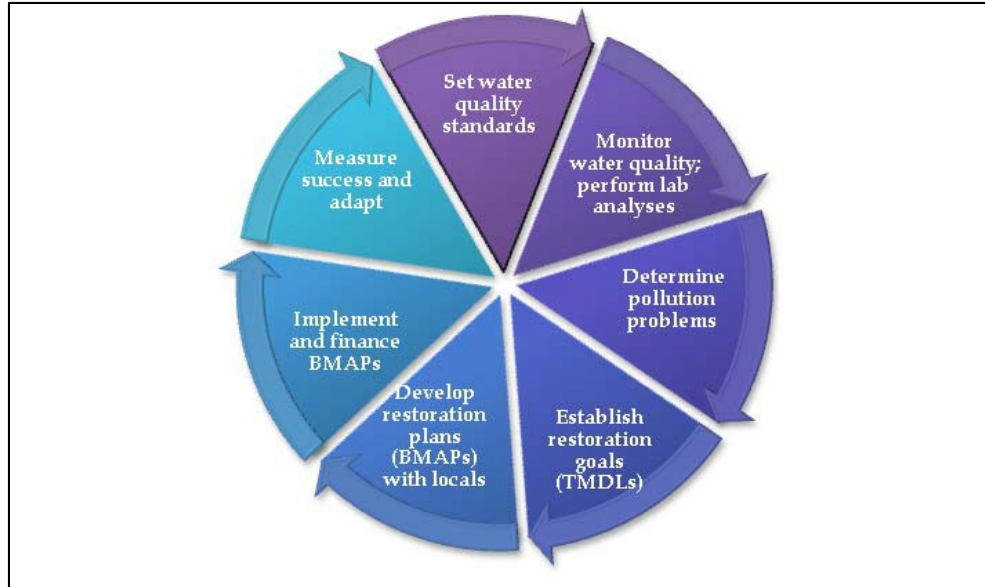
reflects trends in nitrate-nitrite levels in Florida's surface waters over the period 1999 - 2012. Nitrate-nitrite and other forms of nutrients are among the leading causes of Florida's water quality problems.



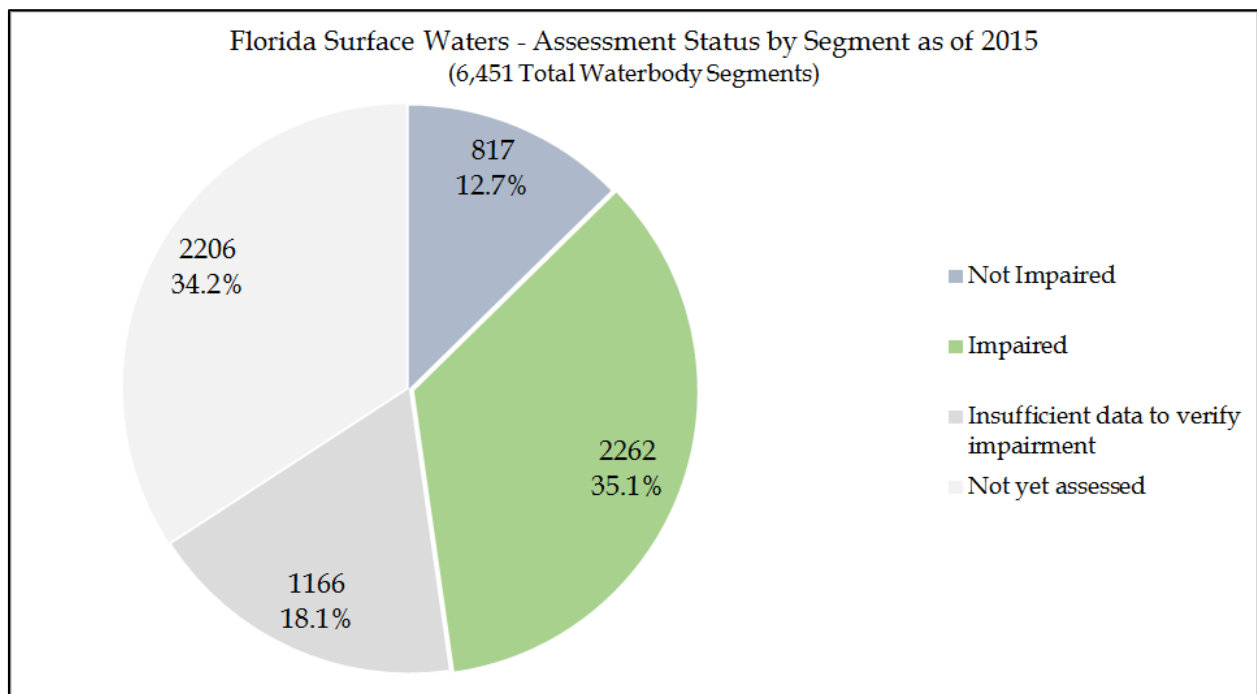
Monitoring is also used to evaluate regulatory compliance, the effectiveness of urban and agricultural best management practices and the success of restoration programs. DEAR constantly improves the effectiveness and efficiency of water quality monitoring and coordinates with other local and state monitoring agencies through the Florida Water Resources Monitoring Council ([www.dep.state.fl.us/water/monitoring/council/index.htm](http://www.dep.state.fl.us/water/monitoring/council/index.htm)) to reduce duplication and expand the pool of available quality data. The division provides a searchable database of Florida water monitoring activities is online at [water-cat.usf.edu/](http://water-cat.usf.edu/). Monitoring water quality at all levels provides a wealth of clear environmental metrics used to evaluate and strengthen DEAR's water quality programs, activities and services.

DEAR assesses all of this monitoring data in the context of surface water quality standards established consistent with the federal Clean Water Act. Florida's standards, adopted in Chapter 62-302, F.A.C., include surface water classifications, numeric and narrative criteria, an anti-degradation policy and moderating provisions, along with special protections for certain waters, such as Outstanding Florida Waters. More than 90 percent of Florida's public drinking water supply comes from ground water, and Florida's ground water standards are based primarily on public health considerations and are adopted pursuant to the federal and state Safe Drinking Water Acts. Ground water standards consist of a classification system based on use and water characteristics, along with narrative "minimum criteria" and specific numeric water quality criteria, all adopted in Chapter 62-520, F.A.C.

The Department has integrated ground water and surface protection in its watershed management program, which involves data collection and interpretation to assess the health of water resources; establishment of scientific water quality restoration targets and pollutant loading limits for individual waterbodies; and development and implementation of detailed basin plans to restore water quality. These activities are undertaken in a continuous cycle that promotes an increasingly refined understanding of basin water quality and assures that restoration actions, and water quality protection programs, are routinely re-evaluated and improved. The following graphic illustrates the watershed management cycle.

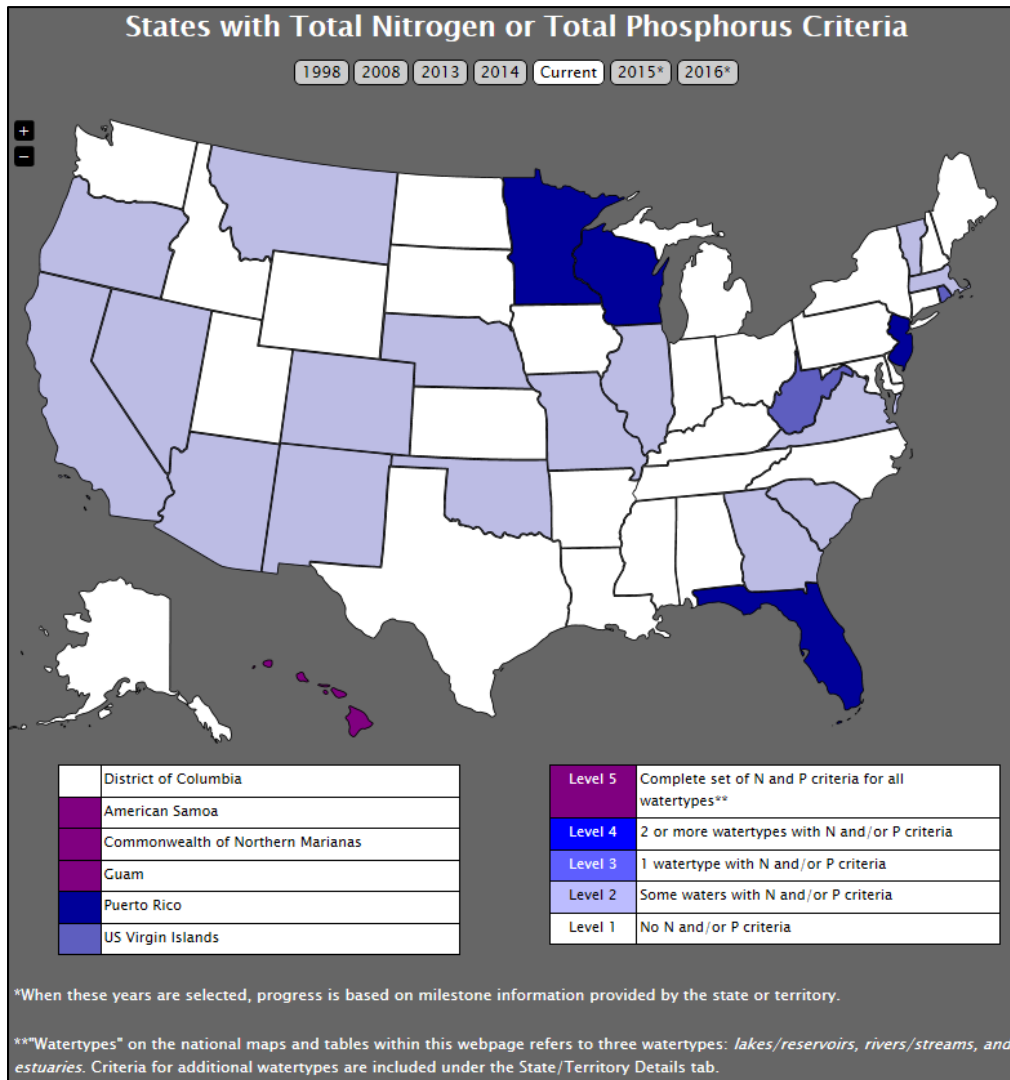


The first step in cleaning up Florida’s polluted rivers, lakes, streams, springs and estuaries is assessing water quality data to determine and verify specific pollution problems. As of 2015, DEAR has assessed 4,245 (66 percent) of Florida’s discrete watershed segments and identified 2,262 as “impaired” (not meeting water quality standards) as the result of a variety of specific pollutants, including nutrients. An additional 1,166 segments have been evaluated but not enough data are yet available to make formal determinations. The following chart illustrates the status of water quality assessments to date. DEAR is embarking on another assessment cycle this summer, beginning with a series of public meetings to solicit local input and help refine monitoring and assessment priorities.



This scientific, data-driven assessment is one way DEAR focuses taxpayer resources on those priority projects and activities that are essential to water quality improvement and provide a direct benefit to local communities. The public nature of the process enables DEAR to partner with those local communities and the residents, businesses and industries that comprise their economic lifeblood.

The most challenging surface water quality program facing Florida is excessive levels of nutrients (forms of nitrogen and phosphorus), which can cause excessive algae growth, deplete oxygen levels and compromise aquatic habitats. DEAR has developed and adopted among the most comprehensive numeric nutrient criteria (NNC) in the nation, as illustrated in the following EPA map comparison of NNC development among the states. The map is available at [cfpub.epa.gov/wqsits/nnc-development/](http://cfpub.epa.gov/wqsits/nnc-development/).

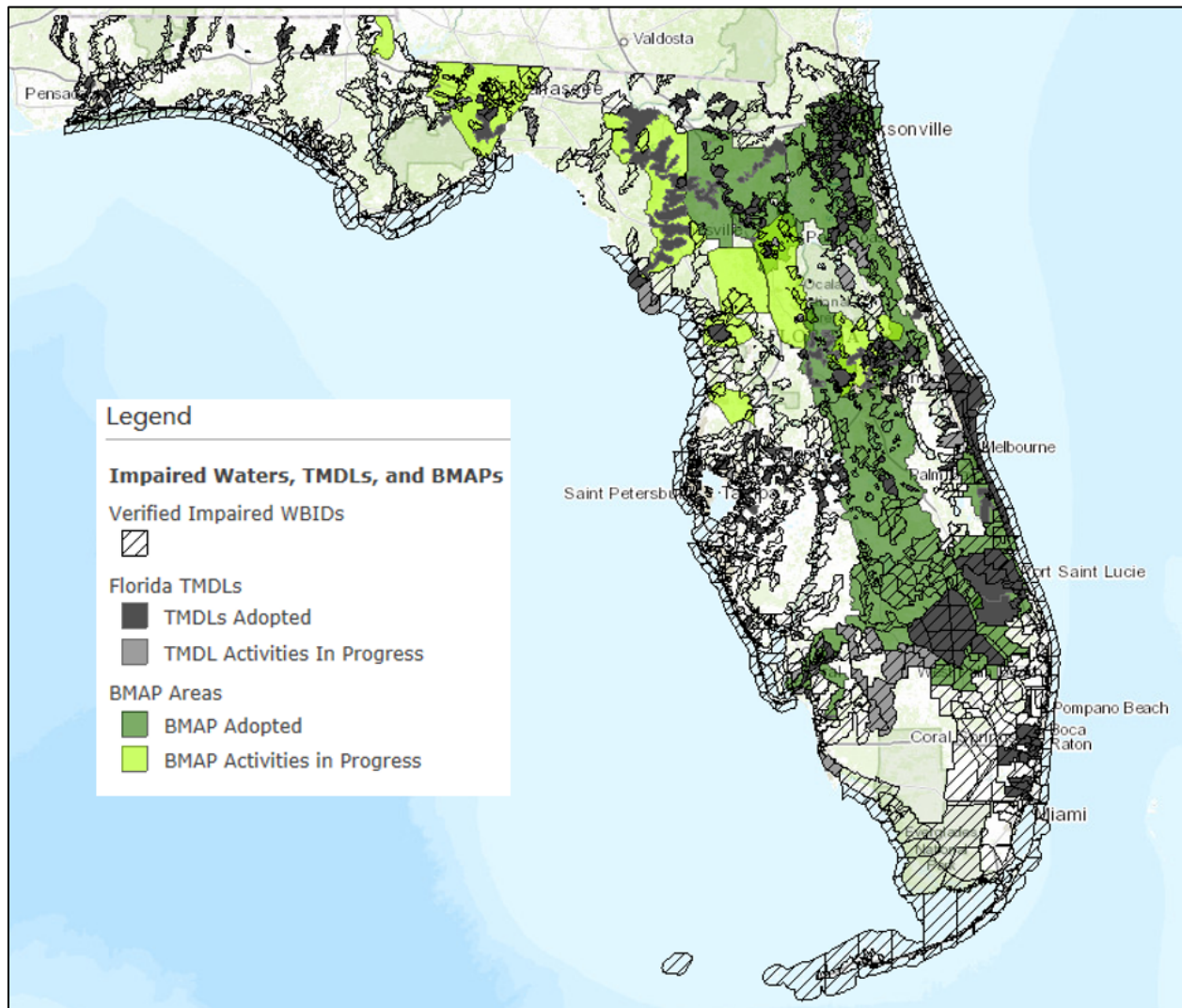


Adoption of these rigorous criteria was the result of years of scientific work, negotiations with an array of stakeholders, several rounds of litigation and multiple EPA approvals. In late 2014, based on the Department's progress in adopting Florida-specific numeric nutrient criteria, EPA withdrew all federal nutrient criteria for Florida and deferred to the Department's criteria. While several parties challenged this action, both a U.S. District Court and circuit court of appeals have upheld EPA's decision, with the most recent determination coming on July 7, 2015, in a decision by the 11th Circuit Court of Appeals.

Whether the problem is nutrients, bacteria, metals or another pollutant, it is essential to establish the level of the pollutant(s) an impaired waterbody can assimilate and still meet its water quality standards. To do so, DEAR undertakes Total Maximum Daily Load (TMDL) determinations. Each TMDL, developed using available data and state-of-the-art water quality modeling, sets a specific water quality restoration target, adopted by rule, to guide the development and implementation of local Basin Management Action Plans (BMAPs). These plans provide the blueprints to restoring waterbody health. TMDLs and BMAPs

are factored into permitting decisions, acquisition of conservation lands, financial assistance for infrastructure construction and implementation of urban and agricultural best management practices, among other actions.

DEAR to date has adopted 392 TMDLs, along with 20 BMAPs (plus two BMAP updates) designed to restore 136 affected waterbodies or waterbody segments and nearly 9.9 million acres of related watersheds. DEAR currently has nine additional BMAPs under development, all associated with major spring systems that collectively encompass 261 individual springs. The following map depicts the current geographic scope of DEAR's TMDLs and BMAPs, along with the other areas of impaired waters (those that do not meet standards) that establish priorities for future actions. Detailed information on the impaired waters listing process, the development and adoption of TMDLs and BMAPs and the overall watershed management cycle is available at [www.dep.state.fl.us/water/](http://www.dep.state.fl.us/water/).



Essential to the analysis of water quality and other environmental and public health data, DEAR's Bureau of Laboratories conducted 145,779 analyses last year and provides biological and chemical laboratory support to many state and local government programs, including specialized field sampling, scientific study design and statistical and narrative interpretation of environmental data. The Lab has rigorous operating procedures and clear metrics designed to determine customer satisfaction in analytical and reporting work and evaluate and strengthen performance. In FY 2014-15, sample analyses met performance expectations 99.7 percent of the time while analytical reports met expectations 98 percent of

the time. The Lab continues to add cutting-edge tools, including DNA analysis that allow DEAR to track the sources of bacteria that indicate the presence of potentially harmful organisms. Isolating the sources of these bacteria will enable the development of cost-effective restoration measures.

DEAR also is one of only seven laboratories in an elite Environmental Response Laboratory Network, coordinated by the U.S. Department of Homeland Security and EPA, to provide analytical support for response and recovery operations following a terrorist attack or other national emergency. See [www.epa.gov/oemerln1/](http://www.epa.gov/oemerln1/) for more information.

DEAR also implements recurring financial assistance programs for springs restoration and projects that reduce pollutant loadings in other priority waterbodies. One program, the Clean Water Act section 319 grant, is funded by EPA and, along with the state-funded TMDL Water Quality Restoration Grant program, awards money to local governments and other entities for stormwater management and other forms of "nonpoint source" pollution control. Springs restoration is underwritten in part by a recurring appropriation from the Florida Legislature and supports land acquisition and capital projects that protect spring flow and water quality. In FY 2015-16, the Legislature appropriated nearly \$56 million for these three programs, more than 80 percent of which is specifically for springs restoration.

#### Office of Coastal and Aquatic Managed Areas

The Office of Coastal and Aquatic Managed Areas (CAMA) protects natural resources on state-owned sovereign submerged lands and coastal uplands through administration of the state's 41 aquatic preserves, three National Estuarine Research Reserves, the Florida Keys National Marine Sanctuary, and the Coral Reef Conservation Program. CAMA also administers the Florida Coastal Management Program, coordinates statewide participation of the Governor's South Atlantic Alliance and Gulf of Mexico Alliance and coordinates restoration activities associated with the 2010 Deepwater Horizon oil spill.

Aquatic Preserves are submerged lands of exceptional ecological character to be maintained in their natural or existing conditions for future generations. There are 41 aquatic preserves, coastal and fresh water sites, encompassing 2.2 million acres of sovereign submerged lands. National Estuarine Research Reserves were designated by joint action of the state and federal government through the National Oceanic and Atmospheric Administration (NOAA). CAMA provides stewardship, education, training, research and monitoring programs at Florida's three National Estuarine Research Reserves (Apalachicola, Guana Tolomato Matanzas and Rookery Bay).

The Florida Keys National Marine Sanctuary, established in 1990 by Congress, and confirmed by the Board of Trustees of the Internal Improvement Trust Fund, covers 2.3 million acres of state and federal submerged lands encompassing unique and nationally significant marine resources, including the southern portion of the Florida Reef Tract (the world's third largest barrier coral reef), extensive sea grass beds, mangrove-fringed islands and more than 6,000 species of marine life. CAMA leads state co-management efforts in the Sanctuary in partnership with NOAA.

The Florida Coral Reef Conservation Program coordinates research and monitoring, develops management strategies and promotes partnerships to protect the northern portion of the Florida Reef Tract along the mainland southeast Florida coast, pursuant to the U.S. Coral Reef Task Force's National Action Plan – including implementing Florida's Local Action Strategy – the Southeast Florida Coral Reef Initiative. The program leads response, assessment, restoration and jointly oversees enforcement efforts for non-permitted reef resource injuries (vessel groundings, anchor and cable drags, etc.) in southeast Florida pursuant to the Florida Coral Reef Protection Act (Section 403.93345, F.S.).

The Florida Coastal Management Program is based on a network of agencies implementing 24 statutes that protect and enhance the state's natural, cultural and economic coastal resources. The goal of the program is to coordinate local, state and federal government activities using existing laws to ensure that



Florida's coast is as valuable to future generations as it is today. CAMA is responsible for directing the implementation of the statewide coastal management program. The Florida Coastal Management Program provides funding to promote the protection and effective management of Florida's coastal resources at the local level through the Coastal Partnership Initiative grant program.

CAMA's Outer Continental Shelf (OCS) Program is responsible for coordinating the state's review, oversight, monitoring and response efforts related to activities that occur in federal waters on the OCS to ensure consistency with state laws and policies and that these activities do not adversely affect state resources. Reviews are conducted under federal laws, including the Outer Continental Shelf Lands Act, Coastal Zone Management Act, National Environmental Policy Act, Deepwater Ports Act, Marine Protection, Research and Sanctuaries Act, Rivers and Harbors Act, Clean Air and Water Acts and the regulations that implement them.

The Governor's South Atlantic Alliance was formed by the governors of the four south Atlantic states in 2009 to foster ecosystem-based management. The Alliance focuses on common priorities related to healthy ecosystems, working waterfronts, clean coastal and ocean waters and disaster-resilient communities. The Gulf of Mexico Alliance (GOMA) was formed by the governors of the five Gulf of Mexico states in 2004 to foster ecosystem-based management. GOMA focuses on common priorities related to water quality monitoring, nutrient reductions, habitat conservation and restoration, coastal community resiliency, ecosystem integration and assessment and environmental education.

CAMA's Deepwater Horizon Restoration Program supports restoration activities associated with the 2010 Deepwater Horizon oil spill. This includes assessing and establishing restoration plans through the Natural Resource Damage Assessment process, which is a legal process determines the type and amount of restoration needed to compensate the public for damages caused by the oil spill. In addition, the Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast State (RESTORE) Act was signed into law on July 6, 2012. The RESTORE Act created the Gulf Coast Ecosystem Restoration Council, and outlined five funding categories for 80 percent of federal Clean Water Act civil and administrative penalties from the Deepwater Horizon oil spill. The Gulf Environmental Benefit Fund was also established by the National Fish and Wildlife Foundation (NFWF) to administer funds arising from plea agreements that resolve the criminal cases against BP and Transocean. The Florida Fish and Wildlife Conservation Commission and Department work with NFWF to identify projects for Florida, in consultation with the U.S. Fish and Wildlife Service and NOAA. The criminal plea agreement will award \$356 million over the period of five years to fund restoration projects in Florida.

On July 2, 2015, an agreement in principle was announced that BP will pay a total of \$18.732 billion, which is broken down between federal Clean Water Act penalties, natural resource damage claims and economic claims, across the five Gulf States. The State of Florida will receive at least \$3.25 billion, of which \$2 billion will be paid to resolve Florida's economic claims. Under this agreement, Florida is expected to also receive, over a 15 year period, a total of \$680 million to resolve the State's National Resource Damage Assessment claims and at least \$572 million pursuant to the RESTORE Act. These various funds are used to implement a variety of restoration projects including rebuilding coastal and estuarine marshes and wetlands, restoring seagrass beds and oyster reefs, installing living shorelines, replenishing damaged beaches and dunes, protecting sensitive areas for wildlife and improving water quality and altered hydrology.

## ***LAND AND RECREATION***

The Deputy Secretary for Land and Recreation is responsible for the acquisition and management of lands for conservation and recreational purposes, serving as staff to the Board of Trustees (BOT) of the Internal Improvement Trust Fund (Governor and Cabinet) and for overseeing the Florida State Park system. These diverse program areas preserve and protect what, in many ways, are Florida's environmental signature: the wild, natural places millions visit every year and that are seen in photographs and posters around the world.

### **State Lands**

#### ***Land Acquisition***

Since 1963, Florida has invested more than \$7.9 billion to conserve roughly 3.9<sup>2</sup> million acres of land for environmental, recreational and preservation purposes. These investments have been implemented through several programs, most recently Florida Forever and its predecessor, Preservation 2000. Through the Florida Forever program, Florida has adopted a comprehensive approach to resource restoration through land acquisition. In addition to acquiring land, Florida Forever has focused on protection and restoration of water resources, wildlife habitat, recreation spaces, forests, wetlands and public beaches.

To achieve its mission, the Division of State Lands (Division) coordinates and evaluates land management plans, conducts appraisals, completes surveys and maps for land purchases, and conducts land negotiations and closings on behalf of the State for conservation lands and non-conservation lands such as universities, state office buildings and state courts. In addition, the Division provides staff support to the Acquisition and Restoration Council, performs geodetic surveys, conducts fresh and tidal shoreline survey work and tracks and maintains the BOT's land ownership records along with surveys and maps of historical records.

Future land acquisitions must be carefully planned to protect natural areas, waterbodies and springs, and also provide linkages to create safe biological and recreational pathways. The Department will continue to partner with other governmental or non-governmental groups to stretch funding to increase the acquisition of appropriate lands.

#### ***Land Management***

The Florida Constitution requires that state-owned lands be held in trust, by the BOT, for the use and benefit of the people of Florida; Florida law further requires that the lands be managed to provide the greatest combination of benefits to the people. With Florida's preservation land inventory exceeding 3.9 million acres, land management plans, land use plans and on-site reviews are necessary to ensure that all responsible agencies manage the land in accordance with best management practices and BOT policies.

State land acquisition programs have increased the demand for land management services and the need for administering and managing uses of state-owned lands via leases and lease amendments, subleases, management agreements and easements, exchanges and surplus.

There are more than 9 million acres of sovereignty-submerged lands within the boundaries of Florida. The shoreline areas of sovereignty-submerged lands have great revenue potential associated with the issuance of leases or easements and, in some cases, are already under a lease or easement. A more aggressive asset management program that introduces proven business principles into traditional government functions to

<sup>2</sup> 3.9 million acres refers to lands that have been acquired by the State, including acquisitions by the water management districts and local governments under Preservation 2000, Florida Forever and Save Our Rivers. This does not refer to lands that are managed by the State.

effectively manage Florida's land resources is in progress.

The Division continues its efforts to identify lands no longer needed for state purposes that may be declared surplus and sold, returning them to county tax rolls and improving local economies. Selling surplus land also allows the Division to make better use of state assets by using funds received from sales for conservation management purposes and to acquire conservation lands with higher resource value. Approximately \$60 million in non-conservation lands were sold in FY 2014-15. Currently, more than \$43 million of surplus non-conservation land has been sold and the money received is available for these purposes.

Improved real estate services are being provided to state agencies and the public. The Division is steadily decreasing the backlog of submerged land lease requests, increasing the number of surplus parcels under contract for sale and increasing the number of submerged land lease files completed over the previous fiscal year. The Division is also more actively identifying lessees who are out of compliance, offering compliance assistance and dealing more firmly with those lessees not willing to comply.

The Public Land Survey System (PLSS), established in Florida in 1824, provided for the survey of approximately 250,000 section corners, which are still the geographic basis for all land titles and land ownership boundary descriptions. Age and land development activities have compromised the integrity of the PLSS, resulting in uncertainty in boundary location of both public and private lands. The cost-effective way to perpetuate the PLSS is to restore the original position of the corners and establish a geographic or geodetic position on the corner to permanently memorialize its position. The Division maintains an ongoing repository and website ([www.labins.org/](http://www.labins.org/)) for PLSS corner records. The Division provides for extension and densification of geodetic survey control throughout the state. Ties between the PLSS and the geodetic reference system will allow establishment of a digital cartographic database with unique coordinates identifying land corners, providing consistency throughout land information systems and reducing duplicative mapping.

The determination of tidal datums (reference points) along coastal tidewaters requires continued monitoring through the extension and maintenance of a network of tide control stations. Private sector surveyors must also be properly trained to assure defensible placement of coastal water boundaries. The new generation tide stations collect data to provide an elevation for mean high water at a certain location and can be equipped with sensors to measure current, wind velocity and direction, salinity, dissolved oxygen, etc. Extending the network is important to hurricane and oil spill emergency response activities, commercial and recreational boating, tide height information collection, and many other uses. The Department's mean high water survey repository can be found on [www.labins.org/](http://www.labins.org/) along with statewide aerial photography and beach and shore preservation (erosion control line) surveys.

With all of these technological advances, the Division is still responsible for maintaining physical records, including original public land records and instruments of the BOT, which are maintained in a vault with more than 1 million instruments and inventory parcels. The Division initiated a computerized information system program for BOT documents, with an inventory base map and hybrid web-map applications for state agency and public use. The system maps parcels in over 76,000 land record documents. An annual inventory reconciliation of lands held in the name of the BOT is performed against the Florida Department of Revenue's annual property assessment rolls for all 67 counties.

The legislatively required Florida State Owned Lands and Records Information System (FL-SOLARIS) project allows the Department and other agencies to track the ownership of all state-owned lands and facilities. The project began in November 2010 and, since February 2013, has allowed submission of state land and facility data from more than 50 agencies. FL-SOLARIS data is available to the public on the Division's website at [www.dep.state.fl.us/lands/fl\\_solaris.htm](http://www.dep.state.fl.us/lands/fl_solaris.htm).

The management system of the BOT's land records is known as the Board of Trustees Land Document

System (BTLDS). Two Web versions are available to the public on the following websites: [tlhds\web.dep.state.fl.us](http://tlhds\web.dep.state.fl.us) and [tlhds\web.dep.state.fl.us/florida/flpro](http://tlhds\web.dep.state.fl.us/florida/flpro). A redesign commenced in 2013 after it was determined that the existing BTLDS must be refreshed with up-to-date technologies to meet Department IT standards. In addition, business processes between mission critical applications, BTLDS and FL-SOLARIS, will be enhanced to include seamless integration and web-enabled access for greater user efficiency. The full implementation of the refreshed BTLDS is currently scheduled for completion in February 2017.

## Recreation and Parks

### *Florida State Parks*

The Department proudly manages 174 nationally recognized and awarded state parks and trails. The operation of these parks not only enhances the quality of life for Florida's residents, but also provides a major attraction for visitors. In FY 2014-15, 31,108,245 people visited Florida's State Parks, generating nearly \$64.2 million in revenue. The state park system's impact on local economies throughout Florida exceeds \$2 billion.<sup>3</sup> With so many acres of conservation land purchased over the years, a concentrated effort has been made to make these natural areas more accessible to the public and provide recreational opportunities for the fast-growing nature tourism segment of Florida's tourist industry. The Florida State Park System's 174 park units comprise nearly 800,000 acres. Attracting more visitors to the parks to enjoy what they have to offer is an agency priority, and park attendance has been increasing. The Department projects an annual increase in park visitation of 10 percent. Over the next five years, the need for public outdoor recreation land and parks will increase as population growth begins to rebound and visitors continue to flock to Florida.

The Department partners with the private sector for a variety of park services, including grounds maintenance, cleaning, water and wastewater services and life guarding. Additionally, the park system has close to 100 vendors who provide recreational opportunities for visitors, including kayak and canoe rentals, boat tours and restaurants. The concessionaires allow the Department to make additional amenities available to visitors while providing jobs for the private sector.

Visiting a state park is a wonderful recreational and educational opportunity; an extended stay enables a full appreciation of Florida's natural treasures. The Department's central reservations system makes it easy, allowing visitors to reserve overnight accommodations by calling the toll-free number, (800)326-3521, or (866) I CAMP FL. Reservations are also available online at [floridastateparks.reserveamerica.com/](http://floridastateparks.reserveamerica.com/).

### *Office of Greenways and Trails*

The Office of Greenways and Trails (Office), within the Division of Recreation and Parks, provides statewide leadership and coordination to establish, expand and promote the Florida Greenways and Trails System (FGTS). The 2013-17 FGTS Plan (Plan) establishes priorities and defines the role of the FGTS in advancing Florida's economy, tourism, health, transportation, recreation, conservation and quality of life. The Office oversees the priority and opportunity maps that define the FGTS, and works in partnership with communities, agencies and organizations to close gaps in the system.

The Office coordinates with communities, agencies and organizations and provides technical assistance regarding the acquisition, development, designation and management of greenways and trails projects that fulfill the FGTS plan and vision. The Office also manages the Florida Greenways and Trails Acquisition Program, a component of Florida Forever. This acquisition program has helped to acquire land for all or

3 Florida State Parks Economic Impact Assessment (2014)

part of several corridors in Florida's Priority Trails System. The Priority Trails System serves as a framework for systematically “closing gaps” and connecting priority corridors within the FGTS to establish a fully connected and integrated statewide trail network.

## **TASK FORCES, STUDIES IN PROGRESS**

### **TASK FORCES**

#### ***ADMINISTRATIVE SERVICES***

##### *Executive Direction and Support Services*

- Department of Environmental Protection Diving Safety Advisory Board – Internal agency board established to provide a state of the art dive safety process in compliance with state and federal dive safety standards and regulations.
- Clean Boating Partnership – The mission of the Clean Boating Partnership is to coordinate public and private resources to promote a clean marine environment and foster stewardship of Florida's waters.
- Department of Environmental Protection Safety Advisory Board – Internal agency board established in an effort to prevent employee injuries and equipment losses and reduce the Department's automotive, civil rights, workers' compensation and general liabilities claims.
- Interagency Advisory Council on Loss Prevention – Duties of this Council are established in Section 284.50, Florida Statutes (F.S.), and is the responsibility of the Department of Financial Services. All state agencies are required by Florida Statute to provide a member to the Council.
- Department of Environmental Protection Boating Safety Advisory Board – Internal agency board established to train Department staff in proper boating techniques, recommend improvements and identify corrective measures to eliminate or control recognized hazards.
- Environmental Regulation Commission (ERC) – The powers and duties of the ERC are established in Section 403.804, F.S. The primary purpose of the ERC is to be the standard setting authority for the Department. The ERC, in exercising its authority, considers scientific and technical validity, economic impacts and relative risks and benefits to the public and the environment. The ERC is created under section 20.255(6), F.S., and Commission membership comprises "seven residents of this state appointed by the Governor, subject to confirmation by the Senate." Members are selected from various sections of the state and are "representative of agriculture, the development industry, local government, the environmental community, lay citizens and members of the scientific and technical community who have substantial expertise in the areas of the fate and transport of water pollutants, toxicology, epidemiology, geology, biology, environmental sciences or engineering." The ERC has regular public meetings, which include rule adoption hearings.

##### *Florida Geological Survey*

Many of the groups in which the Florida Geological Survey (FGS) participates are established in order to fulfill FGS's various statutory responsibilities under section 377.075, F.S.

- Big Cypress Swamp Advisory Committee – Created to ensure proper oil well and facility siting and safeguards within the Big Cypress Swamp watershed. The Director of the FGS, acting as the State Geologist, serves as the Chair. Other members include representatives from the oil industry and an organized conservation group; a botanist; and a hydrologist (section 377.42, F.S.).

- Contaminated Media Forum – The Contaminated Media Forum serves as a venue for interested parties to discuss a wide variety of topics relating to evolving policy, scientific and application issues associated with contaminated site cleanup and the reuse of a variety of media using risk-based management principles.
- Florida Board of Professional Geologists – Established in chapter 492, F.S., to safeguard the public and environment by ensuring that Professional Geologists meet minimum competency standards. The State Geologist in the Department of Environmental Protection serves as an ex officio member of the board.
- Florida Geoscience Workgroup – The Florida Geoscience Workgroup is comprised of representatives from the Department and Water Management Districts. The workgroup is an agency-based forum to discuss geoscience issues facing the Department and Water Management District program areas fostering communication about data and research and providing educational opportunities for geoscientists through webinars and other platforms.
- Florida Water Resources Monitoring Council (FWRMC) – The FWRMC is a council of stakeholders from many disciplines and organizations that participate in water resource monitoring and management. The council will ultimately coordinate Florida water resources monitoring efforts at the federal, state and local levels. Council authority for statewide coordination and cooperation are described in subsection 373.026(3), F.S.
- Salinity Network Workgroup – The Salinity Network Workgroup is a subgroup of the FWRMC is working to develop indices for groundwater levels and groundwater quality. The group will develop protocols for saltwater encroachment monitoring and the special protocols for sampling the freshwater/saltwater interface.
- STATEMAP Advisory Committee – This group meets in October on a yearly basis and provides guidance to the FGS Statemap Program Coordinator on which areas of the state are priorities for future geologic mapping efforts. The group consists of geologists from state and federal agencies, the private sector and academia.

*Office of Emergency Response*

- State Emergency Response Team (SERT) – The State Comprehensive Emergency Management Plan (Plan), authorized by chapter 252, F.S., establishes the roles and responsibilities of the state agencies, special districts and local governments in a disaster. The Plan coordinates response and recovery activities with local agencies, the business community and voluntary organizations active in disasters. The Plan unifies the efforts of these groups for a comprehensive approach to reducing the effects of an emergency and/or disaster. The Office of Emergency Response provides Emergency Coordinating Officers to the SERT.
- Regional Response Team (RRT) – The RRT’s mission is to protect the health, welfare and safety of the public and the environment by ensuring coordinated, efficient and effective support of the responding federal, state and local On-Scene Coordinators for significant oil and hazardous substance incidents occurring within federal Region IV. The RRT is mandated by the National Contingency Plan and required under the federal Water Pollution Control Act. The Office of Emergency Response provides a representative and alternate to the RRT.

- State Emergency Response Commission (SERC) – The SERC is responsible for implementing provisions of the federal Emergency Planning and Community Right to Know Act in Florida and serving as a technical advisor and information clearinghouse for state and federal hazardous material programs. Currently, SERC membership comprises 26 individuals appointed by the Governor who represent the interests of state and local government, emergency services, industry and the environment. The Office of Emergency Response serves as a SERC member.
- State Domestic Security Working Group (SWG) – The SWG is the interagency, multidisciplinary team responsible for implementing state all-hazard domestic security priorities in accordance with the Executive Office of the Governor’s Homeland Security Advisor and State Administrative Advisor. The SWG devises policy for specialty response teams and coordinates statewide projects funded through the federal State Homeland Security Grant Program.

### *STATE LANDS*

- Acquisition and Restoration Council (ARC) – Established by Section 259.035, F.S., ARC is a 10 member council (four of which are Governor appointed; four are state agency heads or designees; one appointed by the Florida Commissioner of Agricultural and Consumer Services; and one appointed by the Florida Fish and Wildlife Conservation Commission. ARC’s duties include making recommendations to the Board of Trustees of the Internal Improvement Trust Fund on the acquisition, management and disposal of state-owned conservation lands.
- Land Management Uniform Accounting Council (LMUAC) – The LMUAC was created within the Department by section 259.037, F.S., and is formed by seven state agency directors. LMUAC’s duties include compiling conservation land management costs across state agencies and establishing formulas for identifying land management funding needs.
- Florida Coordinating Council on Mosquito Control – Established by section 388.46, F.S., the mission of the Florida Coordinating Council on Mosquito Control is to provide assistance and recommendations to the Commissioner of Agriculture and the legislature on all matters related to public health pest control.
- Critical Lands and Waters Identification Project (CLIP) Technical Advisory Group – In 2006, the Century Commission for a Sustainable Florida called for an identification of those lands and waters in the state that are critical to the conservation of Florida’s natural resources. In response, the Florida Natural Areas Inventory, University of Florida GeoPlan Center and Florida Fish and Wildlife Conservation Commission collaborated to produce CLIP, a GIS database of statewide conservation priorities for a broad range of natural resources, including biodiversity, landscape function, surface water, groundwater and marine resources.
- Office of Agricultural Water Policy (OAWP) Interagency/Production Group – OAWP was established in 1995 by the Florida Legislature to facilitate communications among federal, state and local agencies and the agricultural industry on water quantity and water quality issues involving agriculture. In this effort, the OAWP is actively involved in the development of Best Management Practices (BMPs), addressing both water quality and water conservation on a site specific, regional and watershed basis. As a significant part of this effort, OAWP is directly involved with statewide programs to implement the federal Clean Water Act's Total Maximum Daily Load requirements for agriculture. The OAWP works cooperatively with agricultural producers and industry groups, the Department, university system, Water Management Districts and other interested parties to develop



and implement BMP Programs that are economically and technically feasible.

- Upland Ecosystem Restoration Project – The Upland Ecosystem Restoration Project is a cooperative partnership between Tall Timbers Research Station and Land Conservancy, state and federal agencies, the University of Florida and numerous conservation groups to improve populations of declining fire-dependent wildlife species on public land throughout Florida.
- Babcock Ranch Preserve Interagency Coordinating Group – Agencies with managing interests in the Babcock Ranch Preserve meet at least three times a year to resolve managing issues.
- Cooperative Conservation Blueprint (CCB) – The purpose of the CCB is to help to conserve the most vital working landscapes and natural habitats while maintaining a sustainable economy and agriculture opportunities. This public-private partnership will create, publish and maintain an online centralized GIS application of common priorities. The CCB will help to guide future land use planning decisions and recommend market-based incentives that encourage conservation. The Department serves as an interagency member.
- Florida State Owned Land and Records Information System (FL-SOLARIS) Executive Management Team – This agency team collaborating with the Department of Management Services was established to provide oversight of the development of the FL-SOLARIS.
- Air Force Landscape Planning Initiative: Conservation and Working Lands Group – This interagency group works to locate lands for special operations military units to use for training exercises.
- Florida Surveying and Mapping Council – The purpose of this Council is to promote communication between government and private sector surveyors.
- Land Conservation Task Team – Initiated by the federal government to track progress in Everglades' restoration, the Land Conservation Task Team provides staff support, through a task assignment to the Florida Natural Areas Inventory, to update land acquisition and conservation mapping for the South Florida Ecosystem Area.
- Eastern Land and Resources Council – This multistate governmental council provides a collaborative and unique forum to enhance land stewardship and conservation and promote sound policies and practices among those involved in the acquisition, management and administration of public lands.
- Boating Advisory Council – Established by section 327.803, F.S., this 18-member council makes recommendations to the Florida Fish and Wildlife Conservation Commission and the Department of Economic Opportunity regarding issues affecting the boating community.
- Fisheating Creek Settlement Agreement Advisory Board – This court ordered board advises the Florida Fish and Wildlife Conservation Commission on the management of the Fisheating Creek Wildlife Management Area.

#### ***DISTRICT OFFICES***

- Miami River Commission – Created in 1998 by section 163.06, F.S., the Commission is the official clearinghouse for all public policy and projects related to the Miami River. The Commission's mission is to help ensure that government agencies, businesses and residents speak with one voice on

river issues.

- Tampa Bay Estuary Program – The Tampa Bay Estuary Program protects and restores Tampa Bay through a partnership of Pinellas, Hillsborough and Manatee counties, the cities of Tampa, St. Petersburg and Clearwater, the Department, Southwest Florida Water Management District and U.S. Environmental Protection Agency. The Program is governed by a Policy Board of elected officials and a Management Board of top-level bay managers and administrators and consists of various technical and advisory committees.
- St. Johns River Alliance – The Alliance is governed by a regional, 34 member Board of Directors that includes elected officials, agencies, citizens and businesses devoted to water quality improvements and restoration of the St. Johns River.
- Southwest Florida Water Management District’s Comprehensive Watershed Management Initiative – This initiative manages water resources by evaluating interconnected systems of the region’s watersheds. The Initiative joins the Department’s Southwest District staff with representatives from local governments, other interested organizations and citizens to develop plans to protect and improve the watersheds. The Initiative has four primary goals: 1) identify and prioritize existing and potential water resource issues; 2) develop strategies for remedial or protective actions; 3) implement the strategies; and 4) monitor effectiveness.
- Sarasota Bay National Estuary Program – This Program protects and restores Sarasota Bay through a partnership of Sarasota and Manatee counties, the Department, Southwest Florida Water Management District and U.S. Environmental Protection Agency. The Program is governed by a Policy Board of elected officials and a Management Board of top-level bay managers and administrators.
- Charlotte Harbor National Estuary Program – This Program is a partnership of citizens, elected officials, resource managers and commercial and recreational resource users working to improve the water quality and ecological integrity of the greater Charlotte Harbor watershed. A cooperative decision-making process is used within the Program to address diverse resource management concerns in the 4,400 square mile study area.
- Indian River Lagoon National Estuary Program – This Program protects and restores the Indian River Lagoon through a partnership of the Lagoon’s five bordering counties, the Department, St. Johns River Water Management District and U.S. Environmental Protection Agency. It is governed by a Policy Board of elected officials and a Management Board of top-level lagoon managers and administrators.
- Hillsborough River Interlocal Planning Board/Hillsborough River Technical Advisory Council – The Hillsborough River Interlocal Planning Board (River Board) is an organization consisting of three elected officials representing the geographical location of the Hillsborough River. It is supported by the Hillsborough River Technical Advisory Council (Council), comprised of eight agency representatives (the Department is one of the eight agencies) and three citizen members. The River Board and Council developed a Master Plan for the Hillsborough River, incorporating policies broadly pertaining to water quality and quantity; safety and use of the River; and protection of wildlife and its habitat along the river.
- Tampa Bay Nitrogen Management Consortium (NMC) – The NMC consists of local governments, regulatory agencies, private industries and agricultural interests collaborating to achieve nitrogen management goals in Tampa Bay. NMC is a unique voluntary partnership funded by contributions

from participants. A Co-Chair from industry and a Co-Chair from local government in conjunction with representatives of the Tampa Bay Estuary Program provide oversight of the NMC.

### ***WATER POLICY AND ECOSYSTEMS RESTORATION***

- Everglades Technical Oversight Committee – The Committee originated from the July 11, 1991, Settlement Agreement as a mechanism for technical review and conflict resolution to support the Everglades Program begun by the Agreement and continued in the 1994 Everglades Forever Act (section 373.4592, F.S.).
- Restoration Strategies Science Plan Team – This interagency team required by the Restoration Strategies Regional Water Quality Plan accompanies the National Pollutant Discharge Elimination System Watershed Permits and associated consent orders for the Everglades Stormwater Treatment Areas (STAs). The team drafted a science plan that will ensure continued research and monitoring to improve and optimize the performance of the STAs.
- South Florida Ecosystem Restoration Task Force (SFERTF) – The SFERTF was established by section 528(f) of the Water Resources Development Act of 1996. The Task Force: 1) coordinates the development of consistent policies, strategies, plans, programs, projects, activities and priorities addressing the restoration, preservation and protection of the South Florida ecosystem; 2) exchanges information regarding programs, projects and activities of the agencies and entities represented on the Task Force to promote ecosystem restoration and maintenance; 3) facilitates the resolution of interagency and intergovernmental conflicts associated with the restoration of the South Florida ecosystem among the agencies and entities represented on the Task Force; 4) coordinates scientific and other research associated with the restoration of the South Florida ecosystem; and 5) provides assistance and support to agencies and entities represented on the Task Force in their restoration activities.
- SFERTF Working Group – Assists the Task Force in its efforts to coordinate the development of consistent policies, strategies, plans, programs, projects, activities and priorities addressing the restoration, preservation and protection of the South Florida ecosystem.
- SFERTF Science Coordination Group – Continually documents and supports programmatic-level science and other research through updates and implementation of the Task Force's Plan for Coordinating Science.
- SFERTF Biscayne Bay Regional Restoration Team – Implements an Action Plan developed to integrate and coordinate restoration, enhancement, preservation projects, plans, and activities to help maintain a functioning Biscayne Bay ecosystem. The focus is on maintaining adequate volume and appropriate timing and distribution of freshwater flow to Biscayne Bay.
- Water Resources Advisory Commission – This advisory body to the South Florida Water Management District Governing Board and the South Florida Ecosystem Restoration Task Force serves as a forum for improving public participation and decision-making about water resource issues in South and Central Florida.
- North Florida Regional Water Supply Partnership – This partnership is a collaborative effort among the St. Johns River and Suwannee River Water Management Districts, the Department, local elected officials and area stakeholders to protect natural resources and ensure cost-effective and sustainable

water supplies in northeast Florida.

- Central Florida Water Initiative (CFWI) – The CFWI builds on the prior work of the Central Florida Coordination Area. Both efforts focus on an area that includes southern Lake, Orange, Osceola, Seminole and Polk counties. The St. Johns River, Southwest Florida and South Florida Water Management Districts, along with the Department, Florida Department of Agriculture and Consumer Services, regional public water supply utilities and other stakeholders are collaborating to develop a unified process to address central Florida’s current and long-term water supply needs.
- Restoration Coordination and Verification (RECOVER) Leadership Group – The Comprehensive Everglades Restoration Plan interagency team is responsible for coordinating and integrating the activities of the RECOVER technical teams and ensuring that the overall focus and direction of the implementation process remains consistent with the goals of system wide restoration.
- Loxahatchee River Management Coordinating Council – The Council, established by Chapter 83-358, Laws of Florida, advises the Department and South Florida Water Management District on matters that affect administration of the Loxahatchee River.

#### ***ENVIRONMENTAL ASSESSMENT AND RESTORATION***

- Florida Water Resources Monitoring Council – The Council exists to communicate information about the STORET water data repository, share monitoring data, identify and address overlap and gaps in monitoring programs, catalog monitoring programs and investigate marine and coastal monitoring initiatives. It is comprised of the Department, the departments of Health and Agriculture and Consumer Services, Florida Fish and Wildlife Conservation Commission, Water Management Districts, local governments, federal agencies and volunteer organizations.

#### ***WATER RESOURCE MANAGEMENT***

- Non-Mandatory Land Reclamation Committee – The Committee was created pursuant to section 378.033, F.S., to advise the Department on non-mandatory reclamation of lands disturbed before July 1975.
- Miami-Dade County Lake Belt Mitigation Committee – This interagency committee was created pursuant to section 373.41492, F.S., to approve expenditures of mitigation fee funds to conduct projects to offset the impacts of limestone mining within the Miami-Dade County Lake Belt Area.

#### ***WASTE MANAGEMENT***

- Brownfield Areas Loan Guarantee Council – The Council was created pursuant to subsection 376.86(1), F.S., to approve or deny the situations and circumstances for a limited state guaranty of up to five years of loan guarantees or loan loss reserves for redevelopment of a Brownfield area.

## ***RECREATION AND PARKS***

### *State Park Operations*

- Visit Florida – Florida State Parks is a Visit Florida partner and serves on the Industry Relations Committee and other committees as appropriate. The Department’s Office of Greenways and Trails is a Visit Florida partner and serves on the Cultural, Heritage, Rural, Nature Tourism Committee and other committees as appropriate.
- Florida Attractions Association – Florida State Parks is a member of the Florida Attractions Association that promotes and advances the interests of the attraction industry.
- Florida Trail of Indian Heritage – Florida State Parks is a member of the network of archaeological sites, history museums, heritage interpreters and county, state and national parks working together to promote responsible site visitation and public education of Florida’s Indian heritage.
- Florida Association of Destination and Marketing Organizations – Florida State Parks is a member of the organization that is the single unifying voice for all of Florida’s destination marketing organizations, providing insight and direction as Florida enters a new millennium marked by an increasing competitive tourism marketplace.
- Florida Recreation and Park Association – Florida State Parks is a member of the organization that provides professional development, networking and resources to its members. The organization also provides advocacy for parks and recreation interests.
- National Recreation and Park Association – Florida State Parks is a member of the organization that is dedicated to advancing park, recreation and conservation efforts that enhance the quality of life for all people.
- Wekiva River System Advisory Management Council – Florida State Parks is a member of the organization that oversees the federally designated Wild and Scenic Wekiva River Basin. The organization is staffed by the National Park Service and advises the Secretary of the Interior on any river issues.
- Florida’s Prescribed Burning Councils – Florida State Parks is a member of the Florida’s North, Central and South Prescribed Burning Councils with multi-agencies who develop fire management policies and coordination for the State of Florida.
- Florida Greenways and Trails Council – Pursuant to Chapter 260, F.S., this advisory council reports on greenways and trails issues statewide.
- Florida Bicycle and Pedestrian Partnership Council – The Office of Greenways and Trails represents the Department on this Council. The Council was established in 2010 by the Florida Department of Transportation (DOT) to make policy recommendations to DOT and transportation partners throughout Florida on the state’s walking, bicycling and trail facilities.

### *Florida State Parks*

- Citizens Multimodal Advisory Committee – The Office of Greenways and Trails represents the Department on this Committee and makes recommendations to the Capital Region Transportation Planning Agency Board regarding the development of an efficient, safe and cost-effective transportation system that considers the needs of users of all modes of transportation, including bicycle/pedestrian and transit.
- Florida Off-Highway Vehicle (OHV) Advisory Committee – The Office of Greenways and Trails represents the Department on this Committee, which was established in chapter 261, F.S. The Committee members are appointed by the Commissioner of the Department of Agriculture and Consumer Service to establish policies to guide the Department regarding the OHV Recreation Program and the system of OHV recreation areas and trails.
- Florida Scenic Highways Advisory Committee – The Office of Greenways and Trails represents the Department on this committee, which was established by Section 335.093, F.S. The Florida Scenic Highways Program (FSHP) was developed “to preserve, maintain, protect and enhance Florida’s outstanding cultural, historical, archeological, recreational, natural and scenic resources.” The Committee advises the Florida Department of Transportation on whether the candidate corridors have met all requirements specified in the FSHP Manual, Rule 14.15.016, Florida Administrative Code.

### *Coastal and Aquatic Managed Areas (CAMA)*

- Florida Oceans and Coastal Resources Council – Established in Chapter 2005-166, Laws of Florida, the Council assists the state in identifying new research strategies to maximize protection and conservation of ocean and coastal resources while recognizing their economic benefits. The Council reviews existing research and prepares a Florida Ocean and Coastal Scientific Research Plan annually.
- Florida Keys National Marine Sanctuary Advisory Council – Formed by a Memorandum of Understanding signed by the Board of Trustees of the Internal Improvement Trust Fund, the Council provides oversight and direction to the management of the Florida Keys National Marine Sanctuary.
- U.S. Coral Reef Task Force (Interior/Commerce) – Executive Order 13089 by the president of the United States, created the U.S. Coral Reef Task Force and also established the Coral Reef Conservation Program within CAMA.
- Florida Aquaculture Review Council – Advises the Secretary of Agriculture on rules, policies and issues relevant to the aquaculture industry.
- Gulf Alliance – CAMA participates in an association of representatives of the five Gulf of Mexico states and federal agencies to coordinate coastal research, management and education efforts.
- South Atlantic Alliance – CAMA participates in an association of the four South Atlantic coastal states and federal agencies to coordinate coastal research, management and education efforts.
- Coastal States Organization – CAMA holds a seat on the executive committee. The Coastal States Organization represents the coastal states and has important input on ocean and coastal policies at a national level.

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- Gulf of Mexico (GOM) Program – CAMA participates in the Management Committee of the GOM Program. The committee advises the U.S. Environmental Protection Agency on research and management issues within the Gulf.
- Rainbow River Coordination Council – Established to develop a coordinated team effort to protect the Rainbow River and its recharge basin. With additional funding from the Springs Initiative that effort has also been expanded to the Rainbow River Springs. CAMA leads this effort and participants from the Department of State’s Division of Historical Resources, Southwest Florida Water Management District, Department of Agriculture and Consumer Services, Florida Fish and Wildlife Conservation Commission, Marion County, City of Dunnellon and Withlacoochee Regional Planning Council are among the members.

### ***AIR RESOURCES MANAGEMENT***

- Small Business Air Pollution Compliance Advisory Council – The council, established in section 403.8051, F.S., is comprised of seven members from different small business groups across the state to review and advise the Department on the effectiveness of the Small Business Environmental Assistance Program.
- Florida Air Monitoring Advisory Committee – The Advisory Committee exists to identify and address air monitoring quality assurance issues, and to provide guidance and training to the statewide Quality Assurance (QA) Coordinators. It comprises QA representatives from the Department and nine local air monitoring agencies.

## **STUDIES IN PROGRESS**

### ***FLORIDA GEOLOGICAL SURVEY***

Applied geology, hydrogeology, geophysics and geochemistry projects are ongoing in collaboration with regional, state and federal agencies and academia. Examples include statewide aquifer vulnerability modeling, statewide sinkhole potential mapping, informing our current knowledge of complex arsenic behavior Florida's hydrogeological environment, characterization and assessment of spring and coastal watersheds and detailed surface and subsurface geologic mapping. Applications of these projects include mitigation of groundwater contamination and sinkhole hazards, development of alternative drinking water supplies, characterization of mineral resources and refining frameworks for improve water balance/flow models in support of resource sustainability and springs restoration. FGS activities also include sea-floor characterization in cooperation with Florida Fish and Wildlife Conservation Commission and participates in work funded by the U.S. Department of Interior's Bureau of Ocean Energy Management. Other partners include Water Management Districts, the Department's Regulatory and Ecosystem Restoration programs, U.S. Geological Survey, Florida Division of Emergency Management and the State University System.

### ***ENVIRONMENTAL ASSESSMENT AND RESTORATION***

#### **South Florida Canal Aquatic Life Study**

The Division of Environmental Assessment and Restoration (Division) is conducting a study to comprehensively assess south Florida canals and their aquatic life. Study objectives are to:

1. Define appropriate and desired aquatic life;
2. Determine interrelationships between aquatic life and other variables that affect them;
3. Evaluate the best attainable condition for the canals; and
4. Identify information that can be used to guide management decisions.

Staff are currently conducting the third year of sampling at canal sites in southeast Florida (Palm Beach, Martin, St. Lucie, Broward and Dade counties) as scheduled. A contractor has been selected to conduct sampling of selected canals in Lee and Collier counties on the southwest coast during FY 2015-16. The contracting process is being finalized, and the contractor should start monitoring in September/October.

In addition to the monitoring, the Division is also working with stakeholders having expertise in assessing canal aquatic life or responsibility for canal operation and maintenance to assemble data regarding other variables that influence the quality and health of the canals. The Department's Office of Ecosystem Projects is also assisting with this effort. More information regarding the study is available at: [www.dep.state.fl.us/water/bioassess/docs/bcpost/2014/south\\_florida\\_canal\\_study\\_update.pdf](http://www.dep.state.fl.us/water/bioassess/docs/bcpost/2014/south_florida_canal_study_update.pdf).

#### **On-site Sewage Nitrogen Reduction Strategies Study**

The Division is working with the Florida Department of Health (who is the lead agency) to identify cost effective technologies to reduce the nitrogen loading impact of septic tanks, which have become a particularly significant concern in populated areas near springs. The study is scheduled to be completed by the end of 2015. Information on the study is available at [www.floridahealth.gov/healthy-environments/onsite-sewage/research/nitrogen-reduction.html](http://www.floridahealth.gov/healthy-environments/onsite-sewage/research/nitrogen-reduction.html).

#### **Septage Land Application Study**

During the 2014 Legislative Session, House Bill 1113 and Senate Bill 1160 proposed a study on available options for disposing or reusing septage, the waste pumped from on-site sewage treatment and disposal



systems. While the bills did not pass, the Division agreed to undertake a variation on the study, which now includes a progress report to the Legislature due by January 1, 2016 pursuant to proviso language in the 2015-16 General Appropriations Act. Based on the 2015-16 budget implementing bill, the prohibition on land application of septage in section 381.0065(6), F.S., has been extended from January 1 to June 30, 2016. The Division's study, when complete, will likely inform future legislative actions on land application of septage. The study includes monitoring and data collection at 10 representative septage application sites, a survey of septage haulers and treatment facilities and literature review.

#### Wekiva River Area Septic Tank Study

In collaboration with the Coalition for Property Rights and Orange County, the Division has initiated a yearlong study to evaluate the influence of septic systems on nitrogen concentrations in groundwater and the major springs contributing to the Wekiva River. It includes an assessment of nitrogen leaching from residential septic systems under a range of soil conditions, and monitoring of effluent, soil pore water and groundwater. In addition, the study includes an assessment of geologic conditions that govern nitrogen leaching and groundwater transport from septic tank areas to springs, which will include two groundwater tracer tests.

#### Alternative Drainfield Study

The Division, in cooperation with the state park system and the Florida Department of Health, is evaluating simplified, low-cost alternatives to enhance nitrogen removal by conventional septic tank drainfields. In many populated areas, including near spring systems, nitrogen leaching into groundwater is a significant problem. One year of monitoring of nitrogen removal by an under-drainfield amendment (recycled wood chips) at the septic system has been completed at the Ichetucknee Springs State Park Manager's residence, and positive initial results have been documented.

#### Indian River County Septic Tank Loading Evaluation

The Division has supported Florida State University (FSU) in the development of a modeling tool to help Indian River County identify residential areas that should be prioritized for sewerage due to septic tank contributions of nitrogen to canals and the Indian River Lagoon. The FSU modeling tool, ArcNLET, partially funded by the Division, is a simplified public domain tool that can be used to estimate nitrogen loads from septic systems to nearby surface waters via groundwater. A field study is being conducted in a representative neighborhood to monitor groundwater quality, levels and flow to the canal system and will be used to calibrate the model. After calibration, the model can be applied with confidence in other regions that have similar settings.

#### Microbial Source Tracking

The Division is using molecular source tracking (MST) methods to identify sources of fecal contamination in waters considered to be impaired (not meeting water quality standards) for fecal coliform bacteria. Methods that can differentiate human-induced fecal contamination from natural sources of bacteria are desirable when determining what action to take in response to a waterbody being listed as impaired. The Department's Laboratory is able to analyze genetic material extracted from water samples using new molecular biology methods to detect genetic markers that indicates the presence of human fecal contamination. The Laboratory also analyses for chemical markers of human fecal waste such as the artificial sweetener sucralose (Splenda®) and acetaminophen (Tylenol®). The Laboratory is validating additional genetic markers to identify the presence of other non-human sources of fecal contamination, such as birds and cattle. In addition to the molecular markers, the Laboratory is investigating additional techniques to discriminate fecal bacteria from naturally occurring environmental strains of bacteria not associated with fecal pollution. Once the development and verification work is complete on these methods, the Division will have a robust toolbox to assist in identifying the sources of fecal indicator bacteria in impaired waterbodies.

### Choctawhatchee Turbidity Study

The study was initiated to determine whether Alabama's dirt roads contribute to turbidity exceedances in the top most segment of the Choctawhatchee River in Florida. An initial investigation determined that both dirt roads and crossings in Florida and Alabama are partially to blame for sedimentation, but that other factors are at work. Further investigation was directed at whether aquatic life is being affected by the high levels of turbidity and whether the natural background of the Choctawhatchee River is a factor. The Division's investigation determined that a different turbidity threshold for this area of the Choctawhatchee River is appropriate, but the issue of its impairment status remains unresolved.

The study is being updated to include a comparison of Florida and Alabama stream condition index (SCI) scores, some of which have changed since the 2007 SCI. In addition, there is a need to evaluate best management practices in the both states along with potential sources of turbidity, including an evaluation of grain size and pesticide and herbicide applications for all sites. The next key step will occur once SCI results are calculated and a comparison can be completed.

### St. Lucie River Microbial Source Tracking

The Division partnered with Martin County Utilities and Engineering staff in a 2014 wet season and 2015 dry season to conduct a microbial source tracking study on the St. Lucie River and tributaries. The Division provided water quality sampling support and analytical services to assist Martin County in the identification of bacterial sources to the St. Lucie River and Estuary. Three separate monitoring events were performed in June, July and August of 2014. Given the identification of "hot spots" during the wet season events, Martin County executed dry season monitoring with three separate additional events occurring in February, April and May 2015. The Division is awaiting the results from the last event and will synthesize all of the results from the wet and dry season monitoring before determining future actions.

## ***WATER RESOURCE MANAGEMENT***

### Domestic Wastewater Ocean Outfalls

Section 403.086(9), F.S., prohibits construction of new domestic wastewater ocean outfalls, sets out a timeline for elimination of existing domestic wastewater ocean outfalls by 2025 and requires that a majority of the wastewater previously discharged be beneficially reused. Each of the ocean outfall permit holders is required to submit an updated detailed plan for meeting the requirements of the statute by July 1, 2016, and another progress report by December 31, 2019. The Department's next report to the Governor and Florida Legislature is due by July 1, 2020.

## ***WASTE MANAGEMENT***

### Landfill Sinkhole Technical Advisory Group

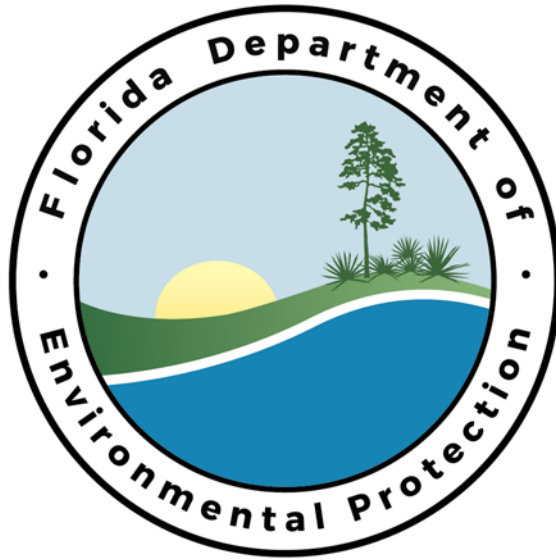
Recent Class I Landfill permitting projects located in karst areas of Florida have highlighted issues related to the potential risks posed to ground water from sinkholes should they form under landfills and cause a failure of the liner system. The Department continues to work with a Landfill Sinkhole Technical Advisory Group (TAG) to study these issues. The goal of the TAG is to develop guidance that will help the Department decide how to evaluate permit applications for solid waste disposal facilities in karst areas. It will also help applicants know what information should be submitted when seeking these permits.

## CONCLUSION

The Department of Environmental Protection works within the framework of the Governor's statewide priorities to identify the environmental and regulatory issues that should be addressed during the next five years. These broad and ongoing efforts include monitoring and assessing Florida's waters, restoring America's Everglades, promoting regulatory accountability by identifying and eliminating unnecessary and burdensome regulations, and providing citizens and visitors with year-round, nature-based recreational opportunities.

In addition, the agency may also be called upon to provide leadership in situations where sudden challenges create immediate threats to Florida's environment and economy. In 2010, the Department was designated as the lead agency for responding to impacts of the Deepwater Horizon oil spill along Florida's coast. In that role, the Department has led and coordinated critical natural resource preservation, cleanup and damage assessment activities.

The Department continually develops, evaluates and improves strategies needed to address these broad ranging challenges. Because we live in a constantly evolving world of technological, industrial and environmental change, it is imperative to initiate solutions rather than respond to problems. We must always be willing and able to efficiently identify and implement new, more effective problem-solving techniques. The objectives, strategies, outcomes and philosophies embodied in this Long Range Program Plan represent the foundation upon which this philosophy is transformed into a reality for the benefit of all Floridians.



Performance Measures and Standards -  
LRPP Exhibit II

**Performance Measures and Standards – LRPP Exhibit II**

Department of Environmental Protection - 37000000

Program	Budget Entity & Performance Measures	Approved Prior Year Standard FY 2014-15	Prior Year Actual FY 2014-15	Approved Standards for FY 2015-16	Requested Standard FY 2016-17
Administrative Services	<i>Executive Direction and Support Services - 37010100</i>				
	Administrative costs as a percent of total agency costs	1.4%	1.40%	1.4%	1.4%
	Administrative positions as a percent of total agency positions	9.5%	8.1%	9.5%	8.5%
	Average permit application time in house (receipt to agency action)	55 Days	25.3 Days	55 Days	30 Days
	Percent of regulated sites and facilities in compliance	90%	96%	90%	95%
	<i>Emergency Response – 37010400</i>				
	Percent of pollutant discharge sites remediated by the responsible party/owner in the context of emergency response	76%	77%	76%	76%
State Lands	<i>Land Management – 37100300 transferred to Land Administration and Management 37100400</i>				
	Proposed New Measure: Percentage of Land Use Plans and Land Management Plans meeting land management and conservation goals	N/A - New Measure	N/A - New Measure	N/A - New Measure	85%

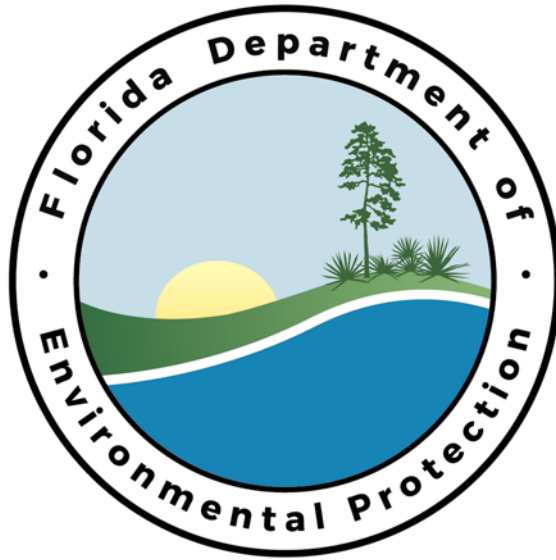
Program	<i>Budget Entity &amp; Performance Measures</i>	Approved Prior Year Standard FY 2014-15	Prior Year Actual FY 2014-15	Approved Standards for FY 2015-16	Requested Standard FY 2016-17
	Proposed New Measure: Average processing time for upland and submerged land instruments.	N/A - New Measure	N/A - New Measure	N/A - New Measure	45 Days
	Percentage of Florida Communities Trust Management Plans, Land Use Plans and Land Management Plans meeting land management and conservation goals	85%	84%	85%	DELETE
Water Policy and Ecosystems Restoration	<i>Water Policy and Ecosystems Restoration - 37200100</i>				
	Percent of Florida's 2030 public water supply demand met	5%	5%	5%	5%
	Percent of restoration activities completed over the last year (as required by the Everglades Water Quality Plan)	100%	100%	100%	100%

Program	<i>Budget Entity &amp; Performance Measures</i>	Approved Prior Year Standard FY 2014-15	Prior Year Actual FY 2014-15	Approved Standards for FY 2015-16	Requested Standard FY 2016-17
Environmental Assessment and Restoration	<i>Water Science and Laboratory Services - 37300100</i>				
	Percent of groundwater quality monitoring wells that reflect good water quality (no exceedances of ground water quality standards)	85%	81%	85%	82%
	<p>Percent of Florida's freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen):</p> <p>1) flowing streams; 2) combined lakes</p> <p>Proposed Revised Measure: The Department has proposed a change in the calculation methodology for the measure, which, requires a different format for reporting the results and a corresponding slight rewording of the measure, as follows: Percent of Florida's freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen):</p> <p>1) Large lakes; 2) Small lakes; 3) Rivers; 4) Streams</p>	1) flowing streams - 55%; 2) combined lakes – 70%	1) flowing streams - 47.2%; 2) combined lakes – 71.1%	1) flowing streams - 55%; 2) combined lakes – 70%	<p>Large lakes: TN - 85%; TP - 70%; DO - 95%</p> <p>Small Lakes: TN - 85%; TP - 90%; DO - 90%</p> <p>Rivers: TN - 70%; TP - 82%; DO - 95%</p> <p>Streams: TN - 65%; TP - 75%; DO - 80%;</p>

Program	Budget Entity & Performance Measures	Approved Prior Year Standard FY 2014-15	Prior Year Actual FY 2014-15	Approved Standards for FY 2015-16	Requested Standard FY 2016-17
Water Resource Management	<i>Beach Management – 37350100</i>				
	Percent of Florida’s 825 miles of sandy beaches that protect uplands, wildlife and recreation	78%	78%	78%	78%
	<i>Water Resource Management – 37350400</i>				
	Percent of reclaimed water (reuse) capacity relative to total domestic wastewater capacity; percent of treated domestic wastewater reused for beneficial purposes	60%; 45%	65.4%; 44.5%	60%; 45%	60%; 45%
	Percent of public water systems with no significant health drinking water quality problems	94%	100%	94%	94%
Waste Management	<i>Waste Management – 37450300</i>				
	Percent of municipal solid waste recycled	50%	50%	50%	50%
	Percent of contaminated sites with cleanup completed	47%	56%	56%	47%
Recreation and Parks	<i>State Park Operations – 37500300</i>				
	Percent change in the number of state parks acres restored or maintained in native state from the prior fiscal year	2%	5.7%	2%	10%
	Percent increase in the number of visitors from the prior fiscal year	1.3%	14.5%	1.3%	3.5%



Program	Budget Entity & Performance Measures	Approved Prior Year Standard FY 2014-15	Prior Year Actual FY 2014-15	Approved Standards for FY 2015-16	Requested Standard FY 2016-17
	<i>Coastal and Aquatic Managed Areas – 37500400</i>				
	Total number of degraded acres in National Estuarine Research Reserves enhanced or restored	1,320	1,604	1,320	1,320
	Percent increase in number of visitors	1.3%	2.5%	1.3%	1.3%
Air Resources Management	<i>Air Resources Management – 37550500</i>				
	Percent of time population breathes good or moderate quality air	99.1%	99.7%	99.1%	99.1%
	Percent change in per capita annual emissions of priority pollutants (nitrous oxides, sulfur dioxide, carbon monoxide, volatile organic compounds) compared with the level 5 years ago	-3.8%	-18.83% NO <sub>x</sub> -51.70% SO <sub>2</sub> -28.32% CO -12.16% VOC	-3.8%	-3.8%



Assessment of Performance for Approved  
Performance Measures -  
LRPP Exhibit III

## LRPP Exhibit III: PERFORMANCE MEASURE ASSESSMENT

**Department:** Environmental Protection

**Program:** State Lands

**Service/Budget Entity:** Land Admin and Management

**Measure:** Percentage of Florida Communities Trust Management Plan and Land Management Plans meeting land management and conservation goals.

**Action:**

- |   |   |
|---|---|
| <input type="checkbox"/> Performance Assessment of <u>Outcome</u> Measure | <input type="checkbox"/> Revision of Measure            |
| <input type="checkbox"/> Performance Assessment of <u>Output</u> Measure  | <input checked="" type="checkbox"/> Deletion of Measure |
| <input type="checkbox"/> Adjustment of GAA Performance Standards          |   |

Approved Standard	Actual Performance Results	Difference (Over/Under)	Percentage Difference
85%	84%	-1%	-1.17%

**Factors Accounting for the Difference:**

**Internal Factors** (check all that apply):

- |  |   |
|--|---|
| <input type="checkbox"/> Personnel Factors           | <input type="checkbox"/> Staff Capacity               |
| <input type="checkbox"/> Competing Priorities        | <input checked="" type="checkbox"/> Level of Training |
| <input type="checkbox"/> Previous Estimate Incorrect | <input type="checkbox"/> Other (Identify)             |

**Explanation:** During the measured time period, staff changes and levels of training increased in order to improve management plan review for compliance within statutory timeframes.

**External Factors** (check all that apply):

- |  |   |
|--|---|
| <input type="checkbox"/> Resources Unavailable                               | <input type="checkbox"/> Technological Problems |
| <input checked="" type="checkbox"/> Legal/Legislative Change                 | <input type="checkbox"/> Natural Disaster       |
| <input type="checkbox"/> Target Population Change                            | <input type="checkbox"/> Other (Identify)       |
| <input type="checkbox"/> This Program/Service Cannot Fix the Problem         |   |
| <input type="checkbox"/> Current Laws Are Working Against the Agency Mission |   |

**Explanation:**

**Management Efforts to Address Differences/Problems** (check all that apply):

- |                                    |   |
|------------------------------------|---|
| <input type="checkbox"/> Training  | <input type="checkbox"/> Technology       |
| <input type="checkbox"/> Personnel | <input type="checkbox"/> Other (Identify) |

**Recommendations:**

## LRPP Exhibit III: PERFORMANCE MEASURE ASSESSMENT

**Department:** Environmental Protection

**Program:** Environmental Assessment & Restoration

**Service/Budget Entity:** Water Science and Laboratory Services

**Measure:** Percent of Florida's freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) flowing streams; 2) combined lakes

**Action:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Performance Assessment of <u>Outcome</u> Measure | <input type="checkbox"/> Revision of Measure |
| <input type="checkbox"/> Performance Assessment of <u>Output</u> Measure             | <input type="checkbox"/> Deletion of Measure |
| <input type="checkbox"/> Adjustment of GAA Performance Standards                     |  |

Approved Standard	Actual Performance Results	Difference (Over/Under)	Percentage Difference
1) flowing streams - 55%; 2) combined lakes - 70%	1) flowing streams - 47.2%; 2) combined lakes - 71.1%	1) 7.8%; 2) 1.1%	1) 14.2%; 2) 1.6%

**Factors Accounting for the Difference:**

**Internal Factors** (check all that apply):

- |  |  |
|--|--|
| <input type="checkbox"/> Personnel Factors           | <input type="checkbox"/> Staff Capacity    |
| <input type="checkbox"/> Competing Priorities        | <input type="checkbox"/> Level of Training |
| <input type="checkbox"/> Previous Estimate Incorrect | <input type="checkbox"/> Other (Identify)  |

**Explanation:**

**External Factors** (check all that apply):

- |  |  |
|--|--|
| <input type="checkbox"/> Resources Unavailable                               | <input type="checkbox"/> Technological Problems      |
| <input type="checkbox"/> Legal/Legislative Change                            | <input type="checkbox"/> Natural Disaster            |
| <input type="checkbox"/> Target Population Change                            | <input checked="" type="checkbox"/> Other (Identify) |
| <input type="checkbox"/> This Program/Service Cannot Fix the Problem         |  |
| <input type="checkbox"/> Current Laws Are Working Against the Agency Mission |  |

**Explanation:** As noted in previous significant portions of the sources of excessive nutrient levels do not fall within the Department's regulatory jurisdiction. Agriculture, onsite sewage treatment and disposal systems and urban fertilizer use are notable examples. Weather conditions—drought and rain cycles—also influence nutrient concentrations.

Addressing these sources through collaborative Basin Management Action Plan (BMAP) implementation under Section 403.067, F.S., is a long-term process

requiring extensive, significant local investments in water quality protection infrastructure and changes in environmental stewardship behaviors and practices. Lasting water quality improvements often take years, even decades, to materialize as restoration projects are built and operated and legacy pollutants flush out of the ecosystem. In the interim, on a yearly basis, the reported measures for statewide water quality are likely to rise and fall.

The reported outcome measure for combined lakes —71.1% meeting the priority water quality criteria—exceeds the approved standard, although it falls within the statistically determined confidence interval of  $\pm 6.1\%$ .

The reported outcome for flowing waters—47.2% meeting the priority water quality criteria—is 14.2% below the established standard, which falls significantly outside the confidence interval of  $\pm 2.8\%$ .

The Department has increased the number of sites to monitor flowing waters, which increases the possibility of more sites failing for one or more of the criteria used to measure water quality (dissolved oxygen, total phosphorus and total nitrogen), which in turn reduces “compliance” with the standard.

In examining each criterion separately, the 2012-14 analysis reflects that dissolved oxygen shows the only significant change from prior years’ analyses. Total nitrogen and total phosphorus remain relatively constant. Dissolved oxygen is a measure of how much oxygen is dissolved in water. It is used by all forms of aquatic life, and the appropriate level of oxygen in a waterbody is one measure of waterbody health. Rapidly moving waters, such as mountain streams and large rivers, tend to contain higher levels of dissolved oxygen. Slower moving warm waters, like many of those in Florida, typically contain lower levels.

As to why the increase in dissolved oxygen “failures” in the period 2012-14, statewide increases in vegetative growth due to nutrient uptake along with increases in annual average water temperatures and extended drought conditions could be significant factors. More years of data will be required to determine if there is a trend in the priority criteria and what factors are responsible.

**Management Efforts to Address Differences/Problems** (check all that apply):

- Training
- Personnel

- Technology
- Other (Identify)

**Recommendations:** As noted in the previous section, the Department cannot make short-term adjustments in policy or practice that will improve short-term outcome performance. The agency proposes to continue to focus on the assessment and identification of nutrient water quality problems, the establishment of restoration goals (Total Maximum Daily Loads), and the implementation of comprehensive restoration plans (BMAPs). In addition, the

implementation of Florida's rigorous numeric nutrient criteria through the permitting of wastewater and stormwater systems will reduce the nutrients entering surface waters.

And, notwithstanding the statewide measure, within watersheds where BMAP implementation are underway, water quality is benefitting. For example, after more than five years of BMAP implementation, wastewater treatment facilities and urban stormwater systems in the freshwater reach of the Lower St. Johns River have exceeded their required total nitrogen and total phosphorus reductions while agriculture has achieved more than 50% of its total nitrogen reductions and more than 30% of its total phosphorus reductions. The targeted activities being implemented through BMAPs are making improvements in watersheds across Florida. Over the long term, these improvements should express themselves in statewide measures of water quality.

The Department is also proposing a modestly revised performance measure and measurement methodology to better break down the impact of nutrients and dissolved oxygen on large lakes, small lakes, rivers, and streams. The current methodology was developed before the Department's adoption of new dissolved oxygen and nutrient criteria (specifically, numeric nutrient criteria, or NNC) in 2013 and 2014. With the new criteria, it is no longer appropriate to combine the results into a collective sampling station "failure" rate as is currently done because it masks the individual result values for the three parameters, potentially making water quality appear worse than the representative metrics.

With the new criteria for nutrients and dissolved oxygen, the Department believes reporting them individually in relation to large lakes, small lakes, rivers, and streams will provide a more accurate and nuanced picture of statewide water quality.

## LRPP Exhibit III: PERFORMANCE MEASURE ASSESSMENT

**Department:** Environmental Protection

**Program:** Wastewater and Stormwater Management

**Service/Budget Entity:** Water Resource Management

**Measure:** Percent of treated domestic wastewater reused for beneficial purposes

**Action:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Performance Assessment of <u>Outcome</u> Measure | <input type="checkbox"/> Revision of Measure |
| <input type="checkbox"/> Performance Assessment of <u>Output</u> Measure             | <input type="checkbox"/> Deletion of Measure |
| <input type="checkbox"/> Adjustment of GAA Performance Standards                     |  |

Approved Standard	Actual Performance Results	Difference (Over/Under)	Percentage Difference
45%	44.5%	- 0.5%	- 1.1%

**Factors Accounting for the Difference:**

**Internal Factors** (check all that apply):

- |  |  |
|--|--|
| <input type="checkbox"/> Personnel Factors           | <input type="checkbox"/> Staff Capacity              |
| <input type="checkbox"/> Competing Priorities        | <input type="checkbox"/> Level of Training           |
| <input type="checkbox"/> Previous Estimate Incorrect | <input checked="" type="checkbox"/> Other (Identify) |

**Explanation:**

**External Factors** (check all that apply):

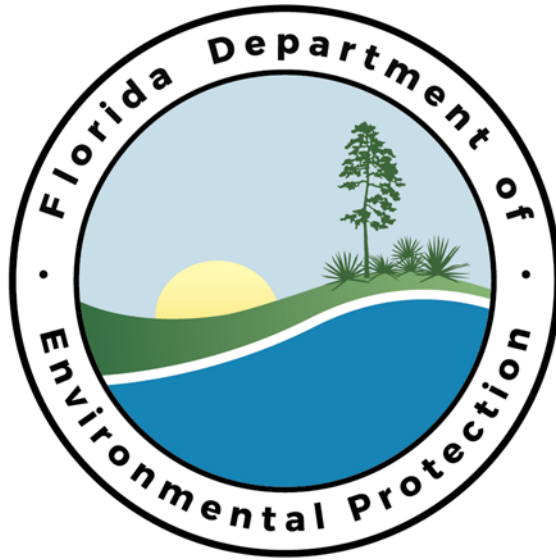
- |  |  |
|--|--|
| <input type="checkbox"/> Resources Unavailable                               | <input type="checkbox"/> Technological Problems      |
| <input type="checkbox"/> Legal/Legislative Change                            | <input type="checkbox"/> Natural Disaster            |
| <input type="checkbox"/> Target Population Change                            | <input checked="" type="checkbox"/> Other (Identify) |
| <input type="checkbox"/> This Program/Service Cannot Fix the Problem         |  |
| <input type="checkbox"/> Current Laws Are Working Against the Agency Mission |  |

**Explanation:** The percent of treated domestic wastewater reused for beneficial purposes depends on factors the Department does not have complete control over such as the economy and weather conditions.

**Management Efforts to Address Differences/Problems** (check all that apply):

- |                                    |  |
|------------------------------------|--|
| <input type="checkbox"/> Training  | <input type="checkbox"/> Technology                  |
| <input type="checkbox"/> Personnel | <input checked="" type="checkbox"/> Other (Identify) |

**Recommendations:** Continue outreach meetings with WMDs to ensure reuse is matched with demand; complete study required by SB536 to determine how use of reclaimed water can be expanded and implement recommendations.



Performance Measure Validity and Reliability -  
LRPP Exhibit IV



## LRPP EXHIBIT IV: Performance Measure Validity and Reliability

**Department:** Environmental Protection

**Program:** State Lands/Bureau of Public Land Administration

**Service/Budget Entity:** Land Administration and Management/37100400

**Measure:** Average processing time for upland and submerged land instruments

**Action** (check one):

- Requesting revision to approved performance measure.
- Change in data sources or measurement methodologies.
- Requesting new measure.
- Backup for performance measure.

**Data Sources and Methodology:** Data sources are the Integrated Land Management System (ILMS), Submerged & Upland Public Revenue System (SUPRS), and Excel Spreadsheet. The number of days is automatically tracked in the ILMS system. The time period for the measure is from assignment to work in ILMS to the mail out of the instrument for lessee/grantor signature. The average will be calculated by adding processing days for all instruments and dividing by the number of instruments to provide an average.

**Validity:** The databases were created to track work load throughout the process from the time of application to closure.

**Reliability:** The database and spreadsheet tracking of the process is reliable. The only errors would be from incorrect data entry.

## LRPP EXHIBIT IV: Performance Measure Validity and Reliability

**Department:** Environmental Protection

**Program:** State Lands/Office of Environmental Services

**Service/Budget Entity:** Land Administration and Management /37100400

**Measure:** Percentage of Land Use Plans and Land Management Plans meeting land management and conservation goals.

**Action** (check one):

- Requesting revision to approved performance measure.
- Change in data sources or measurement methodologies.
- Requesting new measure.
- Backup for performance measure.

**Data Sources and Methodology:** Data sources are a spreadsheet noting compliance of referenced plans with statutory requirements and quarterly compliance reports generated from spreadsheet. The plans are in compliance when they are submitted within the required timeframe, inspected, evaluated, and managed according to all statutory and rule guidelines set forth in the plan. Percentage calculation of the measure is derived by dividing the number of plans in compliance by the total number of plans. The Division of State Lands has developed a plan schedule that will be used to track the total number of plans. The program areas maintain tracking systems for reporting plan compliance. Those tracking systems will be used to identify plan compliance with statutory and rule requirements.

**Validity:** High level of reliability because staff review is followed by review by the Acquisition and Restoration Council for management plans and opportunity for public comment. For land use plans, QA/QC is performed by supervisory staff. Effective land management is a key priority for the Division of State Lands. The measure is designed to determine whether the division is meeting those specific requirements that comprise this core program objective.

**Reliability:** Reliability as only affected by human error in data entry, for which QA/QC will be increased when current data migrates to the Integrated Land Management System. (ILMS) If used as designed, the plan schedule and tracking system will provide program staff and managers accurate and consistent data and information to derive this measure.

## LRPP EXHIBIT IV: Performance Measure Validity and Reliability

**Department:** Environmental Protection

**Program:** Environmental Assessment & Restoration

**Service/Budget Entity:** Water Science and Laboratory Services

**Measure:** Percent of Florida's freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) flowing streams; 2) combined lakes

The Department proposes to revise the measurement methodology for the measure above to reflect adoption and approval of Florida's numeric nutrient criteria. It is similar to the current measure, but more accurately and sensitively reflects surface water quality conditions. It requires a change to the format for reporting results and a corresponding modest rewording of the measure, as follows:

Percent of Florida's freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) Small lakes; 2) Large lakes; 3) Rivers; 4) Streams.

The rationale for the change is explained in the form below.

**Action** (check one):

- Requesting revision to approved performance measure.
- Change in data sources or measurement methodologies.
- Requesting new measure.
- Backup for performance measure.

Currently, the outcome measure for flowing streams and combined lakes is calculated using a combined metric based on historical criteria for total nitrogen (TN) and total phosphorus (TP), which are nutrients, and dissolved oxygen (DO), a criterion that may indicate nutrient pollution. For each waterbody type, the results for TN, TP and DO at each sampling site (station) in the Department's Status Monitoring Network are evaluated collectively—unless all three of the parameters meet water quality criteria at that station, the station is determined to “fail.” The inverse of the failure rate for all stations sampled, after accounting for the extent of the resources statewide, is reported as the “percent of Florida's freshwater surface waters that meet priority water quality criteria.”

The current methodology was developed before the Department's adoption of new DO and nutrient criteria (specifically, numeric nutrient criteria, or NNC) in 2013 and 2014. With the new criteria, it is no longer appropriate to combine the results into a collective sampling station “failure” rate. Doing so inappropriately

masks the individual result values for the three parameters, potentially making water quality appear worse than truly representative metrics.

With the new criteria for TN, TP and DO, the Department believes reporting them individually in relation to large lakes, small lakes, rivers, and streams will provide a more accurate and nuanced picture of statewide water quality. As with the current calculation, the results for the three individual parameters are based on relatively small but statistically valid sample sizes. This is the only practical way to report statewide water quality because it is not feasible to measure all surface waters in all places at all times. Because the measure is statistically representative, the results come with calculated levels of statistical confidence. (See sections on validity and reliability.)

Department staff has compiled the data necessary for the proposed calculations for the three-year period 2012-2104, and the results are as follows:

<b>Percent of Florida’s freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen)</b>			
<b>Resource</b>	<b>Total Nitrogen</b>	<b>Total Phosphorus</b>	<b>Dissolved Oxygen</b>
Small Lakes	91.6 ±2.3	94.8 ±1.8	88.2 ±2.4
Large Lakes	90.3 ±2.3	77.6 ±5.9	98.5 ±0.5
Streams	67.3 ±2.8	74.9 ±2.2	77.1 ±2.6
Rivers	70.6 ±2.3	85.5 ±1.7	95.5 ±1.3

The results in the table reflect the percentage of statewide lake area and river/stream length that meet each criterion. The number following the percentage in each cell represents the statistically derived margin of error or confidence interval. For example, the 91.6% result for TN in small lakes above has a confidence interval of ±2.3%. This interval indicates that the room for error in the results is limited, and if the same analysis were conducted many times the results would be expected to fall within that 4.6% (±2.3%) interval.

**Data Sources and Methodology:**

The data source for the measure is the General Water Information System, known as GWIS, an enterprise Oracle database.

In order to determine the results reported for the measure, Department staff collect water samples from sampling sites for lakes and streams in the Status Monitoring Network (<http://www.dep.state.fl.us/water/monitoring/status.htm>). The samples are submitted to and analyzed by the Department’s Laboratory before being uploaded into GWIS. Data collection, handling and analysis are all governed by detailed protocols and quality assurance procedures. Once in GWIS, the data are reviewed by Watershed Monitoring Program staff before being deemed suitable for distribution or use. For the measure calculation, data collected each year during each rolling three-year period, ending with the most

recent fiscal year, are compared with the numeric nutrient criteria for TN, TP and DO to determine exceedances. The automated procedures employ statistical calculations to account for several factors, including statewide lake area and stream length.

The statistical program establishes the margin of error ( $\pm$ ) for each result, which reflects variability in the data. (See the table and explanation above.) The smaller the margin of error, the more confidence there is that the results are representative of statewide water quality. The procedures employ scripts originally developed by the U.S. Environmental Protection Agency. The scripts and their output are stored on a Department server: \\tlhwrn\sol z\data analysis\Status combined 2011, 2012, and 2013.

The data and the calculations for large lakes, small lakes, rivers, and streams are developed separately because the natural characteristics of these water resources and, in turn, the effect of nutrients and dissolved oxygen on their water quality are so different.

#### **Validity:**

Validity is defined as “the appropriateness of the measuring instrument in relation to the purpose for which it is being used.” The outcome measure reflects the reporting of water quality sampling results relative to specified water quality criteria, which are adopted in Department rule (chapter 302, Florida Administrative Code).

The only way to determine whether any individual waterbody meets an adopted water quality criterion is to analyze water quality samples taken from that waterbody. The only practical way to report on the statewide status of Florida’s surface waterbodies is to sample a statistically representative subset of waterbodies for one or more criteria. Sampling all waters at all times is physically impossible.

Nutrient pollution is the most significant water quality problem in Florida both in terms of its widespread impact and its deleterious effects on aquatic life. For that reason, nutrients and nutrient-related parameters (TN, TP and DO) have been selected to generally represent statewide water quality. The Department makes information about statewide water quality, including other water quality parameters, publicly available through Water Quality Report Cards. See <http://www.dep.state.fl.us/water/monitoring/report-cards.htm>.

The Department’s Status Monitoring Network measures Florida’s freshwater conditions with a known statistical confidence. In the case of surface waters, samples are collected at random and unbiased locations in each of six zones for small lakes of 10-25 acres; large lakes over 25 acres; rivers; streams; canals;

and spring vents. Each resource is sampled during the same month(s) or “index period” each year, which allows for direct comparisons over time.

Of interest for this LRPP measure, the samples are analyzed for nutrients and dissolved oxygen. The direct measurements are then extrapolated, through the use of validated statistical procedures, to reflect statewide water quality. This approach is an appropriate and practical means for portraying an overall picture of surface water quality in Florida.

### **Reliability:**

Reliability is defined as “the extent to which the measuring procedure yields the same results on repeated trials and data is complete and sufficiently error free for the intended use.”

As noted in the section on validity, the water quality data are gathered, analyzed and reported according to strict operating and quality assurance procedures. The measure is calculated annually based on data gathered each year during rolling three-year periods, ending with the most recent fiscal year. The water quality sample results are compared with adopted numeric nutrient criteria for TN, TP and DO to determine exceedances. The automated data calculations account for the statewide extent of lakes (area) and flowing waters (length) in order to report the percentage of statewide lake area and stream length that meet the criteria with a statistically derived margin of error.

Because these measures are statistical projections of statewide surface water quality based on representative sampling conducted in a randomized surface water monitoring network, a confidence level is associated with each result. Water quality samples are collected across Florida throughout the year to capture locational and seasonal differences. The results are then analyzed and processed through the use of data validation routines. The resulting data are weighted so that a disproportionate number of results from one region of the state will not skew the statewide results.

The statistical program used for the Status Monitoring Network establishes a 95% “confidence interval” for the data, which expresses the overall uncertainty associated with the results. The margin of error ( $\pm$ ) is the measurement of variability in the data. The smaller the margin of error, the more confidence there is that the results are representative of statewide water quality. These “inferential statistics” arise out of the fact that there is a certain amount of naturally occurring error in any representative sample set. Inferential statistics account for the use of relatively small data sets—in this case, a limited number of water quality sampling sites in surface waterbodies—to make generalizations about larger populations—in this case, waterbodies statewide—from which the data sets are drawn.

Referring back to the table above, the confidence intervals of the results range from  $\pm 0.5\%$  to  $\pm 5.9\%$ . These intervals indicate the marginal room for error in the results and reflect that if the same analysis were conducted repeatedly, the results always would be expected to fall within that interval. Thus, the measuring procedure yields the same results on repeated trials and the data are sufficiently error free for the purpose at hand.

As noted, the scripts and data output are stored on a Department server and the data are combined for 2012, 2013, and 2014.

## LRPP EXHIBIT IV: Performance Measure Validity and Reliability

**Department:** Environmental Protection

**Program:** Recreation and Parks

**Service/Budget Entity:** State Parks Operations/37500300

**Measure:** Percentage in number of state parks acres restored to or maintained in maintenance condition from the prior year.

**Action** (check one):

- Requesting revision to approved performance measure.
- Change in data sources or measurement methodologies.
- Requesting new measure.
- Backup for performance measure.

**Data Sources and Methodology:** Source of data is the Natural Resource Tracking System (NRTS) maintained by Recreation and Parks/Bureau of Natural and Cultural Resources.

The NRTS tracks the cumulative acres within the state parks that are managed by the removal of exotic plants and by prescribed burning. These lands are protected because of their unique and outstanding natural resources, opportunity for natural resource-based recreation, or historical and archaeological resources. The percentage is derived from taking the total number of acreage restored from the current year minus the previous year to determine the increase or decrease in the restoration of the lands.

The division reevaluates the performance standard to ensure it is in line with the measure. The division exceeded the measure in Fiscal Year 2014-15 by 4%. Request that the measure be increased to 2.5%

**Validity:** Will allow the Division of Recreation and Parks during a given year to provide an overall assessment of the number of acres restored to maintenance condition based on the Performance Measures Data Collections.

The impact of Amendment 1 provides additional funding which will assist in providing extra resources and opportunities to increase the number of acres maintained and restored within state parks.

**Reliability:** The Natural Resource Tracking System is maintained by the Division of Recreation and Parks/Bureau of Natural and Cultural Resources and is updated on a quarterly basis.



## LRPP EXHIBIT IV: Performance Measure Validity and Reliability

**Department:** Environmental Protection

**Program:** Recreation and Parks

**Service/Budget Entity:** State Parks Operations/37500300

**Measure:** Percentage of increase in the number of visitors from the prior fiscal year.

**Action** (check one):

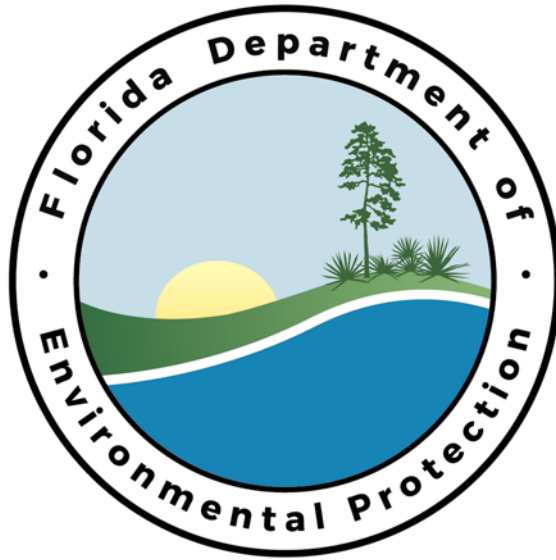
- Requesting revision to approved performance measure.
- Change in data sources or measurement methodologies.
- Requesting new measure.
- Backup for performance measure.

**Data Sources and Methodology:** The data source for tracking the number of visitors to state parks is the Recreation and Parks Management System (RMS) maintained on the Department's intranet site.

The division tracks state park visitation through a combination of historical park visitation increases and parks or park facilities being added in a given fiscal year. A steady increase in park visitation is a reasonable expectation and has been on a significant increase over the years. Weather can be the biggest factor in causing less park visitation than expected. As park visitation increases, the division reevaluates the performance standard to ensure it is in line with the measurement. Request that the measure be increased to 3%.

**Validity:** The Secretary's goal for the division is to increase visitation by 2% each year. The division exceeds this level by 12% of the set standards for Fiscal Year 2014-15.

**Reliability:** Performance Measure Data Collection is maintained by the Division of Recreation and Parks and is reported on a monthly basis and in an annual report.



Associated Activities Contributing to  
Performance Measures -  
LRPP Exhibit V

<b>LRPP Exhibit V: Identification of Associated Activity Contributing to Performance Measures</b>	
<b>Approved Performance Measures for FY 2015-2016</b>	<b>Associated Activities Title</b>
<b>Administrative Services Program</b>	
Administrative costs as a percent of total agency costs	Executive Direction
Administrative positions as a percent of total agency positions	Executive Direction
Percent of pollutant discharge sites remediated by the responsible party/owner in the context of emergency response	On-site emergency response, off-site coordination and assistance and cost recovery
	DELETE - Transfer to Florida Fish and Wildlife Conservation Commission to support Marine Patrol
	DELETE - Transfer to Florida Fish and Wildlife Conservation Commission to support Park Patrol and Bureau of Investigations
	NEW - Transfer to Florida Fish and Wildlife Conservation Commission to support Law Enforcement
<b>State Lands Program</b>	
Percentage of Land Use Plans and Land Management Plans meeting land management and conservation goals	Coordinate outreach for management plan and land use plan compliance
	Evaluate land use plans and management plans for quality and statutory compliance
	Provide technical assistance and outreach to ensure compliance
	Generate Acquisition and Restoration Council (ARC) items for management plan review and approval
	Coordinate/conduct on-site land management reviews
	Generate annual report of findings for on-site land management reviews
Proposed New Measure: Average processing time for upland and submerged land instruments.	Review of application submitted by stakeholder
	Assure requirement with Florida Administrative Code
	Technical assistance from the Division of State Lands Title and Survey and Mapping and land manager, district offices, waste and legal review
	Mailed to applicant for signature
	Final departmental execution
<b>Water Policy and Ecosystems Restoration Program</b>	
Percent of Florida's 2030 public water supply demand met	Assure compliance with statutory requirements
	Authorize and encourage (or require) reuse of reclaimed water through department and water management district permitting programs
	DELETE - Analyze biological and chemical samples
Percent of restoration activities completed over the last year (as required by the Everglades Water Quality Plan)	Assure compliance with statutory requirements
	Authorize and encourage (or require) reuse of reclaimed water through department and water management district permitting programs
	Analyze biological and chemical samples

<b>LRPP Exhibit V: Identification of Associated Activity Contributing to Performance Measures</b>	
<b>Approved Performance Measures for FY 2015-2016</b>	<b>Associated Activities Title</b>
<b>Environmental Assessment and Restoration Program</b>	
Percent of groundwater quality monitoring network wells that meet water quality standards	Assure compliance with statutory requirements
	Provide technical assistance, public education and outreach
	DELETE - Fund priority public health and water resource protection and restoration projects
	Establish water quality criteria and standards
	Monitor, assess and prioritize impaired surface waters and ground waters
	Interpret environmental data
	Analyze biological and chemical samples
	Develop total maximum daily load determinations for impaired waters
Percent of Florida's freshwater surface waters that meet priority water quality criteria (nutrients and dissolved oxygen): 1) flowing streams; 2) combined lakes	Analyze biological and chemical samples
	Interpret environmental data
	DELETE - Executive Direction
	DELETE - Fund priority public health and water resource protection and restoration projects
	Establish water quality criteria and standards
	Monitor, assess and prioritize impaired surface waters and ground waters
	Develop total maximum daily load determinations for impaired waters
	Assure compliance with statutory requirements
Provide technical assistance, public education and outreach	
<b>Water Resource Management Program</b>	
Percent of Florida's 825 miles of sandy beaches that protect uplands, wildlife and recreation	DELETE - Implement design and construction projects
	NEW - Coordinate with natural resource agencies and the U.S. Army Corps of Engineers
	NEW - Fund priority projects
	NEW - Assure compliance for permitted projects
	NEW - Provide strategic planning and technical assistance to local sponsors
	Monitor beach erosion
	Review and approve permits
	DELETE - Compliance assurance for beach management

<b>LRPP Exhibit V: Identification of Associated Activity Contributing to Performance Measures</b>	
<b>Approved Performance Measures for FY 2015-2016</b>	<b>Associated Activities Title</b>
Percent of reclaimed water (reuse) capacity relative to total domestic wastewater capacity; percent of treated domestic wastewater reused for beneficial purposes	Process water resource permits
	Assure compliance with statutory requirements
	Provide technical assistance, public education and outreach
	Fund priority public health and water resource protection and restoration projects
	DELETE - Establish water quality criteria and standards
	DELETE - Develop total maximum daily load determinations for impaired waters
	Authorize and encourage (or require) reuse of reclaimed water through Department and water management district permitting programs
	Fund eligible alternative water supply projects through the State Revolving Fund and other funding programs
	DELETE - Fund mine reclamation projects
	NEW - Perform public outreach at reuse workshops and seminars
	Percent of public water systems with no significant health drinking water quality problems
Assure compliance with statutory requirements	
Provide technical assistance, public education and outreach	
Fund priority public health and water resource protection and restoration projects	
Establish water quality criteria and standards	
Fund eligible alternative water supply projects through the State Revolving Fund and other funding programs	
<b>Waste Management Program</b>	
Percent of municipal solid waste recycled	Reduce waste
	Fund waste management projects
	NEW - Pass through funding
Percent of contaminated sites with cleanup completed	Manage government-funded cleanups of hazardous waste contaminated sites
	Manage government-funded cleanups of drycleaning contaminated sites
	Manage government-funded cleanups of petroleum contaminated sites
	DELETE - Process solid and hazardous waste permit applications, variances, exemptions, certifications and registrations
	DELETE - Conduct solid and hazardous waste compliance assurance
	DELETE - Conduct petroleum storage systems compliance assurance
	DELETE - Reduce waste
	Conduct site investigations
	Conduct site technical reviews
	DELETE - Fund waste management projects
	DELETE - Pass through funding

<b>LRPP Exhibit V: Identification of Associated Activity Contributing to Performance Measures</b>	
<b>Approved Performance Measures for FY 2015-2016</b>	<b>Associated Activities Title</b>
<b>Recreation and Parks Program</b>	
Percent change in the number of state parks acres restored or maintained in native state from the prior fiscal year	Resource management
Percent increase in the number of visitors from the prior fiscal year (State Parks)	Visitor services/recreation
Total number of degraded acres in National Estuarine Research Reserves enhanced or restored	Resource management
Percent increase in number of visitors	Visitor services/recreation
	Resource management
<b>Air Resources Management Program</b>	
Percent of time population breathes good or moderate quality air	Monitor ambient air quality
	Analyze air quality and emissions
	Implement the federal Clean Air Act
	Review and approve air resource permits
	Air compliance assurance
	Small business assistance
	Conduct education and outreach
	Coordination of Siting Acts, other certifications and report reviews
Percent change in per capita annual emissions of priority pollutants (nitrous oxides, sulfur dioxide, carbon monoxide, volatile organic compounds) compared with the level 5 years ago	Monitor ambient air quality
	Analyze air quality and emissions
	Implement the federal Clean Air Act
	Review and approve air resource permits
	Air compliance assurance
	Small business assistance
	Coordination of Siting Acts, other certifications and report reviews

ENVIRONMENTAL PROTECTION, DEPARTMENT OF		FISCAL YEAR 2014-15			
SECTION I: BUDGET		OPERATING		FIXED CAPITAL OUTLAY	
TOTAL ALL FUNDS GENERAL APPROPRIATIONS ACT		498,043,340		1,064,231,654	
ADJUSTMENTS TO GENERAL APPROPRIATIONS ACT (Supplementals, Vetoes, Budget Amendments, etc.)		3,112,976		27,899,450	
FINAL BUDGET FOR AGENCY		501,156,316		1,092,131,104	
SECTION II: ACTIVITIES * MEASURES		Number of Units	(1) Unit Cost	(2) Expenditures (Allocated)	(3) FCO
Executive Direction, Administrative Support and Information Technology (2)					1,800,000
Coordinate And Evaluate Land Management Plans * NUMBER OF PROJECTS/PROPOSALS EVALUATED		16	66,518.63	1,064,298	
Conduct Appraisals * NUMBER OF APPRAISALS COMPLETED ON PROJECTS ON CURRENT LIST (AS AMENDED)		123	6,178.26	759,926	
Survey And Map Lands For Purchase * NUMBER OF MAPPING PRODUCTS COMPLETED ON PROJECT ON CURRENT LIST (AS AMENDED) AND CORRESPONDING ACRES		44	18,393.16	809,299	
Conduct Land Acquisition Negotiations * NUMBER OF PARCELS (OWNERSHIPS) NEGOTIATED AND CORRESPONDING ACRES		91	2,528.92	230,132	
Perform Closings On State Land Acquisitions * NUMBER OF PARCELS (OWNERSHIPS) CLOSED AND CORRESPONDING ACRES		88	21,645.33	1,904,789	217,279,259
Public Land Leasing * number of instruments executed		1,323	6,062.99	8,021,335	
Surplus Property * Number of parcels sold		26	20,274.12	527,127	
Oversee Responsible Party Cleanups Through Enforcement * Number of known contaminated sites being cleaned up by responsible parties		2,494	1,655.30	4,128,313	
Process Water Resource Permits * Number of permits processed		13,178	3,547.19	46,744,854	137,573,614
Assure Compliance With Statutory Requirements * Number of regulatory inspections		8,546	1,993.91	17,039,941	2,277,174
Provide Technical Assistance, Public Education And Outreach * Number of technical assistance, public education and outreach contacts		51,523	51.07	2,631,340	
Fund Priority Public Health And Water Resource Protection And Restoration Projects * Number of projects funded		27	495,648.74	13,382,516	425,258,626
Establish Water Quality Criteria And Standards * Number of water quality standards established		171	36,325.18	6,211,606	
Monitor, Assess And Prioritize Impaired Surface And Ground Waters * Number of stations monitored annually in the statewide water quality status monitoring network		644	7,906.14	5,091,555	25,000,000
Develop Total Maximum Daily Load Determinations For Impaired Waters * Number of total maximum daily loads adopted		29	107,098.38	3,105,853	9,385,000
Fund Mine Reclamation Projects * Number of mine reclamation projects underway		15	166,778.47	2,501,677	4,200,000
Authorize/Encourage (or Require) Reuse Of Reclaimed Water Through Department And Water Management District Permitting Programs * Reclaimed water capacity in average millions of gallons per day		1,685	43,617.33	73,495,198	32,000,000
Implement Design And Construction Projects * Miles of critically eroding beach under a management plan		227	5,596.00	1,270,291	47,271,537
Monitor Beach Erosion * Miles of beaches monitored		141	12,141.23	1,711,914	
Review And Approve Permits * Number of permits issued		605	2,383.91	1,442,263	
Compliance Assurance For Beach Management * Enforcement or compliance inspections conducted		40	17,356.43	694,257	
Intergovernmental Programs And Coastal Management * Number of proposed federal and non-federal activities reviewed and/or comments obtained from state/regional agencies, including review of consistency determinations		406	2,705.32	1,098,358	
Manage Government-funded Cleanups Of Hazardous Waste Contaminated Sites * Number of known contaminated sites being cleaned up		52	59,216.15	3,079,240	4,000,000
Manage Government-funded Cleanups Of Drycleaning Contaminated Sites * Number of known contaminated sites being cleaned up		203	4,594.98	932,781	6,500,000
Manage Government-funded Cleanups Of Petroleum Contaminated Sites * Number of known contaminated sites being cleaned up		5,410	3,703.96	20,038,434	118,971,753
Process Solid And Hazardous Waste Permit Applications, Variances, Exemptions, Certifications And Registrations * Number of solid and hazardous waste permits, variances, exemptions, certifications and registrations processed		31,162	121.57	3,788,367	
Conduct Solid And Hazardous Waste Compliance Assurance * Number of inspections conducted		1,801	6,888.29	12,405,818	
Conduct Petroleum Storage Systems Compliance Assurance * Number of inspections conducted		16,783	612.02	10,271,500	
Reduce Waste * Number of local household hazardous waste collection center grants funded		5	400,048.80	2,000,244	
Conduct Site Investigations * Number of site investigations conducted annually		144	7,309.78	1,052,609	
Conduct Site Technical Reviews * Number of technical reviews conducted annually		257	7,960.29	2,045,795	
Fund Waste Management Projects * Number of projects funded		33	16,578.55	547,092	3,000,000
Monitor Ambient Air Quality * Number of quality assurance audit activities performed on ambient monitoring operations		1,168	5,798.54	6,772,700	
Analyze Air Quality And Emissions * Number of emission points reviewed and analyzed		5,135	169.33	869,499	
Implement The Federal Clean Air Act * Number of Clean Air Act plans produced		5	96,142.40	480,712	
Review And Approve Air Resource Permits * Number of air resource permits issued		1,185	5,932.34	7,029,819	
Air Compliance Assurance * Number of facility inspections		4,408	1,769.07	7,798,044	
Small Business Assistance * Number of Small Business Assistance Program contacts per year		28,527	2.38	67,945	
Coordination Of Siting Acts, Other Certifications And Report Reviews * Number of certifications and follow-ups of specified facilities		84	3,592.33	301,756	
Conduct Geologic Research Projects * Number of projects completed		586	6,423.95	3,764,436	
Analyze Biological And Chemical Samples * Number of analyses completed		131,867	58.73	7,745,183	
Interpret Environmental Data * Number of man hours expended		24,460	74.68	1,826,573	
Resource Management * Number of acres treated with controlled burns and exotic species removal.		89,657	211.36	18,949,684	
Visitor Services/Recreation * Number of visitors		32,133,328	2.96	95,205,369	41,897,820
On-site Emergency Response, Off-site Coordination And Assistance And Cost Recovery * Number of incidents reported		1,964	1,113.93	2,187,757	
TOTAL				403,028,199	1,076,414,783
SECTION III: RECONCILIATION TO BUDGET					
PASS THROUGHS					
TRANSFER - STATE AGENCIES				62,243,075	
AID TO LOCAL GOVERNMENTS					
PAYMENT OF PENSIONS, BENEFITS AND CLAIMS					
OTHER					
REVERSIONS				35,885,077	14,716,321
TOTAL BUDGET FOR AGENCY (Total Activities + Pass Throughs + Reversions) - Should equal Section I above. (4)				501,156,351	1,091,131,104

## SCHEDULE XI/EXHIBIT VI: AGENCY-LEVEL UNIT COST SUMMARY

- (1) Some activity unit costs may be overstated due to the allocation of double budgeted items.  
(2) Expenditures associated with Executive Direction, Administrative Support and Information Technology have been allocated based on FTE. Other allocation methodologies could result in significantly different unit costs per activity.  
(3) Information for FCO depicts amounts for current year appropriations only. Additional information and systems are needed to develop meaningful FCO unit costs.  
(4) Final Budget for Agency and Total Budget for Agency may not equal due to rounding.

## Glossary of Acronyms and Terms

**ACE:** Army Corps of Engineers

**Acquisition and Restoration Council:** An eleven-member group created by the Legislature to make recommendations to the Board of Trustees on the acquisition, management, and disposal of state-owned lands as directed in Section 259.035, F.S.

**Activity:** A unit of work which has identifiable starting and ending points, consumes resources, and produces outputs. Unit cost information is determined using the outputs of activities.

**Actual Expenditures:** Includes prior year actual disbursements, payables and encumbrances. The payables and encumbrances are certified forward at the end of the fiscal year. They may be disbursed between July 1 and December 31 of the subsequent fiscal year. Certified forward amounts are included in the year in which the funds are committed and not shown in the year the funds are disbursed.

**Appropriation Category:** The lowest level line item of funding in the General Appropriations Act which represents a major expenditure classification of the budget entity. Within budget entities, these categories may include: salaries and benefits, other personal services (OPS), expenses, operating capital outlay, data processing services, fixed capital outlay, etc. These categories are defined within this glossary under individual listings. For a complete listing of all appropriation categories, please refer to the ACTR section in the LAS/PBS User's Manual for instructions on ordering a report.

**ARC:** Acquisition and Restoration Council

**ArcView:** A software application for mapping used by the Office of Greenways and Trails and Division of State Lands, Bureau of Survey and Mapping.

**Australian Melaleuca Tree:** A large evergreen tree typically 65 feet in height with a brownish white, many-layered papery bark. Native to Australia and Malaysia, melaleuca was introduced into Florida in 1906 as a potential commercial timber and later extensively sold as a landscape ornamental tree and windbreak. It was also planted to dry up the Everglades to decrease mosquito populations and allow for development. Population estimates indicate melaleuca trees inhabit more than 400 thousand acres, mostly in southern Florida.

**Baseline Data:** Indicators of a state agency's current performance level, pursuant to guidelines established by the Executive Office of the Governor in consultation with legislative appropriations and appropriate substantive committees.

**Basin:** The entire surface area that collects water to supply a particular water body (e.g., a lake or river).

**BAWWG:** Biological Assessment of Wetlands Work Group

**Bioassessment:** Using biological approaches to measure and evaluate the consequences of human actions on biological systems.

**Biocriteria:** Numerical values or narrative expressions that describe the condition of aquatic, biological assemblages of reference sites of a given aquatic life use designation.



**BOT:** Board of Trustees of the Internal Improvement Trust Fund; also known as the Governor and Cabinet.

**Brownfield:** Real property, the expansion, redevelopment, or reuse of which may be complicated by actual or perceived environmental contamination. Brownfield Redevelopment Act was passed in 1997 by the Florida Legislature, creating a program that authorizes local governments to designate brownfield areas by resolution if certain criteria are met, including public notice requirements and the establishment of an advisory committee to improve public participation. The Act provided for the Department of Environmental Protection, or an approved local pollution control program, to enter into a brownfield site rehabilitation agreement with the applicant and to provide regulatory oversight for the cleanup process.

**Budget Entity:** A unit or function at the lowest level to which funds are specifically appropriated in the appropriations act. "Budget entity" and "service" have the same meaning.

**Office of Emergency Response:** Responds to incidents involving oil and hazardous substances representing an imminent hazard, or threat of a hazard, to the public health, welfare and safety, or the environment. Typically, these are inland and coastal spills of hazardous materials, such as petroleum or other contaminants, or may be chemical or biological agents of mass destruction.

**Byte:** Set of adjacent bits, now commonly a group of eight, used in computing to represent a unit of data such as a number or letter.

**CAMA:** Coastal and Aquatic Managed Areas

**CARL:** Conservation and Recreation Lands

**Cartographic:** Pertaining to the science of making maps.

**Causeway:** A raised path or road over a marsh or water or across land that is sometimes covered by water.

**CCA:** Chromated Copper Arsenate

**CERP:** Comprehensive Everglades Restoration Plan

**CHNEP:** Charlotte Harbor National Estuary Program

**Chromated Copper Arsenate (CCA):** A wood preservative, the most commonly used in Florida and the United States until the phase-out in January 2004 for residential uses. CCA contains high concentrations of chromium, copper and arsenic. When burned, CCA generates an ash containing high concentrations of these metals.

**CIO:** Chief Information Officer

**CIP:** Capital Improvements Program Plan

**Clean Marina:** A designation given to environmentally conscious marinas that join a voluntary program. The Clean Marina program is based on best management practices and developed through a partnership of Florida marinas, boatyards, boaters, and government.

**CO<sub>2</sub>:** Carbon Dioxide

**Comprehensive Everglades Restoration Plan:** The 30-year, \$7.8 billion Plan became law in 2000, creating a legally binding agreement between the state and federal government to reserve the water necessary to protect of the Everglades.

**Contamination Locator Map (CLM):** An online tool that provides localized information about contaminated sites in Florida.

**COT:** Commercial-Off-the-Shelf System

**Cross Florida Greenway:** Crossing central Florida from the Gulf of Mexico to the St. Johns River, the Marjorie Harris Carr Cross Florida Greenway occupies much of the land formerly known as the Cross Florida Barge Canal. This 110-mile corridor traverses a wide variety of natural habitats and offers a variety of trails and recreation areas.

**CWM:** Comprehensive Watershed Management

**DACS:** Department of Agricultural and Consumer Services

**D3-A:** A legislative budget request (LBR) exhibit, which presents a narrative explanation and justification for each issue for the requested years.

**Debt Service:** The amount of interest and sinking fund payments due annually on long-term debt.

**Deep-Well Injection:** A waste disposal technique in which industrial waste, sewage, radioactive waste, and (in the case of oil and gas production or reverse osmosis potable water production) saltwater are pumped under high pressure through wells that are cased and cemented at shallow levels, such that the disposed fluids will be forced into confined formations that are isolated and well below potential sources of drinking water.

**Demand:** The number of output units that are eligible to benefit from a service or activity.

**Department:** Department of Environmental Protection

**Dissolved Oxygen:** The volume of oxygen that is contained in water.

**DMS:** Department of Management Services

**DOAH:** Division of Administrative Hearings, a part of the Department of Management Services. Administrative Law Judges conduct hearings on matters in dispute, including Siting case hearings.

**DOH:** Department of Health

**Dolomite:** Calcium magnesium carbonate. In rock form, dolomite is a sedimentary rock containing more than 50% of the minerals calcite and dolomite, with dolomite being the most abundant.

**DOT:** Department of Transportation

**DRI:** Developments of Regional Impact

**DEAR:** Division of Environmental Assessment and Restoration

**DWM:** Division of Waste Management

**DWRM:** Division of Water Resource Management

**EASIIR:** Electronic Access System for Inspection Information Retrieval

**Ecological Integrity:** The condition of an unimpaired ecosystem as measured by combined chemical, physical (including physical habitat), and biological attributes.

**Ecosystem:** A place having unique physical features, encompassing air, water, and land, and habitats supporting plant and animal life.

**Ecotourism:** The effort to attract visitors to a particular area for the purpose of visiting, enjoying and learning about nature and natural resource-based attractions or locations. In Florida, ecotourism is primarily related to the state's system of nationally prominent State Parks, a growing network of greenways and trails and the state's world-renowned top-rated beaches.

**Enterprise Self Service Authorizations system (ESSA):** Part of the Department's Internet Portal, ESSA makes on-line registration available for the renewal of the Division of Waste Management's 270 yard trash processing facilities.

**Environmental Resource Permitting:** A part of the Division of Water Resource Management, this program reviews development that alters the flow of water over the land or affects wetlands and other surface waters.

**Environmental Regulation Commission:** Established through s. 403.804, F.S., the Commission is the standard-setting authority for the Department, holding regular public meetings including rule adoption hearings.

**EOG:** Executive Office of the Governor

**EPA:** Environmental Protection Agency

**Epidemiology:** The scientific study of the causes and transmission of disease within a population.

**ERC:** Environmental Regulation Commission

**Erosion:** The gradual wearing away of rock or soil by physical breakdown, chemical solution, and transportation of material, as caused, for example, by water, wind, or ice.

**ERP:** Environmental Resource Permitting

**Estimated Expenditures:** Includes the amount estimated to be expended during the current fiscal year. These amounts will be computer generated based on the current year appropriations adjusted for vetoes and special appropriations bills.

**Estuary:** A partially enclosed body of water formed where freshwater from rivers and streams flows into the ocean, mixing with the salty seawater.

**F.S.:** Florida Statutes

**FAC:** Florida Administrative Code

**FCO:** Fixed Capital Outlay

**FDACS:** Florida Department of Agriculture and Consumer Services

**FDEP:** Florida Department of Environmental Protection

**FDLE:** Florida Department of Law Enforcement

**FDOT:** Florida Department of Transportation

**FFWCC:** Florida Fish and Wildlife Conservation Commission

**FGCC:** Florida Greenways Coordinating Council

**FGS:** Florida Geological Survey

**FIRST:** A database system for the Storage Tank Program called “Florida Inspection Reporting for Storage Tanks”.

**First Magnitude Spring:** A spring with a measured flow of at least 100 cubic feet per second.

**FITS:** Facility Identification Template for States. A set of working guidelines for integrating information about the identity of environmental data based on the collective experience of participant states.

**Fixed Capital Outlay:** Real property (land, buildings including appurtenances, fixtures and fixed equipment, structures, etc.), including additions, replacements, major repairs, and renovations to real property which materially extend its useful life or materially improve or change its functional use, and including furniture and equipment necessary to furnish and operate a new or improved facility.

**FLAIR:** Florida Accounting Information Resource Subsystem

**Florida Coastal Management Program:** Transferred in 2002 from the Department of Community Affairs to the Department of Environmental Protection, this program is based on a network of agencies implementing 23 statutes that protect and enhance the state’s natural, cultural, and economic coastal resources. The goal of the program is to coordinate local, state, and federal agency activities using existing laws to ensure that Florida’s coast is protected.

**Florida Forever:** Blueprint for conservation of Florida’s natural resources through restoration of damaged environmental systems, water resource development and supply, increased public access, public lands management and maintenance, and increased protection of endangered and threatened species and unique natural systems by acquisition of conservation lands; replaced the Preservation 2000 Program.

**Florida Keys National Marine Sanctuary:** The 2,800 square nautical mile area surrounding the entire archipelago of the Florida Keys and including the productive waters of Florida Bay, the Gulf of Mexico and the Atlantic Ocean.

**FRDAP:** Florida Recreation Development Assistance Program

**Fuller's Earth:** A general term that can be applied to many types of clay that have an exceptional ability to absorb coloring materials from oils of animal, vegetable, and mineral origin. In Florida, the term is narrowly limited. Subsection 378.403(6), Florida Statutes, defines Fuller's Earth as clay possessing a high absorptive capacity consisting largely of the minerals montmorillonite or palygorskite.

**FWCC:** Fish and Wildlife Conservation Commission

**FY:** Fiscal Year

**GAA:** General Appropriations Act

**Geodetic:** A branch of applied mathematics concerned with the determination of the size and shape of the earth and the exact positions of points on its surface and with the description of variations of its gravity field.

**Geophysical:** A branch of earth science dealing with the physical processes and phenomena occurring especially in the earth and in its vicinity. Geophysics deals with a wide array of geologic phenomena, including the temperature distribution of the Earth's interior; the source, configuration, and variations of the geomagnetic field; and the large-scale features of the terrestrial crust.

**Geoscience:** A science (such as geology, geophysics, and geochemistry) dealing with the earth.

**GIS:** Geographic Information System

**GR:** General Revenue Fund

**Graphical User Interface (GUI):** A program user interface that takes advantage of the computer's graphics capabilities to make the program easier to use. A user interface can be the keyboard, mouse, computer system menu, or any boundary across which the user and the computer system meet and act on or communicate with each other.

**Greenway:** As defined in Chapter 260, F.S., a linear open space established along either a natural corridor, such as a river front, stream valley, or ridgeline, or over land along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route; any natural or landscaped course for pedestrian or bicycle passage; an open space connector linking parks, nature reserves, cultural features, or historic sites with each other and populated areas; or a local strip or linear park designated as a parkway or green belt.

**Groundwater:** Water that is found underground in cracks and spaces in soil, sand, and rocks.

**HB:** House Bill

**Heavy Minerals:** Dense grains found not only in rocks, but also in different types of sand.

**Hydrilla:** A submersed plant native to Africa and Southeast Asia that is a major aquatic weed throughout most of the world's warmer climates. Hydrilla was introduced into Florida in the early 1950s and by the early 1990s occupied more than 140,000 acres of public lakes and rivers. Intensive interagency management has reduced the above ground portions of hydrilla to fewer than 50,000 acres.

**IHN:** Integrated Habitat Network. Serves as a guide for permitting and reclamation in the Central Florida phosphate mining district, with the objective of improving wildlife habitat, benefiting water quality and

quantity, and connect the river systems in the mining region with significant environmental features.

**IMS:** Integrated Management Systems

**Indicator:** A single quantitative or qualitative statement that reports information about the nature of a condition, entity or activity. This term is sometimes used as a synonym for the word “measure.”

**Information Technology Resources:** Includes data processing-related hardware, software, services, telecommunications, supplies, personnel, facility resources, maintenance, and training.

**Input:** See Performance Measure.

**Invasive Plant or Invasive Exotic Plant:** A plant species that is not native to a particular geographic area (in this case, Florida) and has been introduced into that area through intentional or unintentional artificial means.

**IOE:** Itemization of Expenditure

**IT:** Information Technology

**Judicial Branch:** All officers, employees, and offices of the Supreme Court, district courts of appeal, circuit courts, county courts, and the Judicial Qualifications Commission.

**Karst:** A type of terrain characterized by sinkholes, caves, disappearing streams, springs, rolling topography, and underground drainage systems. Such terrain is created by ground-water dissolving limestone.

**Lagoon:** A coastal body of shallow water formed where low-lying rock, sand, or coral presents a partial barrier to the open sea.

**Lake Worth Lagoon:** Historically, Lake Worth Lagoon was a freshwater lake with drainage from a swampy area along the western edge. Today, Lake Worth Lagoon is connected to the Atlantic Ocean by two permanent inlets. The Atlantic Intracoastal Waterway runs the entire length of the Lagoon. Eight causeways and bridges connect the mainland to the barrier island. Twenty-eight marinas and hundreds of private docks are scattered along the shoreline.

**Land Management Uniform Accounting Council:** Entrusted with compiling conservation land management costs across state agencies and with establishing formulas for identifying land management funding needs.

**LAN:** Local Area Network

**LAS/PBS:** Legislative Appropriation System/Planning and Budgeting Subsystem. The statewide appropriations and budgeting system owned and maintained by the Executive Office of the Governor.

**LBC:** Legislative Budget Commission

**LBR:** Legislative Budget Request

**Legislative Budget Commission:** A standing joint committee of the Legislature. The Commission was created to: review and approve/disapprove agency requests to amend original approved budgets; review

agency spending plans; issue instructions and reports concerning zero-based budgeting; and take other actions related to the fiscal matters of the state, as authorized in statute. It is composed of 14 members appointed by the President of the Senate and by the Speaker of the House of Representatives to two-year terms, running from the organization of one Legislature to the organization of the next Legislature.

**Legislative Budget Request:** A request to the Legislature, filed pursuant to s. 216.023, Florida Statutes, or supplemental detailed requests filed with the Legislature, for the amounts of money an agency or branch of government believes will be needed to perform the functions that it is authorized, or which it is requesting authorization by law, to perform.

**LIFE:** Learning in Florida's Environment. An initiative administered through the Department's Office of Environmental Education, wherein partnerships are formed between the Department and local school districts. The goal of each LIFE program is to increase student achievement and teacher professional development in science education. It is the state's largest network of outdoor, environmental-science education programs.

**LMUAC:** Land Management Uniform Accounting Council

**L.O.F.:** Laws of Florida

**Long-Range Program Plan:** A plan developed on an annual basis by each state agency that is policy-based, priority-driven, accountable, and developed through careful examination and justification of all programs and their associated costs. Each plan is developed by examining the needs of agency customers and clients and proposing programs and associated costs to address those needs based on state priorities as established by law, the agency mission, and legislative authorization. The plan provides the framework and context for preparing the legislative budget request and includes performance indicators for evaluating the impact of programs and agency performance.

**LRPP:** Long-Range Program Plan

**LWL:** Lake Worth Lagoon

**Marsh:** A tract of soft, wet land usually characterized by grassy vegetation.

**Mean High Water Line:** Point used to mark the boundary of a body of water.

**Mercury:** A poisonous heavy silver-white metallic chemical element that is liquid at room temperature.

**Methyl Mercury:** A highly toxic, bioaccumulative form of mercury often created when mercury is mixed with other contaminants, such as sulfate.

**METRA:** Metropolitan Environmental Training Alliance

**MFL:** Minimum Flows and Levels

**NAAQS:** National Ambient Air Quality Standards

**Narrative:** Justification for each service and activity is required at the program component detail level. Explanation, in many instances, will be required to provide a full understanding of how the dollar requirements were computed.

**NASBO:** National Association of State Budget Officers

**NERR:** National Estuarine Research Reserves

**NOAA:** National Oceanic and Atmospheric Administration

**NO<sub>2</sub>:** Nitrogen Dioxide

**Non-Point Source:** A physical, visual, touchable avenue that carries nutrients to a waterway. Examples include a ditch or pipe through which wastewater effluent might reach a river, stream, or lake. A large dairy or farm that might collect agricultural runoff in holding ponds and release some of the water via overflow pipe or ditch.

**Non-Recurring:** Expenditure or revenue that is not expected to be needed or available after the current fiscal year.

**O<sub>3</sub>:** Ozone

**Objective:** Specific, measurable, intermediate ends that mark progress toward achieving the associated goal.

**OCA:** Other cost accumulators

**OCULUS™:** The Department's web-based document management system.

**OGT:** Office of Greenways and Trails

**OPB:** Office of Policy and Budget, Executive Office of the Governor

**OPS:** Other Personal Services

**OTIS:** Office of Technology and Information Services

**Outcome:** See Performance Measure.

**Other Cost Accumulators:** Refers to accounting codes in the FLAIR system.

**Output:** See Performance Measure.

**Outsourcing:** Describes situations where the state retains responsibility for the service, but contracts outside of state government for its delivery. Outsourcing includes everything from contracting for minor administration tasks to contracting for major portions of activities or services that support the agency mission.

**Pass Through:** Funds the state distributes directly to other entities, e.g., local governments, without being managed by the agency distributing the funds. These funds flow through the agency's budget; however, the agency has no discretion regarding how the funds are spent, and the activities (outputs) associated with the expenditure of funds are not measured at the state level. NOTE: This definition of "pass through" applies ONLY for the purposes of long-range program planning.

**PAT:** Permitting Action Tree



**Pb:** Lead

**Performance Ledger:** The official compilation of information about state agency performance-based programs and measures, including approved programs, approved outputs and outcomes, baseline data, approved standards for each performance measure and any approved adjustments thereto, as well as actual agency performance for each measure.

**Performance Measure:** A quantitative or qualitative indicator used to assess state agency performance.

- **Input:** the quantities of resources used to produce goods or services and the demand for those goods and services.
- **Outcome:** an indicator of the actual impact or public benefit of a service.
- **Output:** the actual service or product delivered by a state agency.

**Phosphogypsum:** The solid waste byproduct that results from the wet acid process of making phosphoric acid.

**Pipe Clay Areas:** Areas of land in which a type of fine, white clay is found.

**PLSS:** Public Land Survey System. A system of 250,000 section corners, created in 1824, which provides the basis for all land titles and land ownership boundary descriptions.

**PM:** Particulate Matter

**PM2.5:** Software application under development through the Air Resources Management program

**PMC:** Program Management Committee

**PPM:** Project and portfolio management.

**Policy Area:** A grouping of related activities to meet the needs of customers or clients that reflects major statewide priorities. Policy areas summarize data at a statewide level by using the first two digits of the ten-digit LAS/PBS program component code. Data collection will sum across state agencies when using this statewide code.

**Pollution Prevention:** Any practice which: a) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and b) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants. The term includes: equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

**Preservation 2000 Program:** Predecessor of Florida Forever land acquisition program that protected more than 1.78 million acres of conservation land.

**Preserves:** A piece of water or land owned by the government or conservation group, where wildlife, plants, or geographical features are protected or where fish or wild animals are bred.

**Primary Service Outcome Measure:** The service outcome measure which is approved as the performance measure which best reflects and measures the intended outcome of a service. Generally, there is only one primary service outcome measure for each agency service.

**Privatization:** Occurs when the state relinquishes its responsibility or maintains some type of partnership role in the delivery of an activity or service.

**Program:** A set of activities undertaken in accordance with a plan of action organized to realize identifiable goals based on legislative authorization (a program can consist of single or multiple services). For purposes of budget development, programs are identified in the General Appropriations Act for FY 2003-2004 by a title that begins with the word "Program." In some instances a program consists of several services, and in other cases the program has no services delineated within it; the service is the program in these cases. The LAS/PBS code is used for purposes of both program identification and service identification. "Service" is a "Budget Entity" for purposes of the LRPP.

**Program Component:** An aggregation of generally related objectives which, because of their special character, related workload and interrelated output, can logically be considered an entity for purposes of organization, management, accounting, reporting, and budgeting.

**Program Purpose Statement:** A brief description of approved program responsibility and policy goals. The purpose statement relates directly to the agency mission and reflects essential services of the program needed to accomplish the agency's mission.

**QA:** Quality Assurance

**Radon:** A colorless, odorless, tasteless, and radioactive gas. It is formed during the radioactive decay of Radium-226, which is a decay product in the uranium series. Low concentrations of uranium and its decay products, especially Radium-226, occur widely in the earth's crust. Thus, radon is naturally occurring and is being generated continuously. A portion of the radon formed during radioactive decay moves through pores in the soil to the soil surface and enters the air, while some remains below the surface and dissolves in ground water.

**RBCA:** Risk-Based Corrective Action

**Recharge Area:** An area that allows water to enter the aquifer. Such an area is particularly vulnerable to any pollutants that could be in the water. This is a very slow process whereby water infiltrates the ground surface and then percolates through the sediments until it either reaches a zone of saturation above an impermeable rock layer creating a water table or continues through the rock layer in a number of ways and recharges an aquifer.

**Reliability:** The extent to which the measuring procedure yields the same results on repeated trials and data are complete and sufficiently error free for the intended use.

**Remediation:** A remedy or solution to a particular problem, designed to help people with to improve their skills or knowledge; an alternative to litigation.

**RRT:** Regional Response Team

**SaaS:** Software as a Service

**Salinity:** Measure of the concentration or level of salt.

**Sanctuary:** A place or area of land where wildlife is protected from predators and from being destroyed or hunted by human beings.

**SB:** Senate Bill

**SBAP:** Small Business Assistance Program

**SBP:** State Buffer Preserves

**SCITS:** Secretary's Correspondence/Information Tracking System

**SCO:** Siting Coordination Office

**SEACO:** Southeast Air Coalition for Outreach

**Seismic Tomography:** A technique for three-dimensional imaging of the Earth's interior by using a computer to compare the seismic records from a large number of stations. It is similar in concept to a CAT scan used for medical purposes.

**SERT:** State Emergency Response Team

**Service:** See Budget Entity.

**SFERTF:** South Florida Ecosystem Restoration Task Force

**SFWMD:** South Florida Water Management District

**SFY:** State Fiscal Year

**Significant Compliance (Waste Program):** A facility that has not committed a significant non-compliance violation (SNC), also known as a "Major" or "Moderate" violation, which actually resulted in, or is reasonably expected to result in, pollution in a manner that represents a significant threat to human health or the environment.

**Sinkhole:** A natural depression in the land surface, caused by the dissolution of limestone.

**Sinkhole Dumping:** Improper disposal of waste into sinkholes.

**Siting:** A procedure for the selection, licensing and utilization of sites for electrical generating facilities, including their sites, for electrical transmission lines and natural gas pipelines. .

**Silviculture:** A branch of forestry dealing with the development and care of forests with respect to human objectives.

**SJRWMD:** St. Johns River Water Management District

**Sludge:** The solids in sewage that separate out during treatment.

**Small Business Assistance Program:** Established by Title V of the Clean Air Act Amendments of 1990, this program resides in the Division of Air Resource Management and provides technical and regulatory assistance to small businesses in the state.

**SO<sub>2</sub>:** Sulfur Dioxide

**Source Water Assessment and Protection:** A program designed to assess potential sources of water pollution, so that strategies for reducing those threats can be developed and implemented.

**STA:** Stormwater Treatment Area.

**Standard:** The level of required performance for an outcome or output.

**Sulfate:** A salt or ester of sulfuric acid; this chemical is often found in runoff from farms.

**SWAP:** Source Water Assessment and Protection

**SWFRRCT:** Southwest Florida Regional Restoration Coordination Team

**SWFWMD:** Southwest Florida Water Management District

**SWIFT:** A database system for the Solid and Hazardous Waste Program called “Solid Waste Information Field Tracking.”

**SWOT:** Strengths, Weaknesses, Opportunities and Threats

**TCS:** Trends and Conditions Statement

**Terabytes:** An information unit of one trillion bytes.

**TF:** Trust Fund

**TMDL:** Total Maximum Daily Load

**Toxicology:** The scientific study of poisons, especially their effects on the body and their antidotes.

**Trails:** Linear corridors and their adjacent land or water that provide public access for recreation or authorized alternative modes of transportation.

**Trust Fund:** A state investment fund over which an agency (e.g., the Florida Department of Environmental Protection) has legal management authority.

**UF:** University of Florida

**Unit Cost:** The average total cost of producing a single unit of output – goods and services for a specific agency activity.

**UNIX:** A computer programming language

**Upland:** Ground elevated above the lowlands along rivers or between hills.

**Upland Buffer:** Uplands that provide a protective barrier for adjacent lowlands or coastal areas.

**UPS:** Uninterrupted Power Supply

**U.S. EPA:** United States Environmental Protection Agency

**USF&WS:** United States Fish and Wildlife Service

**USGS:** United States Geological Survey

**Validity:** The appropriateness of the measuring instrument in relation to the purpose for which it is being used.

**VC:** Video conferencing.

**VPN:** Virtual Private Network. An expansion of the Department's computer network, which provides home and remote high-speed, secure access to agency email and network computers.

**VOC:** Volatile Organic Compound

**WACS:** The Department's Water Assurance Compliance System database.

**Water Hyacinth:** A plant native to South America that is now considered a major weed species in more than 50 countries. The floating water hyacinth was introduced into Florida in the 1880s and covered more than 120,000 acres of public lakes and navigable rivers by the early 1960s. Since then, intensive management efforts coordinated by the Florida Department of Environmental Protection and the U.S. Army Corps of Engineers have reduced water hyacinth to approximately 2,000 acres statewide.

**Water Lettuce:** A floating plant native to South America that is considered to be one of the worst weeds in the subtropical and tropical regions of the world. In Florida, it was first recorded in 1765; its introduction is linked to early shipping commerce between Florida and South America. Today, water-lettuce is commonly found in the central and southern portions of the state, but new infestations of water-lettuce have been found in North Florida's spring-fed rivers and lakes. Because of intensive statewide management efforts, water-lettuce populations are maintained at low population densities.

**Watershed:** The land area that drains into a particular lake, river, or ocean.

**WCI:** Water Conservation Initiative

**Web-Enabled:** Information formatted in such a manner that it can be placed on an Internet web site.

**Wetland:** Those areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support - and under normal circumstances do support - a prevalence of vegetation typically adapted for life in saturated soils.

**WMD:** Water Management District

**WWSRF:** Wastewater State Revolving Fund