

Operations & Maintenance

Success Indicator:	1) Compliance with current fiscal year budget-driven segment of the 50-year Plan
Definition:	<p>Budget for capital projects that are “green” divided by total budget for capital projects.</p> <p>All capital construction projects are prioritized based on engineering condition, functional capacity, and emergency response of the structures, pump stations, levees, and canals. This is to ensure that the infrastructure is in appropriate condition to perform according to original intent design.</p>
Data Source(s):	<ul style="list-style-type: none"> • 10-Year Capital Projects Plan • 50-Year Plan
Reporting Period:	Fiscal Year (FY) (October 1–September 30)
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Refurbish infrastructure to design conditions
Why is Success Indicator important:	Much of the South Florida Water Management District infrastructure is nearing the end of its design lifespan. The Operations & Maintenance Program has performed routine maintenance, which has effectively extended the lifespan of many structures. However, many structures have experienced normal deterioration beyond the scope of maintenance activities. Operations & Maintenance program staff evaluate the condition of control structures, pump stations, canals, and District facilities, and makes recommendations for the Capital Projects Program. This success indicator is important because it is a measure of compliance against actual budgets.
Example:	<p>FY2008 budget for capital projects that ended FY2008 as “green” according to Annual Work Plan Report = \$X</p> <p>FY2008 total budget for capital projects = \$Y</p> <p>$\\$X/\\$Y = Z\%$ compliance</p>
Target(s):	Completion of 90% of budgeted projects, weighted by individual project budgets
Target definition source:	Operation & Maintenance Annual Work Plan
Subject matter expert(s):	Alex Damian

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Success Indicator:	2) 95% compliance with permit requirements
Definition:	Percentage of permits fully in compliance; compliance with regulatory permits obtained, and statutory requirements relating to continuing Operations and Maintenance activities. This does not include permits for projects with finite durations. Examples include Title V air emissions permits; spill prevention, controls, and countermeasures plans for petroleum, oil, and lubricant containment; the Lake Okeechobee Operating Permit; and hazardous waste accumulation and disposal.
Data Source(s):	<ul style="list-style-type: none"> • Permits and plans maintained by the Maintenance Engineering Section • Notices of violations
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Operate within environmental regulations
Why is Success Indicator important:	Ensures that the District continues a tradition of environmental excellence and fully complies with applicable federal, state, and local regulatory requirements
Example:	<ul style="list-style-type: none"> • All Title V permit reporting is submitted on time and emission ceilings are not breached • All Spill Prevention, Control, and Countermeasure plans are complete and posted with required facility modifications and training complete • Hazardous waste is properly accumulated and shipped to disposal in accordance with applicable regulations • Full compliance with operating provisions of the Lake Okeechobee Operating Permit
Target(s):	95% of permits fully in compliance
Target definition source:	Operation & Maintenance Annual Work Plan
Subject matter expert(s):	Alex Damian

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Success Indicator:	3) 99% flood protection achieved for rainfall events within project design standards
Definition:	<p>Percentage of time in the acceptable range. Moving water within operating criteria is accomplished through 24-hour real-time monitoring of hydrometeorological parameters, such as stage, flow, and rainfall, and making operational changes at regional water control structures, as needed. <u>Unacceptable:</u> Canal levels are above or below stage criteria due to human error. <u>Acceptable:</u> Canal stages are within the optimum levels for the climatic conditions being experienced, and human error has not resulted in damage due to flooding or unacceptable low water levels. Note: Rainfall deficit and extremes may result in canal stages above or below design optimum but not because of human error.</p> <p>Technical measuring devices, such as stilling wells, are used in combination with either Motorola Supervisory Control and Data Acquisition (MOSCAD) or Remote Acquisition Control Unit (RACU) and data collection criteria, which is compared to the established operating criteria.</p>
Data Source(s):	District's DBHYDRO database; U.S. Geological Survey data; U.S. Army Corps of Engineers (USACE) operating criteria; Stormwater Treatment Area operating criteria; Data Collection and Validation Program database; Information Management System database
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Maintain stages within operating criteria.
Why is Success Indicator important:	<p>Moving water within operating criteria is key in balancing and improving the District mission elements of flood control, water supply, water quality, and natural systems. By maintaining water stages at the major structures within the criteria, the system will be at optimum performance to aid in flood control, prevent saltwater intrusion, provide water supply, and improve water quality.</p> <p>The District is responsible for operating the Central & Southern Florida (C&SF) Project according to operating criteria defined by the U.S. Army Corps of Engineers and by federal Consent Decree. There are over 600 gravity flow, water control structures and 60 pump stations. The system is monitored continuously to ensure that water levels are maintained within set criteria designed to prevent damage to property and the natural environment. Even with a sophisticated computerized control and data acquisition system, there is always potential for human error. Constant evaluation and continued development of tools to assist water managers and operators can minimize the potential for human errors that compromise either flood control or water supply.</p>
Example:	<p>Operators monitor system stages and notify water managers if any stages are outside of operating criteria. Alarms also sound if conditions result in stages outside of operating criteria.</p> <p>On an annual basis, water levels are plotted against operating criteria to determine if stages were maintained within operating criteria.</p>
Target(s):	Operate within the criteria 99% of the time
Target definition source:	DBHYDRO database; Water Conditions Reports
Subject matter expert(s):	Susan Sylvester

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Success Indicator:	4) 99% of planned structure maintenance performed on schedule
Definition:	Maintenance schedule compliance; all maintenance performed based on industry standards and manufacture requirements
Data Source(s):	SAP Plant Maintenance Module; Operation & Maintenance Manuals; Annual Work Plans
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually
Aligned Strategy:	Maintain structures and pump stations to meet operational demands
Why is Success Indicator important:	The operation, maintenance, and refurbishment of water control structures and pump stations are critical to moving water to meet operational demands, and to ensure the movement of water through critical water control structures and pump stations to meet demands for flood control and water supply deliveries.
Example:	<p>Structure Maintenance Plant Maintenance (PM)</p> <ul style="list-style-type: none"> • Major Gate Overhauls — 10-Year Salt Water, 15-Year Fresh Water • Monthly PM Schedule — Any structure equipped with a stationary emergency backup generator, such as major gated spillways and telemetry sites • Quarterly PM Schedule — Any structure that has the ability to regulate the water elevation by manual or automated control such as gated culverts • Semiannual PM Schedule — Any structure that does not have the means to mechanically control water elevations, such as weirs and flow-through culverts <p>Pump Station PM</p> <ul style="list-style-type: none"> • Weekly Pump Station PM — Test run all equipment • Monthly Pump Station PM — Routine pump station service • 1500 Hour PM – Main engine services • Main Engine Overhaul — 20,000 to 30,000-hour refurbishments
Target(s):	Complete 99% of planned maintenance
Target definition source:	Operations & Maintenance Annual Work Plans
Subject matter expert(s):	Alex Damian; Fred Remen; Joel Arrieta

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Success Indicator:	5) 90% of canals/levees passing U.S., Army Corps of Engineers inspection
Definition:	<p>USACE inspections as defined in the following Code of Federal Regulations (CFR):</p> <ul style="list-style-type: none"> • Chapter 90.54.020.11 Reclaimed Water, Water Resources Development Act of 1971, (11) Water management programs, including but not limited to, water quality, flood control, drainage, erosion control, and storm runoff are deemed to be in the public interest • Code of Federal Regulations Title 33, Part 208, Section 208.10, Local Flood Protection Works; Maintenance and Operation of Structures and Facilities • Public Law 91-611 (84 Statute 1818), Section 221 of Flood Control Act of 1970 • ER 1130-2-335, Project Operations, Levee Maintenance Standards and Procedures • ER 1130-2-530, Project Operations, Flood Control Operations and Maintenance Policies • ER 1150-2-301, Local Cooperation, Policies and Procedures
Data Source(s):	Semiannual USACE Reports
Reporting Period:	Pre-storm season (February) and post-storm season (September)
Reporting Frequency:	Semiannually
Aligned Strategy:	Maintain canals and levees to USACE regulations
Why is Success Indicator important:	The structures and facilities constructed by the USACE for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits. CFR, Sec. 208.10 (A).
Example:	<p>Compliance with CRF Sec.208.10 Local Flood Protection Works</p> <p>Channels and floodways -- Maintenance. Periodic inspections of improved channels and floodways will be made by the superintendent to be certain that:</p> <ul style="list-style-type: none"> • The channel or floodway is clear of debris, weeds, and wild growth • The channel or floodway is not being restricted by the depositing of waste materials, building of unauthorized structures, or other encroachments • The capacity of the channel or floodway is not being reduced by the formation of shoals • Banks are not being damaged by rain or wave wash, and that no sloughing of banks has occurred • Riprap sections and deflection dikes and walls are in good condition • Approach and egress channels adjacent to the improved channel or floodway are sufficiently clear of obstructions and debris to permit proper functioning of the project works <p>Levees Maintenance - All times such maintenance as may be required to insure serviceability of the structures in time of flood. Measures shall be taken to promote the growth of sod, exterminate burrowing animals, and to provide for routine mowing of the grass and weeds, removal of wild growth and drift deposits, and repair of damage caused by erosion or other forces. Periodic inspections shall be made to insure that the above maintenance measures are being effectively carried out and, further, to be</p>

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	<p>certain that:</p> <ul style="list-style-type: none"> • No unusual settlement, sloughing, or material loss of grade or levee cross section has taken place; • No caving has occurred on either the land side or the river side of the levee which might affect the stability of the levee section; • No seepage, saturated areas, or sand boils are occurring; • Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged; • Drains through the levees and gates on said drains are in good working condition; • No revetment work or riprap has been displaced, washed out, or removed; • Access roads to and on the levee are being properly maintained; • Crown of levee is shaped so as to drain readily, and roadway thereon, if any, is well shaped and maintained; • There is no unauthorized grazing or vehicular traffic on the levees; • Encroachments are not being made on the levee right-of-way which might endanger the structure or hinder its proper and efficient functioning during times of emergency.
Target(s):	90% pass USACE inspection
Target definition source:	CFR 33 Sec. 208.10
Subject matter expert(s):	Joel Arrieta

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Success Indicator:	6) 90% design conveyance capable.
Definition:	As defined in the following Code of Federal Regulations: <ul style="list-style-type: none"> • Chapter 90.54.020.11 RCW, Water Resources Act of 1971 (11) Water management programs, including but not limited to, water quality, flood control, drainage, erosion control and storm runoff are deemed to be in the public interest. • Code of Federal Regulations Title 33, Part 208, Section 208.10, Local Flood Protection Works; Maintenance and Operation of Structures and Facilities. • Public Law 91-611 (84 Statute 1818), Section 221 of Flood Control Act of 1970. • ER 1130-2-335, Project Operations, Levee Maintenance Standards and Procedures. • ER 1130-2-530, Project Operations, Flood Control Operations and Maintenance Policies. • ER 1150-2-301, Local Cooperation, Policies and Procedures.
Data Source(s):	Semiannual USACE Reports
Reporting Period:	Pre-storm season (February) and post-storm season (September)
Reporting Frequency:	Semiannually
Aligned Strategy:	Maintain canals and levees to USACE Regulations
Why is Success Indicator important:	The structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits. CFR, Sec. 208.10 (A).
Example:	<p>Compliance with CRF Sec.208.10 Local flood protection works</p> <p>Channels and floodways — Maintenance. Periodic inspections of improved channels and floodways shall be made by the Superintendent to be certain that:</p> <ul style="list-style-type: none"> • The channel or floodway is clear of debris, weeds, and wild growth; • The channel or floodway is not being restricted by the depositing of waste materials, building of unauthorized structures or other encroachments; • The capacity of the channel or floodway is not being reduced by the formation of shoals; • Banks are not being damaged by rain or wave wash, and that no sloughing of banks has occurred; • Riprap sections and deflection dikes and walls are in good condition; • Approach and egress channels adjacent to the improved channel or floodway are sufficiently clear of obstructions and debris to permit proper functioning of the project works. <p>Levees Maintenance — All times such maintenance as may be required to insure serviceability of the structures in time of flood. Measures shall be taken to promote the growth of sod, exterminate burrowing animals, and to provide for routine mowing of the grass and weeds, removal of wild growth and drift deposits, and repair of damage caused by erosion or other forces. Periodic inspections shall be made to insure that the above maintenance measures are being effectively carried out and, further, to be certain that:</p> <ul style="list-style-type: none"> • No unusual settlement, sloughing, or material loss of grade

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	<p>or levee cross section has taken place;</p> <ul style="list-style-type: none"> • No caving has occurred on either the land side or the river side of the levee which might affect the stability of the levee section; • No seepage, saturated areas, or sand boils are occurring; • Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged; • Drains through the levees and gates on said drains are in good working condition; • No revetment work or riprap has been displaced, washed out, or removed; • Access roads to and on the levee are being properly maintained; • Crown of levee is shaped so as to drain readily, and roadway thereon, if any, is well shaped and maintained; • There is no unauthorized grazing or vehicular traffic on the levees; • Encroachments are not being made on the levee right-of-way which might endanger the structure or hinder its proper and efficient functioning during times of emergency.
Target(s):	90% design conveyance
Target definition source:	Code of Federal Regulation 33 Sec. 208.10: The structure and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits.
Subject matter expert(s):	Joel Arrieta

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Success Indicator:	7) 99% of planned vehicle maintenance performed on schedule
Definition:	Scheduled general maintenance of District vehicles and equipment other than Operations & Maintenance vehicles and equipment.
Data Source(s):	SAP Plant Maintenance Module; Operations and Maintenance – Standard Operating Procedure; Annual Work Plans
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Maintain all vehicles and equipment in a safe and acceptable condition
Why is Success Indicator important:	Ensures preventive maintenance is completed on-time to prevent vehicles or equipment failures that may impact the ability to meet operational demands
Example:	<p>Light Vehicles: 0–19,000 pounds</p> <ul style="list-style-type: none"> • 4,000-mile oil change and inspection with check sheet. <p>Medium Duty Trucks: 19,001–36,000 pounds</p> <ul style="list-style-type: none"> • 6,000-mile inspection and oil change with check sheet <p>Heavy Duty Trucks: 36,001+ pounds</p> <ul style="list-style-type: none"> • 12,000-mile inspection and oil change with check sheet <p>24,000-mile Transmission Service</p> <ul style="list-style-type: none"> • Service transmissions at 24,000-mile intervals <p>Semiannual inspection</p>
Target(s):	Complete 99% of planned maintenance.
Target definition source:	Operation & Maintenance Annual Work Plan
Subject matter expert(s):	Joel Arrieta

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Success Indicator:	8) 90% compliance with electronic communication installation and maintenance schedule
Definition:	<p>Percentage of scheduled Supervisory Control and Data Acquisition (SCADA) installation and maintenance that are in the “Acceptable” range.</p> <p><u>Unacceptable:</u> SCADA system equipment installation is not delivered when promised or turnaround time for critical site equipment maintenance is not timely. Equipment installation and maintenance is not performed within 24 hours of schedule.</p> <p><u>Acceptable:</u> SCADA system equipment is installed by the expected delivery date or critical site equipment maintenance is performed in a timely manner. Equipment installation and maintenance is performed within 24 hours of schedule.</p>
Data Source(s):	<ul style="list-style-type: none"> • Operations & Maintenance Resource Area Annual Work Plan • SAP Notification Reports • Engineering (Installation) Section Activities Progress Report
Reporting Period:	Quarterly
Reporting Frequency:	Quarterly
Aligned Strategy:	Maintain SCADA infrastructure to District Standards
Why is Success Indicator important:	Meeting the resource area goal of flood protection requires that water managers have real-time water level data available for decision making, water budgeting, and planning. Installing, upgrading, and maintaining the monitoring network that provides that data are key to the success of flood protection.
Example:	An SAP notification of failure at S-5A filed on Saturday at 1500 hours must be physically addressed by Sunday at 1500 hours
Target(s):	90% compliance with installation and maintenance schedule
Target definition source:	SCADA and Instrumentation Management Site Worksheet database; Historical Trend Analysis
Subject matter expert(s):	Keith Smith

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Success Indicator:	9) 90% of land at an acceptable level of exotics infestation
Definition:	<p>Unacceptable: Land with more than 10% exotic coverage to include medium and high level infestations</p> <ul style="list-style-type: none"> • Heavy: Percentage of area with more than 50% exotics coverage. • Medium: Percentage of area with less than 50% exotics coverage but more than 10%. <p>Acceptable: Land with less than or equal to 10% exotic coverage to include low and maintenance level infestations</p> <ul style="list-style-type: none"> • Low: Percentage of area with 10% or less exotics coverage but more than 1% exotics coverage. Regular maintenance treatments are required to keep the area clear • Maintenance: Percentage of area with 1% or less exotics coverage <p>Total Acres Treated: Total acres covered while implementing exotic control measures (manual, chemical, and mechanical)</p>
Data Source(s):	Weed Data and Reporting (WEEDAR) Data Management System
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Manage natural resources effectively
Why is Success Indicator important:	The Operations & Maintenance Program has management responsibilities for invasive exotic species in the Water Conservation Areas, Lake Okeechobee, and the Stormwater Treatment Areas. In the absence of control efforts, these species adeptly establish themselves in natural communities, thereby displacing native species and, over time, creating monocultures completely devoid of Florida's native biodiversity. Constructed wetlands require diligent vegetation management activities to ensure optimal water treatment performance.
Example:	Percentage of area with an acceptable exotic infestation
Target(s):	District lands with less than 10% exotic coverage
Target definition source:	Vegetation Management Standard Operating Procedures
Subject matter expert(s):	Francois Laroche

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Success Indicator:	10) 90% of canals at an acceptable level of aquatic plant infestation
Definition:	<p>For Flood Control Project Assets:</p> <ul style="list-style-type: none"> • Maintain 99% of canal unobstructed by targeted floating plants and 100% clear around water control structures. The 100%-clear zone around structures means one-quarter-mile upstream and immediately downstream of the structure. • Maintain more than 50% of water column unobstructed by targeted submerged aquatic vegetation in accordance with prioritized work plans and 100% clear around water control structures as defined above. • Maintain targeted emergent aquatic vegetation 90% clear of water body only when impairment of intended use occurs. The impairment of use can mean either water movement or accessibility. • Maintain targeted ditchbank or fenceline vegetation in accordance with prioritized work plans. Structures and rip-rap should be maintained 100% vegetation-free. <p>For Lakes:</p> <ul style="list-style-type: none"> • Maintain 99.9% of the water body unobstructed by targeted floating plants. For example, the maintenance goal for Lake Kissimmee, a 35,000-acre lake, would be 35 acres or less of the lake surface covered by floating weeds. • Maintain submerged and emergent plants in the water body in accordance with interagency objectives (i.e., fisheries, water flow, navigation, and habitat stabilization) and available funding.
Data Source(s):	WEEDAR Data Management System.
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Control vegetation that impedes system effectiveness
Why is Success Indicator important:	<p>Aquatic Plants disrupt the ability of the District to effectively manage water resources. Research done by U.S. Department of Agriculture personnel in 1963 demonstrated the problems caused by aquatic vegetation on the ability of channels to meet design flow of water. It was found that a cover of floating plants can reduce flow in medium-to-large channels by nearly half, and that submerged weeds cut the flow by as much as 97%. Another study done by the University of Florida and funded by the USACE in 1985 attempted to quantify the benefits of maintaining low levels of water hyacinth. The results indicated that maintaining low levels of floating aquatic plants (below 5% coverage) can reduce annual herbicide usage by a factor of 2.6, and reduce organic deposition by a factor of 4.0.</p> <p>It is anticipated that by implementing these standards, the water bodies in the District will be maintained in a balanced condition, keeping invasive exotic pest plants at the lowest possible level while encouraging native communities to thrive and still allow for the proper movement of water for flood protection and water supply.</p>
Example:	For 2008: 89% of C&SF canals at acceptable levels of aquatic infestation
Target(s):	90% of canals at an acceptable level of aquatic plant infestation
Target definition source:	Vegetation Management Standard Operating Procedures
Subject matter expert(s):	Francois Laroche

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Success Indicator:	<p>11) 92% of Right-Of-Way permit compliance or resolution</p> <ul style="list-style-type: none"> • Percentage of encroachments resolved • Percentage resolution of issues with initially non-compliant permit • Percentage of permits resolved
Definition:	<p>As defined in the following codes and regulations:</p> <ul style="list-style-type: none"> • Code of Federal regulations Title 33, Part 208, Section 208.1, Local Flood Protection Works; Maintenance and Operation of Structures and Facilities • ER 1130-2-335, Project operations, Levee Maintenance Standards and Procedures • ER -2-530, Project Operations, Flood Control Operations and Maintenance Policies • ER 1150-2-301, Local Cooperation, Policies and Procedures • CESAJ-CO, USACE Regulation No. 1130-2-1, 15 August 1997 • SFWMD Permit Information manual, September 1999 • SFWMD, Right of Way Information Manual
Data Source(s):	Quarterly Right-of-Way Work Load Report
Reporting Period:	Fiscal Year
Reporting Frequency:	Quarterly
Aligned Strategy:	Manage Rights-of-Way in compliance with District policies and USACE requirements
Why is Success Indicator important:	Control of encroachment and trespassing to ensure that District operations are not hindered during times of emergency, routine maintenance, and refurbishment.
Example:	<p>Encroachments are not being made on the Rights-of-Way, which might endanger the structure or hinder its proper and efficient functioning during times of emergency or its functioning in time of flood.</p> <p>Channels and floodways are not in danger of being restricted by debris weeds, wild growth, unauthorized structures, or other encroachments</p>
Target(s):	<ul style="list-style-type: none"> • 70% of encroachment resolved • 95% resolution of issues with initially non-compliant permit holders • 60% of permits resolved to completion
Target definition source:	District Right-of-Way Enforcement Manual; District Right-of-Way Permit Information Manual.
Subject matter expert(s):	Jorge Patino

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Success Indicator:	12) 95% of planned maintenance performed on schedule
Definition:	General maintenance on District Field Stations buildings and grounds including: roofing, plumbing, painting, electrical lighting, and mowing activities; repair of lock tender residences on Kissimmee River
Data Source(s):	SAP Plant Maintenance Module; Operation and Maintenance Standard Operating Procedures
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually
Aligned Strategy:	Maintain infrastructure to District standards of safety, health, and operation according to intended utilization.
Why is Success Indicator important:	Ensure preventive maintenance activities are completed on time to prevent equipment and infrastructure failures that may adversely impact the ability to meet operational demands and intended utilization.
Example:	<ul style="list-style-type: none"> • Weekly, monthly, semiannual, and annual maintenance activities • Air conditioning maintenance • Monthly/quarterly coils and filters cleaning, recharging refrigerant, and overall functionality • Ice machines • Monthly/quarterly checking coils for debris, cleaning, and ensuring proper and safe operability • Facility Electrical Maintenance • Monthly/quarterly verifying integrity of the system, replacing breakers, switches, fuses, etc. as needed in accordance to standards and safety requirements • Plumbing • Monthly/quarterly inspections of the system, and verifying integrity and operability according to standards of operation and safety requirements.
Target(s):	Complete 95% of planned general maintenance
Target definition source:	Operation & Maintenance Annual Work Plan
Subject matter expert(s):	Fred Remen

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Success Indicator:	13) Compliance maintained with all state and federal Stormwater Treatment Area permit requirements
Definition:	Each of the six Everglades Construction Project (ECP) STAs is regulated by a state EFA permit and a federal National Pollution Discharge Elimination System (NPDES) permit. As a result, a total of 11 permits are currently in place for the six ECP STAs. Each permit contains general and specific conditions which must be adhered to in order to keep the STAs in compliance with permit requirements.
Data Source(s):	Everglades Protection Area Tributary Basins Long-Term Plan for Achieving Water Quality Goals (Long-Term Plan) (Burns and McDonnell, 2003) and subsequent revisions, and the annual SFER
Reporting Period:	Varies
Reporting Frequency:	As needed triggered by certain events Monthly – 28 th day of the month Annually on March 1
Aligned Strategy:	Properly operate and maintain the Stormwater Treatment Area facilities to ensure compliance with STA treatment objectives, as well as permit requirements.
Why Success Indicator Is Important:	The STAs are being maintained and operated under the Long-Term Plan, which is the state's blueprint for achieving water quality standards in the EPA and is recognized in the 2003 amended EFA and the 2003 Everglades TP rule as the Best Available Phosphorus Reduction Technology for the Everglades. Each of the STAs must be operated and maintained in a manner consistent with the permit conditions in order to ensure the facilities are in compliance with applicable state and federal water quality regulations.
Example:	For FY2008: In compliance.
Target(s):	In compliance each year
Target definition source:	EFA and NPDES permits for the STAs; Long-Term Plan
Subject matter expert(s):	Ron Bearzotti

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Success Indicator:	14) 73% of conservation land at an acceptable level of exotic infestation
Definition:	<p>Unacceptable: Land with more than 10% exotic coverage to include medium- and high-level infestations.</p> <ul style="list-style-type: none"> • Heavy: Percentage of area with more than 50% exotics coverage • Medium: Percentage of area with less than 50% exotics coverage but more than low or maintenance level <p>Acceptable: Land with less than or equal to 10% exotic coverage to include low and maintenance level infestations</p> <ul style="list-style-type: none"> • Low: Percentage of area with 10% or less exotics coverage but more than 1% exotics coverage. Regular maintenance treatments are required to keep the area clear • Maintenance: Percentage of area with 1% or less exotics coverage <p>Total Acres Treated: Total acres covered while implementing exotic control measures (manual, chemical, and mechanical)</p> <p>Note: Exotic coverage doesn't include widespread improved pasture grasses such as Bahia grass (<i>Paspalum notatum Flueggé</i>), but would include exotics such as tropical soda apple (<i>Solanum viarum</i>) scattered throughout the pasture.</p>
Data Source(s):	Weedar the SFWMD's exotic control database; monthly Land Stewardship Land Management Activity Reports; Land Stewardship exotic coverage spreadsheet
Reporting Period:	Fiscal Year (October 1, 2007–September 30, 2008)
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Effectively manage natural resources
Why Success Indicator is important:	District natural lands managed by the Land Stewardship Division are under threat by approximately 124 highly invasive, nonnative plants (Exotic Pest Plant Council, 2007 Category I and II species for Central and South Florida). In the absence of control efforts, these species adeptly establish themselves in natural communities, thereby displacing native species and, over time, create monocultures threatening Florida's native biodiversity. Some species also disrupt the ability of the South Florida Water Management District to effectively manage water resources, including plants like melaleuca (<i>Melaleuca quinquenervia</i>) that have high evapotranspiration rates. These plants can drain broad areas of wetlands and aquatic weeds, choke waterways, and foul control structures.
Example:	Percentage of conservation lands with an acceptable exotic infestation
Target(s):	Percentage of conservation lands anticipated as needing treatment to meet target acceptable infestation levels for lands
Target definition source:	Historical Land Stewardship exotic coverage spreadsheets
Subject matter expert(s):	Steve Coughlin

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Success Indicator:	15) 95% of lands burned according to recommended burn frequency
Definition:	This excludes lands restricted from burning due to legal, safety, or restoration in progress, and considers only those lands that have been part of the burn management program. <u>Return Interval Targets:</u> <ul style="list-style-type: none"> • Scrub: 10–20 years • Sandhill: 3–5 years • Dry Prairie: 2–5 years • Pinelands: 3–5 years • Freshwater Marsh (Basin, Floodplain, and Depression) and Wet Prairie: 3–10 years • Marl Prairies: 10–20 years • Sawgrass Marsh (Swale): 5–10 years • Salt Marsh: 15–20 years
Data Source(s):	Native Vegetative Communities within the Florida Fish and Wildlife Conservation Commission's FLVEG03 raster-based map; shapefiles of areas burned within the District's management areas
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Implement recommended fire-return intervals
Why Success Indicator is important:	District natural lands managed by the Land Stewardship Division contain over 96,000 acres of fire-dependent natural communities, including scrub, pinelands, wet and dry prairies, and marshes. Fire-dependent communities are typically much more biologically diverse than non-fire-dependent communities. Not burning these communities at the appropriate interval triggers ecological succession to a less diverse community type and creates a wildfire hazard through the multidecadal succession process through the accumulation of heavy flammable fuels.
Example:	91% of acres are within their target return interval
Target(s):	District-wide: 64,887 acres within their target return interval
Target definition source:	Return intervals are from the Florida Natural Areas Inventory Guide to the Natural Communities of Florida, 1990
Subject matter expert(s):	Steve Coughlin

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Success Indicator:	16) 80% of Land Stewardship infrastructure projects completed on schedule and within budget
Definition:	Repair/replace as needed: <ul style="list-style-type: none"> • Fences • Gates • Roads • Culverts • Building Repairs (Roofs, Septic Tanks, Air Conditioning Units)
Data Source(s):	Land Stewardship Infrastructure Maintenance Plan (to be completed in 2009)
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually
Aligned Strategy:	Manage and maintain all facilities
Why Success Indicator is important:	Fences, gates, roads, and culverts necessary for maintaining site security, and providing management and public access to District lands. The District owns and is responsible for major structure maintenance of several law enforcement officer residences
Example:	26 miles of fence constructed/repaired 32 miles of roads graded 3 gates installed
Target(s):	80% of infrastructure repair projects completed on schedule and within budget
Target definition source:	Land Stewardship policy regarding the Infrastructure Maintenance Plan (in preparation)
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	17) 100% of unrestricted District lands opened to the public
Definition:	District lands described in the Land Stewardship Recreation Program spreadsheet. All District lands are open with a public recreational use area provided the use is practicable and conducted in a manner consistent with legislative directives, intended uses, legal considerations, and resource protection.
Data Source(s):	Land Stewardship Recreation Program spreadsheet
Reporting Period:	Annually
Reporting Frequency:	Annually
Aligned Strategy:	Maximize appropriate nature-based recreation
Why Success Indicator is important:	The success indicator ensures District lands are open to the public, which is consistent with the District's Public Recreational Access and Use Policy. This policy, adopted by the Governing Board in 2004, is a commitment to plan, manage, and promote public recreational use on District lands that are compatible and consistent with the primary purpose for which the lands were acquired. District lands are restricted to public use during project construction or when an active agricultural lease exists that prohibits public use.
Example:	98% of project lands are open to the public in FY2008
Target(s):	District lands open to the public are 100% unless during project construction or when an active agricultural lease exists which prohibits public use
Target definition source:	District's Public Recreational Access and Use Policy
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	18) 80% of recreation capital projects completed on schedule and within budget
Definition:	80% of capital projects as described in the District's Annual Work Plan. These projects include such facilities as parking areas/trailheads, boardwalks, shelters, and boat ramps
Data Source(s):	Five-year Recreation Management and Partnership Plan and Five-year Capital Improvement Plan (budget spreadsheet)
Reporting Period:	Fiscal Year
Reporting Frequency:	Semiannual updates
Aligned Strategy:	Maximize appropriate nature-based recreation
Why Success Indicator is important:	Capital improvement projects are constructed on District lands to provide adequate public access consistent with the District's Public Recreational Access and Use Policy. The success indicator ensures that these projects are planned, designed, and constructed within the budgeted fiscal year. Capital improvement projects provide the necessary amenities and facilities that enhance the public's ability to access and recreate on District lands.
Example:	3 parking trailheads constructed 1 boardwalk constructed 1 boat ramp constructed
Target definition source:	The target and data source are provided in the District's Public Recreational Access and Use Policy, Five-Year Recreation Management and Partnership Plan, and Five-Year Capital Improvement Plan (budget spreadsheet)
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	19) 100% photo documented database by 2017; 180 more ecological photopoint monitoring locations by 2017
Definition:	Photodocumentation entails establishing permanent 360-degree panoramic photopoints at sites on conservation lands within the District and returning periodically to take photos. Panoramic photos provide information on the size, density, and arrangement of major types of plants, which are very important determinants of wildlife habitat value. Photopoints are located to record the effects of restoration projects or provide feedback on the effectiveness of various land management activities.
Data Source(s):	Records of photopoints established and photos taken are kept on a spreadsheet. Actual photos are available for inspection on the District's computer server.
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Effectively manage natural resources
Why Success Indicator is important:	Building and using an adequate network of photopoints is necessary for demonstrating the benefits of restoration projects and for providing feedback on the effectiveness of land management activities. This feedback not only allows the District to improve its management practices, but also provides a permanent record of habitat condition and changes that will guide future land managers to understand and maintain valuable, preserved lands.
Example:	20 new photopoints established and 110 panoramic photos taken and permanently stored
Target(s):	100% of the District-wide photo-monitoring network of 270 photopoints will be completed by 2017 by adding 20 new points each year to the existing 90 points. Each year, 90 panoramic photographs will be created and stored by District staff. The locations of where photos will be taken each year will be determined by restoration activity land managers needs for feedback, and the importance of documenting key habitat areas on District conservation lands. (It is anticipated that periodic photo-monitoring will continue after 2017, but that increasing the size of the network beyond 270 points will not be necessary.)
Target definition source:	Target established in the 10-year Land Stewardship Monitoring Plan
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	20) 100% Land Management Plans developed/updated per land management review team recommendations at five-year intervals
Definition:	<p>General Land Management Plans are developed for conservation lands over 1,000 acres and updated every five years. A management review team per 373.591 Florida Statutes (F.S.) is convened to review the sufficiency of land management activities, the condition of the land and natural resources, and to determine if the land is being managed for the purpose for which it was acquired.</p> <p>Results of the management review team are incorporated into the five year update of the management plan.</p>
Data Source(s):	Land Management Review Team Evaluation Forms and the Land Management Plans
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Conduct land management reviews
Why Success Indicator is important:	373.591 F.S.requires District conservation lands to periodically undergo a multiagency land management review to determine whether conservation, preservation, and recreation lands titled in the names of the water management districts are being managed for the purposes for which they were acquired and in accordance with land management objectives
Example:	Two land management plans developed/ updated per land management review team recommendations on schedule
Target(s):	100% of Land Management Plans developed/ updated per land management review team recommendations at five year intervals
Target definition source:	Internal policy set by Land Stewardship Division management
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	21) 100% of submitted mitigation bank restoration credit release requests approved by permitting agencies
Definition:	The District's two mitigation banks are trending toward restoration success; mitigation bank credits are released by the permitting agencies as certain milestones are reached
Data Source(s):	Permit modification requests are made by the mitigation banker to the permitting agencies to request credit releases for success attainment
Reporting Period:	Fiscal Year
Reporting Frequency:	Annually, end of fiscal year
Aligned Strategy:	Effectively manage natural resources
Why Success Indicator is important:	The District's two mitigation banks are implemented in public-private contract to restore targeted lands and generate revenue for priority projects. The success of the Mitigation Banking Program is measured by attaining restoration success and obtaining associated credit releases from the permitting agencies. Both the Loxahatchee and Corkscrew Regional Mitigation Banks will have credit release requests in FY2009 that will result in credit sales and revenue distribution to the District. The revenue is used to augment revenue sources of priority restoration projects.
Example:	Loxahatchee Mitigation Bank — credit release requested on September 22, 2008, for 32.4 credits, permitting agencies response with 32.4 credits released granted on October 21, 2008 Corkscrew Regional Mitigation Bank — credit release requested November 22, 2008, for 14.2 credits, permitting agencies response with 14.2 credits released granted on December 21, 2008
Target(s):	100% of mitigation banker's submitted credit requests approved by permitting agencies
Target definition source:	Represents goal suggested by the District's Executive Office
Subject matter expert(s):	Marjorie Moore

Operations & Maintenance

Success Indicator:	22) 100% of water resource development project plans to include associated recreation
Definition:	Each Water Resource Development project plan includes associated recreation
Data Source(s):	Program project lists from each water resource program, CERP Master Recreation Plan, and the Recreation Management and Partnership Plan
Reporting Period:	Annually
Reporting Frequency:	Annually
Aligned Strategy:	Maximize appropriate nature-based recreation.
Why Success Indicator is important:	The success indicator ensures District lands are open to the public, which is consistent with the District's Recreational Access and Public Use Policy. Water resource development projects include Stormwater Treatment Areas, reservoirs, or natural areas that are being planned as part of CERP, Everglades Construction Project, and Northern Everglades initiatives.
Example:	Number of water resource projects that include recreation in the planning documents
Target(s):	All water resource construction plans will include associated recreation planning as part of the design
Target definition source:	District's Recreational Access and Public Use Policy
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	23) Minimum of two formal inspections conducted annually on all leased and vacant lands to document compliance and illegal activity; plans-of-action developed 100% of time within 30 days of problem identification.
Definition:	The District manages approximately 100 leases for interim agricultural uses on the project lands that will eventually be constructed as part of Everglades restoration. These lands are routinely visited by the Land Stewardship Program's land managers; these the visits are formally documented at least twice a year in semiannual inspection reports that provide a formal record of lease and Best Management Practice compliance or issues. If an issue is identified by the land manager during an inspection, an incident report is prepared, which documents an action plan to address the incident within 30 days, 100% of the time.
Data Source(s):	Interactive Excel spreadsheet inspection reports are filled out and web-posted semiannually, or as needed, as an incident report
Reporting Period:	Fiscal Year
Reporting Frequency:	Semiannually in 2 nd and 4 th quarters and as needed for incident reports
Aligned Strategy:	Effectively manage natural resources
Why Success Indicator is important:	The District land managers will document two formal semiannual inspections and any incident reports as needed when inspecting the leased properties. These reports are entered in an interactive Excel spreadsheet semiannually and as needed if incident-related. When an incident-related report is prepared, the land managers are obligated to develop a plan of action within 30 days after identifying the problem, 100% of the time. This will facilitate tracking and resolution of issues.
Example:	For interim project lands, four incidents recorded, four developed plans of action within 30 days of problem identification = 100 % of the time.
Target(s):	Plans-of-action developed 100% of time within 30 days of problem identification.
Target definition source:	Internal audit provided the recommendation for semiannual inspection reports for all leased properties. Policy developed that problems identified in the reports have plans developed to address the problems within 30 days.
Subject matter expert(s):	Steve Coughlin

Operations & Maintenance

Success Indicator:	24) 100% of critical Stormwater Treatment Area facilities and structures maintained in accordance with standard operating procedures to meet the goals of the Long-Term Plan.
Definition:	<p>Compliance with standard operating procedures for critical STA facilities and structures:</p> <ul style="list-style-type: none"> • Meet all Preventive Maintenance Plan schedules • Repair all unscheduled breakdowns to meet operational demands for water movement <p>Structure Preventative Maintenance Plan Classifications: Monthly Preventive Maintenance Schedule: High Maintenance Structures – Any structure equipped with a stationary emergency backup generator, such as major gated spillways and telemetry sites. Quarterly Preventive Maintenance Schedule: Medium Maintenance Structures – Any structure that has the ability to fluctuate the water elevation by manual or automated control such as gated culverts. Semiannual Preventive Maintenance Schedule: Low Maintenance Structures – Any structure that does not have the means to mechanically control water elevations, such as weirs and flow-through culverts.</p>
Data Source(s):	SAP Plant Maintenance Module and Operation and Maintenance Manuals
Reporting Period:	Fiscal Year
Reporting Frequency:	Semiannual (end of 2 nd and 4 th quarters)
Aligned Strategy:	Ensure preventive maintenance activities are completed on-time to prevent breakdowns that may adversely impact the ability to meet operational demands.
Why Success Indicator Is Important:	The operation and maintenance of facilities and structures is critical to moving water to achieve Long-Term Plan objectives and goals. Moving water through critical water control structures is needed to meet demands.
Example:	For FY2008: 100% maintained
Target(s):	100% maintained each year
Target definition source:	Operations & Maintenance Annual Work Plans
Subject matter expert(s):	Karen A. Estock, Richard Champlin, Alex Damian