Everglades Coalition

2020 Vision for the Everglades

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Everglades Coalition Conference

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EXECUTIVE SUMMARY

In 2000, the U.S. Congress passed the landmark Comprehensive Everglades Restoration Plan (CERP). This was the largest ecosystem restoration plan ever undertaken in the history of the world, and was championed as a landmark accomplishment for America's Everglades. This Plan was always intended to take decades, and sustained levels of leadership and funding from our federal and state governments.

Ten years later, as the Everglades Coalition prepares to celebrate its 25th Annual Conference, it is time to look forward for the next decade. While implementing such a large and intricate restoration has not proven easy, events over the last months and years, have reinvigorated this globally significant initiative. Our Vision for 2020 includes ten specific Visions, which capture those objectives we feel are critical to successful restoration. These ten Visions are summarized below:

1. By 2020, lands that are necessary for restoration are brought into public ownership to expand the spatial extent of wetlands and prevent development that undermines the greater Everglades ecosystem.
2. By 2020, abundant and diverse native plant and animal life in the greater south Florida ecosystem meets or exceeds the 10 year recovery goals of federal and state conservation plans for listed species and their habitats.
3. Assure sufficient clean freshwater for the Everglades and the Estuaries.
4. Adequate storage exists in the Everglades Agricultural Area and North of Lake Okeechobee to provide clean water to the Everglades and its estuaries during dry periods and sufficient conveyance capacity exists in the Everglades Agricultural Area to facilitate a natural response to wet events.
5. By 2020, the ecological decline of Lake Okeechobee will be measurably reversed and infrastructure improvements to eliminate destructive discharges to the estuaries and to enable water to flow south into the Northern Everglades will be in significant stages of design, bid or construction.
6. The Southern Everglades is on its way towards full restoration of sheetflow and wildlife recovery as initial key projects are completed.
7. In the Western Everglades, maintain and recreate the connectivity of water and wildlife movement, and the greater ecosystem, while promoting wise growth management.
8. Science remains the driving force for decision support in CERP and related project implementation, as well as the basis of CERP policy, including all steps in the scientific method, peer review, and incremental adaptive management.
9. Florida's energy choices do not compromise land and water supply critical to Everglades' restoration efforts.
10. Everglades restoration sees substantial progress with support and full commitment at the highest levels of the federal and state governments

As we restore the natural system, the need for expensive outlays for maintenance and operation of structural systems will diminish. We need a commitment from all our decision-makers to achieve the goals outlined in these Visions. Only with sustained leadership from the Administration, U.S. Congress, the state of Florida, and local Florida governments can we hope to move forward successfully.

VISION #1: SUSTAINABLE LAND USE

By 2020, LANDS THAT ARE NECESSARY FOR RESTORATION ARE BROUGHT INTO PUBLIC OWNERSHIP TO EXPAND THE SPATIAL EXTENT OF WETLANDS AND PREVENT DEVELOPMENT THAT UNDERMINES THE GREATER EVERGLADES ECOSYSTEM.

EXPLANATION: Urban sprawl has had, and continues to have, significantly harmful impacts on the Everglades, wildlife, resources, and our quality of life, primarily through reducing the size of the Everglades to about one-half its original size, and through secondary degradation of the remaining Everglades as a result of habitat degradation, pollution, drainage and water demands and infrastructure impacts. To be sustainable in the 21st Century Florida must adopt a modern economic model that reflects the negative costs of development, and the positive economic, utilitarian and social values of natural resources; protects remaining wetlands for their current or restoration values; and maintains sustainable agriculture as the appropriate use in between urban and natural areas. As we engage in the largest ecosystem restoration project in the world, we must immediately cease the loss of any more spatial extent of the greater Everglades and enlarge the existing spatial extent through restoration.

ROADMAP TO ACCOMPLISH THE VISION:

- Ensure Effective Growth Management
    - Strengthen local planning restrictions to remove the opportunity for new development on natural areas that are important now or in the future as restoration components to the long–term survival of the Everglades, and prioritize infill and redevelopment which relies primarily upon transit, not new roads and highways.
    - Growth management decisions maintain to the greatest extent possible urban boundaries in southeast Florida, prevent further encroachment into habitat in southwest Florida and the Heartland, and avoid the introduction of major industrial, commercial, residential, mining or other urban or suburban uses in the EAA except for logical extensions of land uses adjacent to existing urban boundaries.
    - Potential restoration benefits from the River of Grass Initiative are not impeded by incompatible development.
    - Restrict construction of new major roadways or thoroughfares by improving and expanding public mass transportation options
    - Prevent land use designations and development decisions that intensify development options on lands that are under study for restoration potential.
    - Require development to retain on-site native vegetation. Where clearing is unavoidable, require exclusive use of Florida native plants in all mitigation and landscaping, so that the need for irrigation systems is minimized.
    - Maintain statewide growth management oversight through the Florida Department of Community Affairs.
    - Require new development projects to pay for their own infrastructure requirements.
    - Maintain water concurrency by requiring proof of adequate available water supply prior to approval of new development applications.
    - Deny permits and restrict land uses in areas that are projected to be at risk from sea level rise and associated impacts within the next 50 years.
    - Make permitting decisions a transparent, public process.
    - Utilize land valuations which calculate the value of ecosystem services.
- Agricultural Partnership
    - The state of Florida creates a Resource Planning and Management Committee to comprehensively address issues related to lands important to restoration, including in the Everglades Agricultural Area, and engages all stakeholders.

  - Rezoning of land identified for restoration projects and protect agricultural land from conversion into intensified urban and mining use areas is prevented
  - Congress and the Administration utilize the Farm Bill for land acquisition needs for Everglades restoration.
- Wetlands And Natural Areas Protection
  - Prohibit any net loss of wetlands, Florida native plant communities, and wildlife habitat.
  - Maintain existing wetlands and accelerate restoration to keep water tables high, recharge the reservoir, prevent salt water intrusion, and lessen the effects of climate change.
  - Agencies are proactive in identifying areas of concern and able to weigh in early on local development projects that impact restoration projects.
  - Florida Forever's funding increases
  - A uniform methodology for wetland scoring and enforce stricter mitigation requirements, such as on-site mitigation, is established.

VISION #2: PLANT AND WILDLIFE DIVERSITY

BY 2020, ABUNDANT AND DIVERSE NATIVE PLANT AND ANIMAL LIFE IN THE GREATER SOUTH FLORIDA ECOSYSTEM MEETS OR EXCEEDS THE 10 YEAR RECOVERY GOALS OF FEDERAL AND STATE CONSERVATION PLANS FOR LISTED SPECIES AND THEIR HABITATS.

EXPLANATION: Ultimately, success of restoration will be measured through the recovery of native wildlife. In 1999, the US Fish and Wildlife Service (*Multi-Species Recovery Plan for South Florida)*, identified 68 federally listed species and the restoration needs of 23 natural communities. South Florida's diverse ecological communities, unique in the world, must be restored and managed as a whole to support all animals and plants and the interdependent wetland and upland habitats native to the region. South Florida's wildlife need sufficient contiguous habitat to sustain them in the face of climate change, as well as the continuing habitat loss, degradation and fragmentation from development, roads, invasives, and inadequate land and water management. The resilience of healthy natural communities with their full array of native species and interdependent functions yields benefits for all – wildlife, the Everglades, and people.

ROADMAP TO ACCOMPLISH THE VISION

- Intact large swathes of habitat are protected
    - Control growth, mining and development that threaten habitat necessary for species at risk.
    - Acquire title and conservation easements for priority wildlife areas and habitat links.
    - Protect and restore a greater percentage of habitat quality and connectivity on private lands.
    - Prevent road projects that further fragment habitat; maintain habitat and hydrological connectivity and safe passage for wildlife and people by developing a comprehensive transportation and wildlife crossings plan.
- Smart growth practices are implemented
    - Incorporate climate change and sea level rise adaptation strategies into land, water and wildlife management plans.
    - Promote wildlife compatible site planning and the use of appropriate native plants
- Conservation and restoration efforts are adequately funded and supported
    - Florida Forever is fully funded and the state's environmental land protection programs are maintained.
    - Land acquisition programs are established in all counties in the Everglades region.
    - Necessary funding is provided to responsibly manage public conservation lands and restore wildlife habitat, both wetlands and uplands, on federal, state and local conservation lands with effective programs to control invasive plant and animal species.
    - Wildlife-compatible agriculture is promoted.
    - Less-than-fee acquisition and incentive programs are used to prevent loss of wildlife-compatible agricultural lands.
    - Appoint individuals to agency and board positions, including the Fish and Wildlife Conservation Commission, who are committed to the protection and recovery of state and federally listed species.
    - Stop abuses of the Right to Farm Act that circumvent local land use restrictions and avoid state and federal permitting obligations.
- Encourage Fact Based Approaches to State listing of Species
    - Assure the state listing process for at-risk species utilizes scientifically based criteria that meet international and federal standards to protect Florida's wildlife populations.
    - Implement wildlife recovery and management plans that meaningfully protect vulnerable species and support the comprehensive state wildlife action plan to keep common species abundant.

VISION #3: WATER QUALITY

ASSURE SUFFICIENT CLEAN FRESHWATER FOR THE EVERGLADES AND THE ESTUARIES

EXPLANATION: From its headwaters, to the estuaries and the bays, a healthy greater Everglades depends on sufficient flows of clean freshwater. Sufficient quantities of clean freshwater must be moved through the Everglades to replicate the historic River of Grass. Immediate water quality improvements, through both source control and treatment, are needed to provide water as CERP and other restoration projects come online. Stormwater Treatment Areas must be substantially expanded. Stormwater and agricultural runoff can be adequately controlled with implementation of existing water quality protections and improved water quality strategies. Source control initiatives such as fertilizer ordinances and low impact development design requirements can lessen clean-up costs and proactively prevent additional water quality degradation. Wetland restoration and preservation can provide natural supplemental filtration and distributed storage. Providing sufficient clean freshwater to restore the Everglades and our estuaries can be achieved by controlling both Nitrogen and Phosphorus as well as other pollutants at their source, while preserving our natural wetland systems.

ROADMAP TO ACCOMPLISH THE VISION:

- Ensure the 10 parts per billion (ppb) phosphorus water quality standard is met by implementing innovative Best Management Practices (BMPs) in the Everglades Agricultural Area, expanding the Stormwater Treatment Areas (STAs) and building reservoirs to better manage water feeding these STAs.
- Utilize the River of Grass land acquisition to expand STAs in the EAA
- Refine Everglades Agricultural Area BMPs according to phosphorus reduction effectiveness, and require “Water Management” BMPs and “Sediment Control” BMPs by all holding BMP permits in the EAA. Revise the BMP point system accordingly.
- In the Okeechobee basin, BMP’s must be materially strengthened. Base fertilizer application rates on phosphorus reductions necessary to meet the TMDL, rather than optimum agronomic yield.
- STA 1 West is doubled in size and new STAs and reservoirs are constructed as land becomes available from the River of Grass purchase. STAs are better managed and operated to increase phosphorus reduction.
- Expand water quality monitoring requirements and funding to support it so that every FDEP assessment area (aka “WBID”) has sufficient sampling of each regulated pollutant to meet the minimum sampling thresholds in the Impaired Water Rule.
- Ensure scientifically supported numeric water quality standards for nitrogen and phosphorus are set such that they are adequately protective in maintaining the historical natural balance of flora and fauna in both freshwater, brackish and marine ecosystems.
- Ensure adequate wetlands protection by requiring like for like wetland type mitigation, and not allow natural wetlands to be counted as pollutant sources or utilized for required stormwater treatment.
- Ensure adequate stormwater standards for removing additional pollutant loadings above natural background conditions. Assure removal of both Nitrogen and Phosphorus in the stormwater management systems required in the permitting of new developments. Significantly strengthen requirements for onsite treatment and retention, as well as possible pollution offsets in drainage basins through regional treatment systems funded by development interests. Increase the dedication of additional lands in development project areas to accommodate at least a 50% expansion in the size of retention facilities required.

- Ensure that designated uses of water bodies and water quality standards are n't inappropriately changed. The swimmable/fishable waters goal in the Clean Water Act is not compromised for any water body that supports fish and wildlife or public recreation.
- Create and implement Total Maximum Daily Loads and Basin Management Action Plans in a timely manner for all impaired waterbodies not meeting current state water quality standards.
- Agricultural runoff is retained and treated on-site to meet downstream strictly enforced water quality standards.
- Prevent nutrient pollution resulting from reclaimed wastewater for irrigation. Establish new requirements to limit nutrients in reclaimed water, or regulate the use of reclaimed water to avoid adding to nutrient loading, particularly in basins where meeting TMDLs is challenging.
- Adequate flow rates are maintained to meet Minimum Flows and Levels and prevents pollutant concentrations exceeding state water quality standards
- Model and assess new drainage or water rerouting proposals prior to permitting - to ensure their consistency with maintaining wetland and the historical flow regime of their downstream receiving waterbodies, and to prevent diminishing water supply.
- Require monitoring of the actual effectiveness of stormwater management systems. Require the upgrade and expansion of such facilities if pollutant removal efficiencies are not achieved.
- Prohibit preemption of the ability of local governments to require more stringent regulations to protect water quality within their jurisdictions.

VISION #4: WATER STORAGE

ADEQUATE STORAGE EXISTS IN THE EVERGLADES AGRICULTURAL AREA AND NORTH OF LAKE OKEECHOBEE TO PROVIDE CLEAN WATER TO THE EVERGLADES AND ITS ESTUARIES DURING DRY PERIODS AND SUFFICIENT CONVEYANCE CAPACITY EXISTS IN THE EVERGLADES AGRICULTURAL AREA TO FACILITATE A NATURAL RESPONSE TO WET EVENTS.

EXPLANATION: During the past century of drainage of the Everglades, more than half of wetlands and nearly all of its uplands have been lost, and the C&SF Project has inflicted immense damage on the remaining natural areas. Restoration and rehabilitation of the Everglades, its estuaries, and Lake Okeechobee will require that the function of these lost areas be recovered or reproduced. Among the most important natural functions to recover are water storage and sheetflow. Historically, the vastness and interconnectedness of the Everglades provided these services; they must be recovered as quickly as possible if Lake Okeechobee, the estuaries, and the Everglades are to survive.

ROADMAP TO ACCOMPLISH THE VISION:

- Complete the initial acquisition of 73,000 acres of US Sugar lands by May 2010
- Announce the commencement of a restoration project on the newly-acquired lands by May 2010
    - The immense opportunity represented by the initial acquisition could be capitalized upon by immediately commencing a project on one of the newly acquired parcels.
    - There are a number of possibilities that would provide important benefits, such as converting the EAA Reservoir into an STA or swap 8,000 acres acquired near L8 to augment STA 1 West.
- The State of Florida declares a moratorium of new industrial development and mining until a comprehensive master plan for the EAA is developed that includes the River of Grass project footprint.
- The SFWMD completes Phase II planning for the River of Grass project, identifying a footprint for storage and conveyance features by July 2011.
    - The initial scoping phase has identified a number of possibilities for storage, treatment, sheet-flow, dynamic storage, and conveyance in the EAA.
    - The SFWMD should select a footprint that can be completed expediently and provides important restoration benefits to the Everglades, Lake Okeechobee, and the estuaries, while providing for maximum restoration of environmental function in the EAA.
    - The Corps of Engineers and the Department of the Interior need to fully partner with SFWMD to assure federal cooperation in implementing the result.
    - Consider the economic value of ecosystem services, cost avoidance, and full cost accounting in selecting the final plan.
- The SFWMD secures the required land in the EAA to implement the River of Grass within the 3-year option window for the remaining US Sugar lands.
    - The SFWMD will need to complete planning well before the end of the option window to acquire the rest of the US Sugar lands.
    - The SFWMD should complete negotiations on swaps or identify the appropriate acquisition method for lands in the identified footprint.
- Begin construction on storage, treatment and flow features by 2013.
    - Secure an agreement with federal partner(s) on funding for the plan. The federal government must seek additional funding for the Land and Water Conservation Program to enable it to share land costs with the state of Florida for Everglades restoration.
    - Begin phased construction on selected plan as soon as lands have been acquired and funding secured.

VISION #5: NORTHERN EVERGLADES AND LAKE OKEECHOBEE

BY 2020, THE ECOLOGICAL DECLINE OF LAKE OKEECHOBEE WILL BE MEASURABLY REVERSED AND INFRASTRUCTURE IMPROVEMENTS TO ELIMINATE DESTRUCTIVE DISCHARGES TO THE ESTUARIES AND TO ENABLE WATER TO FLOW SOUTH INTO THE NORTHERN EVERGLADES WILL BE IN SIGNIFICANT STAGES OF DESIGN, BID OR CONSTRUCTION.

EXPLANATION: Lake Okeechobee is in severely impaired condition. In the last decade, the Lake has seen 75-square-miles of plant communities drowned, concomitant declines in fisheries and wildlife, and record-breaking increases in phosphorus levels. Discharges of polluted water passed the problems downstream into the estuaries of the Caloosahatchee and St. Lucie rivers, which were then also impaired for much of the decade. Minimum Flows and Levels (MFL) violations in the Caloosahatchee Estuary were chronic. For several years, water has been rationed to EAA farmers and lower east coast cities. The system remains broken for all stakeholders.

ROADMAP TO ACCOMPLISH THE VISION:

- Manage Water Levels of Lake Okeechobee
    - Increase water storage outside the perimeter of the Herbert Hoover Dike by at least 1.5 million acre-feet. Develop a hydrologic global vision (Everglades, estuaries, Lake Okeechobee). The location and amount of storage needed to maintain the Lake ecosystem during drought and rainy events is investigated along with the amount needed for the estuaries and the Everglades.
    - Implement an aggressive program to compensate landowners for extra efforts to help meet overall water storage and treatment goals on their land. SFWMD adjusts its Northern Everglades strategies to emphasize dispersed and distributed water storage in the upper reaches of the Kissimmee-Okeechobee basin. Wetlands are rehydrated and restored.
    - Manage water levels by maintaining lake levels and adapt existing protocols to allow timely deviations (decisions within a week) to improve conditions in the Lake and estuaries.
- Remove Harmful Nutrients from Lake Okeechobee's Waters
    - Annual phosphorus loading rates to Lake Okeechobee under Total Maximum Daily Load (TMDL) requirements are met. The levels of phosphorus entering the Lake are reduced to reach the required 40 ppb.
    - Amend legislation to reduce the import of phosphorus into Lake Okeechobee watersheds by at least 80% through combinations of eliminating point source discharges or at least treating the effluents to meet the up-coming consent decree; prescribing the slow release fertilizers to be applied based on water quality goals to reach Lake Okeechobee TMDL; requiring edge-of-farm run-off treatment and soil amendments to agricultural operations that fertilize at agronomic rates and installing sediment traps to capture disturbed soil during rain storms.
    - Best Management Practices (BMPs) in the Lake Okeechobee watershed are materially strengthened , mandatory and enforced.
    - The spider-web like network of small canals and drainage ditches that feed runoff toward the Kissimmee River and Lake Okeechobee should be modernized with water control structures to reduce "flashy" runoff events.
    - The 2007 statute prohibiting the dumping and spreading of biosolid (Class B) in the Okeechobee, St. Lucie, and Caloosahatchee Basin must be effectively implemented and enforced by the Florida Department of Environmental Protection.
    - Develop a plan to remove or sequester Lake Okeechobee's bottom sediments.
    - Complete Lake Okeechobee Protection Plan (Northern Everglades) nutrient control efforts in compliance with the 2015 TMDL deadline.

- Improve Water Storage and Releases at the Northern Estuary
    - Complete Northern Everglades and CERP water storage and cleansing efforts within estuary watersheds (between Lake Okeechobee and the estuary), in part by fully funding the Florida Forever program.
    - Complete River of Grass acquisition and planning (including north-of-lake efforts) to allow water to flow to the Everglades and southern estuaries.
    - Tailor releases to each estuary based upon their individual needs and specificity (decoupling their management).
    - Maintain a minimum flow of 650 cfs to the Caloosahatchee Estuary unless drought conditions in the Lake Okeechobee Service Area require extreme water rationing, whereupon the estuary would be rationed concomitantly.
- Research the need for controlling nitrogen fertilizers to prevent negative impacts to the Lake and the estuaries
- Improve Infrastructure
    - Continue Kissimmee River Restoration and complete the backfilling of the C-38 canal and implement the Headwaters Revitalization Project to ensure an appropriate river hydroperiod by 2012.
    - Insure public safety by maintaining safe Lake levels and reinforcing Herbert Hoover Dike (while also recognizing that increased system-wide storage helps prevent excessively high water levels).
    - Dredge and maintain the Okeechobee Waterway and access canals to facilitate rejuvenation of the Lake's tourism value and local base of support.
    - Monitor the budget-appropriations process to ensure structures and systems put in place operate as intended, and to avoid crises.

VISION #6: SOUTHERN EVERGLADES PROTECTION AND RESTORATION

THE SOUTHERN EVERGLADES IS ON ITS WAY TOWARDS FULL RESTORATION OF SHEETFLOW AND WILDLIFE RECOVERY AS INITIAL KEY PROJECTS ARE COMPLETED

EXPLANATION: Northeast Shark River Slough, Taylor Slough, and Florida Bay in Everglades National Park, Biscayne Bay and National Park, and Water Conservation Area 3 (WCA3) are often collectively considered to be the southern Everglades. However, the Everglades is an ecosystem that is intricately linked throughout the whole region and cannot be compartmentalized. Removing the harmful effects of unnatural barriers, including Tamiami Trail, the C-111, and canals in WCA3, will restore sheetflow through the River of Grass, which will stimulate an abundance of wildlife recovery throughout the southern Everglades. Simultaneously, as it becomes more and more apparent that sea level rise will soon have serious impacts on south Florida, projects to restore the River of Grass serve as the most important mitigation and adaptation solutions to sea level rise.

ROADMAP TO ACCOMPLISH THE VISION:

- Bridge Tamiami Trail to improve sheetflow through the Everglades
    - The Modified Water Deliveries project is complete and is operated in a way that provides the most benefits to the restoration of wildlife and habitat. This includes building the one mile bridge across Tamiami Trail, and acquiring all properties identified in the 1989 law.
    - A maximum amount of bridging in a second phase is constructed, and an operating system is in place that will ensure maximum ecological benefit.
- Decompartmentalization of Water Conservation Area 3 to improve sheetflow through the central Everglades
    - DECOMP is the key to restoring sheetflow; all planning to remove the harmful effects of the canals and dams that hinder water flow is completed and construction well underway in conjunction with the River of Grass Initiative, Seepage Management project, and plans for additional bridging along Tamiami Trail.
    - Completed bridging along Tamiami Trail enables DECOMP to deliver needed water to Everglades National Park and Florida Bay.
- Planning for seepage management components is complete, in coordination with DECOMP, Tamiami Trail bridging projects, and the River of Grass Initiative
- C-111 Spreader Canal to improve flows through the southern coastal Everglades and Florida Bay
    - Construction of Phase One is complete and operated to achieve maximum ecological benefits for Florida Bay and the coastal marshes.
    - Planning for Phase Two is completed in a manner that is compatible and integrated with the Biscayne Bay Coastal Wetlands project, and construction begins on Phase Two, which includes backfilling the lower C-111.
    - The C-111 1994 South Dade project is complete and operating in a way that fulfills the ecological benefits as promised.
- Biscayne Bay Coastal Wetlands (BBCW)
    - Construction of Phase One of BBCW is completed
    - Planning and land acquisition needs for Phase Two are complete, the project is fully funded, and construction is underway.
- Planning for Phase Two includes integration with the C-111 project and additional sources of water, such as potential use of reuse water and water management changes.

VISION #7: WESTERN EVERGLADES PROTECTION AND RESTORATION

IN THE WESTERN EVERGLADES, MAINTAIN AND RECREATE THE CONNECTIVITY OF WATER AND WILDLIFE MOVEMENT, AND THE GREATER ECOSYSTEM, WHILE PROMOTING WISE GROWTH MANAGEMENT.

EXPLANATION: The Big Cypress Swamp, Corkscrew Swamp and Caloosahatchee River watersheds and downstream estuaries, through wise growth planning and proactive strategic restoration and protection, have been spared the need for monumental engineered restoration and thrive in a sustainable balanced landscape of land uses. Transit-oriented, livable urban areas complement sustainable agriculture which buffers intact, contiguous wetland and habitat corridors linking well-maintained habitat centers of public and private preserves. Public-private partnerships have resulted in collaborative and equitable land ownership, restoration and management responsibilities. Key indicator species for the diverse and unique habitats of the Western Everglades are thriving, including the Florida panther, wood stork, snail kite, snook, scrub jay, and gopher tortoise.

ROADMAP TO ACCOMPLISH THE VISION:

- Complete and implement Watershed Management Plans (WMPs) for each basin in the Western Everglades. Plans are coordinated amongst local, state and federal efforts to protect and restore wetlands, flowways, water quality, flood protection, aquifer recharge and habitat. All such plans are codified in local comprehensive plans and land development regulations.
- Adopt by 2010 the Southwest Florida Feasibility Study, one strategic guide to effect watershed management and restoration and used to direct integrated efforts described above, both planning and construction.
- Fund and complete restoration projects, including the Picayune Strand/Fakahatchee Estuary, C-43 Reservoir, Henderson Creek-Belle Meade Watershed, Lake Okeechobee-Estuaries-Northern Everglades, River of Grass (US Sugar land projects) and Corkscrew Regional Ecosystem Watershed (CREW). Timeframes vary, but significant actions are taken annually on all projects for the next decade, with corresponding local government actions taken.
- Amend local comprehensive plans in the four Western Everglades counties of Glades, Hendry, Lee and Collier to best accommodate resource protection and restoration, sustainable agriculture and resilient properly sited urban development. Evaluation and Appraisal Reports are due around 2011 from these local governments, providing a useful vehicle for good resource protection and planning amendments.
- Craft regional habitat conservation plans for important landscapes dependent upon by numerous imperiled wildlife species. Such plans must effectively find alternatives, avoidance, minimization and mitigation for all future resource impacts expected.
- Reform wetland and stormwater permitting policies to more fully achieve “no net loss”, and be coordinated between local, state and federal programs. Any rule changes needed to implement this are identified and executed. This process is underway and expected to begin phased implementation in the next year.
- Address natural resource (and other infrastructure) planning at all levels of government to immediately begin adapting to rising sea levels.
- Florida Forever is fully funded.

VISION #8: SCIENCE AND TECHNOLOGY

SCIENCE REMAINS THE DRIVING FORCE FOR DECISION SUPPORT IN CERP AND RELATED PROJECT IMPLEMENTATION, AS WELL AS THE BASIS OF CERP POLICY, INCLUDING ALL STEPS IN THE SCIENTIFIC METHOD, PEER REVIEW, AND INCREMENTAL ADAPTIVE MANAGEMENT.

EXPLANATION: A science-based approach to CERP implementation will maximize performance at least cost long term.

ROADMAP TO ACCOMPLISH THE VISION:

- CERP progress is quantitatively monitored and assessed relative to CERP Goals & Objectives in Table 5-1 of the April 1999 Restudy presented to Congress.
- CERP progress is expedited by implementing principles of Adaptive Management to begin project construction while accomplishing on the ground learning.
- CERP implementers exercise leadership in adaptive management by making science-based course corrections on a timely basis.
- National Research Council (NRC) peer review of CERP science and technology continues, with wide acceptance of recommendations in the biennial reports, including incremental adaptive management.
- NRC reports are supplemented in the off year by the science updates, by the Science Coordination Group, South Florida Ecosystem Restoration Task Force.
- Extensive science reporting in the form of the South Florida Environmental Report will continue to be published annually, and made a part of the decision-support process.
- Non-government citizen scientists continue to be engaged in CERP implementation decision-making and a source of analysis.
- Assessments include an overall evaluation of economic benefits of restored ecosystem services, relative to costs of restoration; decision-support regarding benefit to costs analysis, as well as cost-effective analysis become an assessment policy.
- Benefits are calculated as recommended by the National Research Council Report on Evaluating Ecosystem Services to include the benefit of restoring wildlife habitat, and benefit of adaptations to global climate change and sea level rise.
- As monitoring and assessment data are evaluated and analyzed relative to CERP and CERP support project goals, objectives and targets, the analysis becomes the quantitative basis for adaptive management, and synthesis of information.

VISION #9: ENERGY POLICY

FLORIDA'S ENERGY CHOICES DO NOT COMPROMISE LAND AND WATER SUPPLY CRITICAL TO EVERGLADES' RESTORATION EFFORTS.

EXPLANATION: Energy production takes an enormous toll on Florida's water resources critical to restoring water flow through the greater Everglades ecosystem. Nuclear and coal are among the most water intensive energy sources and carry additional risks including mercury contamination, excavation and filling of wetlands and degraded water quality. The consumption of energy is responsible for 42% of greenhouse gas emissions in Florida which exacerbate climate change. Recognizing that full implementation of Everglades Restoration is crucial to combating saltwater intrusion and mitigating sea level rise, Florida should focus on conservation, energy efficiency, and renewable energy sources rather than construct more infrastructure dependent non-renewable energy sources, which are harmful to people and wildlife and conflict with Everglades restoration priorities.

ROADMAP TO ACCOMPLISH THE VISION:

- Full implementation of a renewable portfolio standard (RPS) by the Florida Legislature achieving 20% renewable energy generation by 2020 with a standard that includes only truly renewable energy resources, which do not include nuclear or coal derived energy.
- Adoption of federal and state legislation implementing an 80% reduction of greenhouse gas emissions below 1990 levels by the year 2050, and that Florida and municipalities strive to meet the same goals.
- Statewide Climate Change Adaptation Plan to coordinate statewide emission reductions throughout the built environment to include the use of energy efficiency, energy conservation, and the use of demand-side renewable energy resources to mitigate the need for additional power plants.
- Prevent those energy production uses that are incompatible with the health of the greater Everglades ecosystem, such as sugarcane ethanol, coal plants, nuclear plants and oil excavation.
- A statewide ban is enacted and federal moratorium re-enacted prohibiting near-shore oil drilling off Florida's coast.
- Adequate water supply for restoration from all available sources is guaranteed prior to authorizing withdrawals for energy facilities.
- Prioritize and accelerate federal and state efforts to implement Everglades restoration plans and projects.
- Any energy policy will contain a natural resources section intended to provide dedicated funding to help wildlife and the habitats they rely on to cope with the adverse impacts of climate change. Such provisions will include directing a portion of the funding to the restoration of the nation's aquatic ecosystems, including the Everglades.

VISION #10: FEDERAL AND STATE POLICY

EVERGLADES RESTORATION SEES SUBSTANTIAL PROGRESS WITH SUPPORT AND FULL COMMITMENT AT THE HIGHEST LEVELS OF THE FEDERAL AND STATE GOVERNMENTS

EXPLANATION: The success of Everglades restoration depends on the demonstrated commitment of the state and federal restoration partners. In addition to a cooperative working partnership, dedicated and strong leadership is needed to ensure that Everglades restoration remains a high priority across the nation and in Florida. Strong leadership allows implementation of an aggressive approach to reaching restoration goals, so that visible success in restoration will be seen in accordance with this commitment.

ROADMAP TO ACCOMPLISH THE VISION:
Leadership

- Demonstrated champions for Everglades restoration are appointed to high-level leadership roles at the state and federal levels, including US Department of Interior, US Army Corps of Engineers, the Governing Board of the South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of Community Affairs.
- Strong support is demonstrated from elected officials in US Congress, the Florida Legislature and local governments.
- Revised Programmatic Regulations, Principles and Guidelines, and other guidance documents promote the best Everglades ecological outcomes.

Progress on CERP and other restoration projects:

- All Everglades restoration projects authorized previous to CERP, such as the Kissimmee River restoration, C-111 South Dade Project, and Modified Water Deliveries to Everglades National Park project, are completed.
- The Modified Water Deliveries project is complete, enabling construction on DECOMP per WRDA 2000, and operating in a way that provides the most benefits to the restoration of wildlife and habitat.
- A large suite of CERP projects are federally authorized and fully funded, and are being implemented on an aggressive time frame. These must include C-111 Spreader Canal Phase 1 and Phase 2, C-43 reservoir, C-44 reservoir of the Indian River Lagoon South project, Site 1 Impoundment, Biscayne Bay Coastal Wetlands Phase 1 and Phase 2, Picayune Strand, Broward County Water Preserve Areas, DECOMP Phase 1 and others. The Tamiami Trail phase 2 project is authorized, fully funded, constructed and operational.
    - CERP and other restoration projects are prioritized based on the greatest ecological benefits. This benefits determination is made utilizing sound science, incorporating emerging science and the urgency for completing Everglades restoration projects as adaptation to climate change.
- Funding for CERP from the state of Florida and the federal government has continued annually, uninterrupted from 2010 to 2020.

Water Policy:

- Florida statewide water policy provides adequate water sources for Everglades restoration projects through the Regional Water Availability Rule, Water Reservations for CERP projects, and water conservation policies.
- Federal ecosystem restoration funding is increased through coalition efforts and working with partners such as America's Great Waters Coalition. This increase should be achieved in part through dedicated funding sources as well as through the implementation of other national policies benefitting national restoration initiatives, including the Everglades.