

D R A F T
RECOMMENDATIONS TO PROTECT AND RESTORE LAKE
OKEECHOBEE AND THE CALOOSAHATCHEE AND ST. LUCIE ESTUARIES
South Florida Water Management District Water Resources Advisory
Commission, Lake Okeechobee Committee
November 29, 2006

WRAC and Lake Okeechobee Committee Members: Please Note: This is the “Importance” Ranking Voting Summary.

- **“Score” is the total of points for each strategy.**
- **“# Votes” is the number of 5, 4, 3, 2 and 1 votes for each strategy.**
- **Strategies have been rearranged according to priority rankings made by the Committee.**
- **Committee agreed on 1/24/07 that this exercise was to assign relative importance to each strategy, not rank in priority order.**
- **Committee asked staff to determine which strategies are underway, which are not, and the estimated costs.**
- **This information will be provided at the 2/28/07 in Stuart, FL.**
- **The committee will then discuss how to rank the recommended strategies in order of priority.**

GOAL I: Restore and maintain the ecological health of Lake Okeechobee and ensure its continued protection.

OBJECTIVE A: Better manage lake water levels by means of a revised Lake Okeechobee water level regulation schedule.

Score <u>81</u>	<u>Strategy 1: Revise the Lake Okeechobee Regulation schedule to benefit the lake and estuarine ecosystems while providing for appropriate water supply and flood protection and to take into account long term climate trends.</u>				
# votes	5: 15	4: 0	3: 2	2: 0	1: 0
Score <u>67</u>	<u>**Strategy 3: Determine whether pulse releases or continuous releases are appropriate for each estuary receiving Lake Okeechobee water and implement appropriate changes to the Lake Okeechobee Regulation Schedule.</u>				
# votes	5: 9	4: 2	3: 5	2: 1	1: 0
Score <u>65</u>	<u>Strategy 2: Develop an action plan and criteria to periodically lower the water level of Lake Okeechobee to 12’ for a minimum of 12 weeks.</u>				
# votes	5: 8	4: 1	3: 5	2: 0	1: 2

OBJECTIVE B: Restore and protect the biodiversity of the lake ecosystem including plant and animal communities and fisheries.

Score <u>72</u>	**Strategy 4: Evaluate methods to reduce harmful exotic species and replenish native species to benefit the lake ecosystem.				
# votes	5: 7	4: 8	3: 1	2: 1	1: 0
Score <u>70</u>	Strategy 1: Create measurable objectives for the conservation of plant and animal communities and fisheries in the lake.				
# votes	5: 10	4: 2	3: 2	2: 3	1: 0
Score <u>69</u>	**Strategy 3: Vegetation management: Improve coordination and communication between spraying agencies and the public. Evaluate the impact of aquatic plant control activities, including controlled burning, on the health of the lake ecosystem with opportunities for stakeholder input. More closely monitor the spraying activities of independent contractors and post such activities on the appropriate WEB sites.				
# votes	5: 9	4: 3	3: 3	2: 1	1: 1
Score <u>61</u>	Strategy 2: Continue to assess seed bed viability for submerged aquatic vegetation.				
# votes	5: 5	4: 2	3: 8	2: 2	1: 0

OBJECTIVE C: Evaluate other possible solutions to improve water management within the lake and in the lake and tributary watersheds.

Score <u>81</u>	Strategy 1: Evaluate options to store water north of Lake Okeechobee, including the evaluation of operational plans and regulations schedules for all basins north of the Lake. Also evaluate Aquifer Storage and Recovery, and Lake Okeechobee and Estuary Recovery Plan components.				
# votes	5: 15	4: 0	3: 2	2: 0	1: 0
Score <u>79</u>	**Strategy 4: Evaluate, and implement if feasible, additional storage, conveyance and treatment options in the EAA, Caloosahatchee Basin, St. Lucie Basin, and other basins to reduce harmful discharges				
# votes	5: 14	4: 0	3: 3	2: 0	1: 0
Score <u>71</u>	**Strategy 3: Evaluate, and implement if feasible, additional water storage on private and public lands				
# votes	5: 9	4: 3	3: 4	2: 1	1: 0
Score <u>40</u>	Strategy 2: Investigate the feasibility of constructing levees within the Lake Okeechobee dike to create compartments				

	within the lake to enable more efficient water and nutrient management.				
# votes	5: 3	4: 2	3: 2	2: 2	1: 9

OBJECTIVE D: Improve the quality of water in the lake.

Score <u>81</u>	Strategy 1: Complete LOER “Fast Track” and water quality improvement components as quickly as possible.				
# votes	5: 14	4: 2	3: 1	2: 0	1: 0
Score <u>72</u>	Strategy 2: Evaluate feasibility of in-lake sediment dredging as quickly as possible.				
# votes	5: 8	4: 7	3: 0	2: 0	1: 1
Score <u>68</u>	Strategy 4: Meet the current Lake Okeechobee “Total Maximum Daily Load” (TMDL) an average of 140 metric tons per year of phosphorous. Implement the Lake Okeechobee Protection Plan, which is the implementation plan for the TMDL.				
# votes	5: 10	4: 2	3: 2	2: 1	1: 2
Score <u>54</u>	Strategy 3: Evaluate alum, calcium carbonate or other appropriate cleanup methods for use in treating appropriate segments of the lake to gain rapid water quality improvement.				
# votes	5: 4	4: 1	3: 8	2: 2	1: 2

GOAL II: Improve the ecological health of the Caloosahatchee and St. Lucie estuaries by reducing peak flow discharges of freshwater from Lake Okeechobee and by meeting Minimum Flow and Level (MFL) requirements.

OBJECTIVE A: Increase water storage and treatment capacity on public and private lands throughout the SFWMD.

Score <u>73</u>	Strategy 1: Implement Lake Okeechobee and Estuary Recovery Plan component regarding water storage on public and private lands.				
# votes	5: 12	4: 3	3: 1	2: 1	1: 0
Score <u>73</u>	Strategy 7: Implement sustainable agricultural practices.				
# votes	5: 11	4: 1	3: 4	2: 1	1: 0
Score <u>72</u>	Strategy 2: Evaluate and implement Deep Aquifer Recharge Injection wherever feasible, as soon as possible.				
# votes	5: 10	4: 3	3: 2	2: 2	1: 0
Score	Strategy 3: Implement Aquifer Storage and Recovery (ASR)				

<u>72</u>	well construction to the extent feasible.				
# votes	5: 9	4: 5	3: 1	2: 2	1: 0
Score <u>70</u>	Strategy 4: Assess need to add more water storage and Stormwater Treatment Area capacity to store and treat excess Lake Okeechobee water.				
# votes	5: 11	4: 0	3: 4	2: 1	1: 1
Score <u>63</u>	Strategy 6: Explore additional storage opportunities through programs such as World Wildlife Fund's Florida Ranch Lands Environmental Service Project.				
# votes	5: 8	4: 0	3: 5	2: 4	1: 0
Score <u>57</u>	Strategy 5: Determine the feasibility of and need for reconfiguring discharge structures to enable mid-stage discharge capability so that less sediment is sent downstream to the estuaries.				
# votes	5: 5	4: 4	3: 4	2: 2	1: 2

OBJECTIVE B: Increase conveyance capacities for Lake Okeechobee outflows through the C&SF project, for environmental restoration, environmental protection and reasonable beneficial uses.

Score <u>73</u>	Strategy 4: Evaluate the need for and feasibility for additional conveyance capacity, flow ways, reservoirs, etc., to send Lake Okeechobee water to the south (re: Corps of Engineers Reconnaissance Study, mid-1990s).				
# votes	5: 11	4: 3	3: 1	2: 1	1: 1
Score <u>63</u>	Strategy 5: Evaluate a plan, with appropriate conveyance to water utilities, to reduce the harmful discharge of water to tide.				
# votes	5: 6	4: 3	3: 6	2: 1	1: 1
Score <u>63</u>	Strategy 6: Evaluate the feasibility of providing excess Lake Okeechobee water to water utilities as needed.				
# votes	5: 5	4: 4	3: 7	2: 0	1: 1
Score <u>58</u>	Strategy 1: Evaluate existing SFWMD plans and projects to determine the need for conveyance of Lake Okeechobee water to the C-23, C-24, and C-25 basins for beneficial uses when there is excess water in Lake Okeechobee.				
# votes	5: 7	4: 3	3: 0	2: 4	1: 3
Score <u>56</u>	Strategy 3: Interbasin/Interdistrict Transfers: Determine the feasibility of using excess Lake Okeechobee water in the SFWMD Big Cypress basin, and the Southwest Florida and St. Johns River Water Management Districts.				
# votes	5: 6	4: 1	3: 5	2: 2	1: 3
Score <u>54</u>	Strategy 2: Evaluate the need to create works necessary to reestablish a more natural distribution and timing of water				

	from the C-25 basin to the St. Johns River Water Management District when there is excess water in the system.				
# votes	5: 7	4: 1	3: 2	2: 2	1: 5

OBJECTIVE C: Improve water quality in the Caloosahatchee and St. Lucie estuaries to meet Federal and State water standards.

<u>Score</u> <u>76</u>	<u>Strategy 2:</u> Implement LOER water quality improvement programs.				
# votes	5: 12	4: 1	3: 4	2: 0	1: 0
<u>Score</u> <u>71</u>	<u>Strategy 1:</u> Establish and meet estuary Total Maximum Daily Loads (TMDLs) and other water quality standards.				
# votes	5: 11	4: 1	3: 3	2: 1	1: 1

GOAL III: Protect land and water resources in the Lake Okeechobee and tributary watersheds while also protecting private property rights, flood protection and water supply needs.

OBJECTIVE A: Create incentives for landowners to retain natural areas to reduce runoff, store water and improve water quality.

<u>Score</u> <u>75</u>	<u>Strategy 6:</u> Complete the Long Term Management Plan for the Kissimmee Chain of Lakes to better assess water management needs in that region.				
# votes	5: 10	4: 4	3: 3	2: 0	1: 0
<u>Score</u> <u>72</u>	<u>Strategy 7:</u> Initiate a study to determine watershed storage and nutrient needs in Lake Istokpoga's watershed.				
# votes	5: 10	4: 2	3: 4	2: 1	1: 0
<u>Score</u> <u>70</u>	<u>Strategy 5:</u> Provide credits, compensation or other incentives for landowners who store more water on their land.				
# votes	5: 9	4: 2	3: 5	2: 1	1: 0
<u>Score</u> <u>61</u>	<u>Strategy 2:</u> Determine appropriate phosphorous reduction requirements for conversion of land uses in the Lake Okeechobee and tributary watersheds.				
# votes	5: 7	4: 3	3: 3	2: 1	1: 3
<u>Score</u> <u>59</u>	<u>Strategy 1:</u> Evaluate implementation of transfer of Development Rights and Rural Land Stewardship programs in Lake Okeechobee tributary watersheds.				
# votes	5: 7	4: 2	3: 3	2: 2	1: 3
<u>Score</u> <u>59</u>	<u>Strategy 3:</u> For Lake tributary basin, evaluate leasing vs. acquiring land for storage and treatment, especially in areas impacted by citrus canker.				
# votes	5: 6	4: 3	3: 3	2: 3	1: 2

Score <u>54</u>	<u>Strategy 4:</u> When leasing lands for storage and treatment, evaluate feasibility of restoring wetlands as a lease provision.				
# votes	5: 4	4: 3	3: 4	2: 4	1: 2

OBJECTIVE B: Implement alternative water supply development, water reuse and conservation in the Lake Okeechobee watershed, its tributary watersheds, and downstream water users.

Score <u>67</u>	<u>Strategy 4:</u> Continue efforts to reduce water supply dependence on Lake Okeechobee by creating alternative water supply solutions				
# votes	5: 9	4: 2	3: 4	2: 0	1: 2
Score <u>67</u>	<u>Strategy 2:</u> Need to quickly resolve issue of temporary vs. permanent forward pumps and impacts on water supply and Lake and Estuarine Ecology and recreation.				
# votes	5: 9	4: 3	3: 2	2: 1	1: 2
Score <u>65</u>	<u>Strategy 3:</u> Support desalination plants and water reuse and water conservation programs in coastal counties, to augment public water supply.				
# votes	5: 8	4: 4	3: 1	2: 2	1: 2
Score <u>59</u>	<u>Strategy 1:</u> Rapidly complete and implement the SFWMD Lake Okeechobee Water Shortage Management Plan.				
# votes	5: 4	4: 7	3: 1	2: 3	1: 2

OBJECTIVE C: Improve quality of water flowing into the lake.

Score <u>77</u>	<u>**Strategy 4:</u> Rapidly implement the State of Florida’s initiative regarding use of phosphorous and nitrogen fertilizers for urban turf applications in Lake Okeechobee and tributary basins.				
# votes	5: 12	4: 8	3: 3	2: 0	1: 0
Score <u>76</u>	<u>**Strategy 7:</u> Evaluate and implement alternatives to the land application of bio-solids in the Lake Okeechobee watershed.				
# votes	5: 10	4: 5	3: 2	2: 0	1: 0
Score <u>73</u>	<u>**Strategy 3:</u> Implement agricultural and urban BMP programs for any water sources flowing into the lake.				
#votes	5: 11	4: 3	3: 1	2: 1	1: 1
Score <u>71</u>	<u>Strategy 2:</u> Speed up the timeframe for implementation of agricultural and urban “Best Management Practices” (BMPs).				
# votes	5: 9	4: 6	3: 1	2: 1	1: 0
Score <u>66</u>	<u>**Strategy 5:</u> The Florida Department of Environmental Protection should establish Lake Okeechobee tributary Total				

	Maximum Daily Loads and implementation plans to achieve the targets.				
# votes	5: 9	4: 2	3: 3	2: 1	1: 2
Score <u>64</u>	<u>Strategy 6:</u> Determine the feasibility of and need for reconfiguring discharge structures to enable mid-stage discharge capability so that less sediment enters the lake.				
# votes	5: 5	4: 4	3: 7	2: 1	1: 0
Score <u>52</u>	<u>Strategy 1:</u> Evaluate aeration and chemical treatment in canals at strategic inflow points to settle out nutrients and solids flowing into the lake.				
# votes	5: 2	4: 4	3: 6	2: 3	1: 2

OBJECTIVE D: Assure that the Lake Okeechobee Hoover Dike provides adequate flood protection

Score <u>81</u>	<u>Strategy 1:</u> Expedite rehabilitation of the Hoover dike and all other appropriate flood protection.				
# votes	5: 14	4: 2	3: 1	2: 0	1: 0
Score <u>66</u>	<u>Strategy 2:</u> As soon as possible, reevaluate the outflow capacity of the Lake to assure that the design discharge capacity of Lake outflow structures is maintained.				
# votes	5: 7	4: 4	3: 4	2: 1	1: 1