

PLANNED, ONGOING, AND COMPLETED WATER QUALITY MODELING EFFORTS IN SOUTH FLORIDA (COMPILED AUGUST 2002)

	TASK NAME	PROJECT NAME	LEAD ORGANIZATION	BASIN NAME	WATER BODY	SIMULATED ENVIRONMENT	MODEL CODE	POLLUTANTS OF INTEREST	SCHEDULE		ESTIMATED COST	MODELING PURPOSE	STATUS OF MODEL	CONTACT INFORMATION	DESCRIPTION	WEB PAGE
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1	Fate / Transport Modeling of Wastewater Pollutants	Wastewater Reuse - West	USACE SFWMD	Lower East Coast (LEC)	Bird Drive Basin	Wetlands, surface / subsurface Fate transport	Not selected yet	Nutrients, metals	Jan. 04	Dec. 07	\$ 400,000	CERP	Planned for future	Larry Fink, lfink@sfwmd.gov, mark.d.shafer@usace.army.mil	There are two modeling efforts in this task. The first is the simulation of fate/transport of wastewater pollutants in a treatment wetland. The second is the simulation of trace pollutants discharged to the canal network and groundwater.	
2	Fate / Transport Modeling of Wastewater Pollutants	Wastewater Reuse - South	USACE SFWMD	LEC	L-31E / Biscayne Bay	Wetlands, Canal	Not selected yet	Nutrients, trace metals				CERP, Permit Support	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	A WQ model will be used to predict the impact of WW discharges on L-31E and coastal wetlands of Biscayne Bay	
3	Pollutant Load Assessment	Biscayne Bay Coastal Wetlands	USACE SFWMD	LEC	Biscayne Bay	STA, Watershed	Not selected yet	Nutrients, metals	Mar. 03	Feb. 04	\$ 120,000	CERP, Permit Support	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	The Phase II WQ modeling effort will look at nutrients, seagrasses, light, turbidity, pathogens, and toxics. Model may be 3-D.	
4	Berry Reservoir WQ modeling	C-43 Basin Storage Reservoir(s)	USACE SFWMD	Southwest Florida	Caloosahatchee River	STA, River	Not selected yet	Nutrients	Dec. 02	Mar. 03	\$ 160,000	CERP, Permit Support	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	A WQ model will be created to predict effluent quality for Berry Reservoir. A second model will be used to predict project impacts to C-43.	
5	Lake Okeechobee Ecosystems Modeling	Regional ASR Study	USACE SFWMD	Lake O. Watershed	Lake O	Lake, Sediment flux	WASP, EFDC	nutrients, DOC, Ca, CaCO3, SO4, pH	Mar. 05	Mar. 07	\$125,000	CERP, SWIM, Research Study	Currently under development	Tom James, tjames@sfwmd.gov, kjin@sfwmd.gov	This effort includes simulation modeling of dilution, dispersion, transport, and chemical transformation of nutrients as well as DOC, Ca, CaCO3, SO4, and pH.	
6	Ecological Methylmercury Modeling	Regional ASR Study	USACE SFWMD	Lake O. Watershed, Everglades	Lake O, Everglades	Bioaccumulation	WASP	Hg, methylmercury, SO4, DOC, OrthoP	Mar. 07	Mar. 09	\$190,000	CERP	Planned for future	Larry Fink, lfink@sfwmd.gov	Methylmercury bioaccumulation will be simulated spatially as well as in higher trophic levels using an improved version of the Everglades Mercury Cycling Model.	
7	Greater Everglades Basin WQ Modeling	Regional ASR Study	USACE SFWMD	Everglades	EPA	Wetlands	Probably ELM	nutrients, chloride, sulfate, trace metals	Feb. 07	Feb. 08	\$100,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	The ELM or some other model will be used to simulate changes in concentration of nutrients and possibly chloride and sulfate that result from large-scale ASR operation.	
8	Caloosahatchee River Basin WQ Modeling	Regional ASR Study	USACE SFWMD	Lower West Coast	Caloosahatchee River / Estuary	River	Not selected yet	nutrients, chloride, sulfate, trace metal	Aug. 06	Aug. 07	\$100,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	This modeling effort is intended to incorporate and expand upon previous WQ modeling done in the Caloosahatchee Basin.	
9	St. Lucie Basin WQ modeling	Regional ASR Study	USACE SFWMD	Upper East Coast	St. Lucie River / Estuary	River	Not selected yet	nutrients, chloride, sulfate, trace metal	Aug. 06	Aug. 07	\$100,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	The intent is to use/adapt a pre-existing WQ model of the St. Lucie River/Estuary.	
10	C-51 Basin WQ Modeling	Regional ASR Study	USACE SFWMD	Northern Palm Beach County	C-51 Canal	Canals	Not selected yet	nutrients, chloride, sulfate, trace metal	Aug. 06	Aug. 07	\$100,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	The intent is to use/adapt a pre-existing WQ model of this system.	
11	Hillsboro Basin WQ Modeling	Regional ASR Study	USACE SFWMD	Northern Palm Beach County	Hillsboro Canal	Canals	Not selected yet	nutrients, chloride, sulfate, trace metal	Jun. 06	Jun. 07	\$100,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	The intent is to use/adapt a pre-existing WQ model of this system.	
12	Mass Balance Study	Regional ASR Study	USACE SFWMD	Lake Okeechobee, Everglades	Lake Okeechobee, Everglades	Canals	Not selected yet	chloride, sulfate	Feb. 07	Feb. 08	\$90,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	This task is intended to be performed using SFWMM2X2 flows and spreadsheet tracking of conservative pollutants.	
13	Assessment of Dissolved Ions in Recovered Water	Regional ASR Study	USACE SFWMD	Okeechobee	Lake Okeechobee	Eco-toxicity	Probably GRI-FW-STR	K, Na, Ca, Mg, Cl, SO4	Aug. 06	Aug. 07	\$68,000	CERP	Planned for future	Mark Shafer, mark.d.shafer@usace.army.mil	Discharge of recovered water from ASR wells is expected to increase the concentration of common ions such as sodium, potassium, calcium, magnesium, etc. Related toxicity in fresh and marine systems will be investigated.	
14	Geochemical Reaction Modeling - Phase I	Regional ASR Study	USACE SFWMD	Lake Okeechobee, Everglades	Lake Okeechobee, Everglades	Geochemical WQ	Unknown	trace metals, nutrients, Alk., Hardness,	Mar. 03	Sep. 03	\$55,000	CERP	Planned for future	June Mirecki, june.e.mirecki@erdc.usace.army.mil	Rock / water chemistry will be simulated for different mixtures of native and injected ASR water.	
15	Geochemical Reaction Modeling - Phase II	Regional ASR Study	USACE SFWMD	Lake Okeechobee, Everglades	Lake Okeechobee, Everglades	Geochemical WQ	Unknown	trace metals, nutrients, Alk., Hardness,	Jun. 07	Dec. 07	\$55,000	CERP	Planned for future	June Mirecki, june.e.mirecki@erdc.usace.army.mil	Rock / water chemistry will be simulated for different mixtures of native and injected ASR water.	

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16	WQ Analysis	Acme Basin B	USACE SFWMD	Northern Palm Beach County	L-40 Canal	STA, Watershed	Not selected yet	Nutrients, pesticides, metals	Jul. 02	Nov. 02	\$87,000	CERP, Permit Support	Currently under development	Mark White, mark.a.white@usace.army.mil, Chandra Pathak, cpathak@sfwmd.gov	DMSTA, a statistical/empirical WQ model will be used to simulate WQ in an STA. WAMVIEW, a GIS-Based Watershed Hydrology/WQ model will be used to simulate basin loads	
17	Water Quality Assessment	EAA Storage Reservoirs - Phase 1	USACE SFWMD	Everglades Agricultural Area	Miami Canal, N. New River Canal, Hillsboro Canal	STA, Watershed	Not selected yet	Nutrients, Hg, pesticides	Aug. 02	Dec. 02	\$64,000	CERP, Permit Support	Currently under development	Mark White, mark.a.white@usace.army.mil, Tracey Piccone, tpiccone@sfwmd.gov	DMSTA, a statistical/empirical WQ model will be used to simulate WQ in an STA. WAMVIEW, a GIS-Based Watershed Hydrology/WQ model will be used to simulate basin loads	
18	WQ Analysis	Indian River Lagoon North Restoration Feasibility Study	USACE, SJRWMD	Upper East Coast	Indian River Lagoon	Hydrodynamic / WQ	CH3D-ICM linked to WQ model	TSS, nutrients		Jul. 02		CERP, SWIM, Permit Support	Operational, Continued Development	Peter Chang, Phd, UF, Coastal Engineering, mark.a.white@usace.army.mil	The Corps of Engineers, CH3D-ICM Hydrodynamic model was used to simulate salinity and nutrient conditions. Results are available in final report. See IRL web-site.	
19	WQ Analysis	Indian River Lagoon - South	USACE SFWMD	Upper East Coast	St. Lucie River / Estuary	STA, and Optimization Model	Walker STA model, Linear Optimization Model	TSS, nutrients, agri-chemicals, metals		Oct. 01		CERP, SWIM	Operational, Continued Development	Ken Konyha, kkonyha@sfwmd.gov, mark.a.white@usace.army.mil	Several hydrologic / hydrodynamic, and optimization models were used in the IRL Feasibility Study. See IRL web-site for complete description.	
20	WQ Analysis	Lake Okeechobee Watershed	USACE SFWMD	Lake Okeechobee	Taylor Creek, Nubben Slough, Kissimmee River (Pool D, Pool E), Fisheating Creek	Watershed, STA	WAM-VIEW with DMSTA	Phosphorus	May. 02			CERP	Currently under development	Mark White, mark.a.white@usace.army.mil	DMSTA, a statistical/empirical WQ model will be used to simulate WQ in an STA. WAMVIEW, a GIS-Based Watershed Hydrology/WQ model will be used to simulate basin loads	
21	WQ Analysis	S-169 / Nine Mile Creek	USACE SFWMD	Lake Okeechobee	Nine Mile Creek	Watershed, Canal	Not selected yet	Nutrients, Agri-chemicals				CERP	Planned for future	Mark White, mark.a.white@usace.army.mil	Planning not complete	
22	WRA WQ (Planning Level) Modeling	Big Cypress Seminole Indian Reservation Western Water Conservation Project	USACE Seminole Tribe	Everglades	L-28 Canal	STA	Walker STA model	Phosphorus	Aug. 02	Sep. 02		Permit Support	Currently under development	Geral Benock, Seminole Contractor, mark.a.white@usace.army.mil		
23	Updated WQ Assessment	Ten Mile Creek Water Preserve Area	USACE SFWMD	Upper East Coast	Ten Mile Creek	STA	DMSTA	Phosphorus	Dec. 01	Jun. 02	\$65,000	CERP, Permit Support	Operational	Bob Knight, Wetlands Solutions, Inc., mark.a.white@usace.army.mil	Results available in Ten-mile Creek Design Report.	
24	WQ Assessment	Winsberg Farm Wetlands Restoration Project	USACE SFWMD	Upper East Coast	L-30 Canal	STA	Walker STA model	Nutrients, metals				CERP, Permit Support	Planned for future	Hassan Hadjimiry, Palm Beach County Wastewater Division, mark.a.white@usace.army.mil	WQ modeling will be used to provide effluent projections to determine the suitability of system discharges for indirect reuse and /or release to surface waters (L-30).	
25	Caloosahatchee WQ Model	Caloosahatchee Basin WQ Assessment	FDEP USEPA	Southwest Florida	Caloosahatchee	Watershed, river	WAM-VIEW	Nutrients	Mar. 02	Dec. 02	\$150,000	SWIM	Currently under development	Deborah Scerno, Deborah.Scerno@dep.state.fl.us	Under contract to Tetra-Tech, Inc.	
26	Fl. Bay Seagrass Modeling	Florida Bay / Florida Keys Feasibility Study	USACE SFWMD	Everglades	Florida Bay	Bay	Not selected yet	TSS, Light Penetration				CERP, SWIM	Currently under development	Chris Madden, cmadden@sfwmd.gov	Model will be used to develop management alternatives for improving the Florida Bay Seagrass Community. Model will include sediment and water column nutrient dynamics, and effects of freshwater inputs.	
27	Florida Bay Salinity Modeling	Florida Bay / Florida Keys Feasibility Study	USACE SFWMD	Everglades	Florida Bay	Bay, Hydrodynamic	Not selected yet	Salinity				CERP, SWIM	Currently under development	Zaki Moustafa, moustafa@sfwmd.gov	Model will be used to predict salinity structure and flow fields in Florida Bay under a range of freshwater flow regimes. The model will use multiple grids (northeastern grid, Bay/Keys grid).	

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28	Everglades Landscape Modeling	Everglades Ecological Modeling	SFWMD	Greater Everglades	EPA	Wetlands, soil / water	Everglades Landscape Model	nutrients (soil, water), periphyton biomass, community type					Operational, Continued Development	Carl Fitz, cfitz@sfwmd.gov	The ELM is a regional scale ecological model designed to predict the landscape response to different water management scenarios in South Florida. It simulates changes to the hydrology, soil & water nutrients, periphyton biomass & community type, and vegetation biomass & community type.	
29	Everglades Agricultural Model (EAAMOD)	Everglades Agricultural Area Model	SFWMD	EAA	EAA	Watershed	EAAMOD linked to WAM	nutrients		1998		BMP simulators	Operational	Barry Jacobsen, Soil and Water Engineering Technology, Inc.	The model simulates the effectiveness of Best Management Practices to control Phosphorus runoff in the EAA.	
30	Everglades Mercury Cycling Model.	Everglades Mercury Modelling	USEPA	Greater Everglades	Everglades		WASP	Methylated Hg				Research Study	Operational	Larry Fink, Lfink@sfwmd.gov	Simulates the mercury cycle in the Everglades.	
31	Aquatic Cycling of Mercury in the Everglades	Aquatic Cycling of Mercury in the Everglades	USGS	Lake O. Watershed, Everglades	Everglades	Wetlands, chemical reactions, bioaccumulation	Everglades Mercury Cycling Model (EMCM)	Methylmercury, mercury, sulfate	2000	2004		TMDL, research	Operational, Continued Development	David Krabbenhoft, USGS, 8505 Research Way, Middleton, WI 53562, dkrabbe@usgs.gov, 608-821-3843	The model was formulated based on the fundamental conceptual model put forward by the ACME researchers, including the primary cycling processes, reaction rates, and bioaccumulation pathways. Presently the model is undergoing further development to enhance the code to provide direct linkages between sulfur cycling and mercury cycling, which is known to be the most important methylation process in nature.	
32	Okeechobee Grazing Lands BMP Modelling	Okeechobee Grazing Lands BMP Modelling	USDA-NRCS	Lake Okeechobee	Priority Watersheds (TCNS, S-65D, S-65E, S-154)	Watershed, STA	WAM-VIEW	Phosphorus	Feb. 02			PL-566	Currently under development	Bill Reck, bill.reck@fl.usda.gov	WAMVIEW, a GIS-Based Watershed Hydrology/WQ model will be used to simulate basin loads. The intent of the model is to determine the effectiveness of BMPs on pasturelands.	
33	USDA-ARS, Everglades Agro-hydrology project		USDA-ARS	Ag Areas in S. Dade or EAA	None	All the processes in the Ag areas	FORTAN	Ag-Chemicals (Nutrients & Pesticides)	1998	2002	\$250,000	TMDL, research, CERP project	Planned for future, Currently under development	Reza Savabi rsavabi@saa.ars.usda.gov	A decision support tool for sustainable agriculture during CERP implementation and beyond (Fate and Transport of Ag-Chemicals)	
34	Dynamics of Phosphorus and Periphyton Interactions	Structural Instability, Multiple Stable States, and Hysteresis in Periphyton Driven by Phosphorus Enrichment in the Everglades	NPS / SERC	Everglades	N/A	Wetlands	MSH	Phosphorus		Jan. 02		Research Study	Operational	Quan Dong, Quan_dong@nps.gov	The model examines the interactions between periphyton and P dynamics in slough areas. The model is not a water quality model per se. The model analyses suggested multiple steady states and hysteresis that was not suggested before, that are supported by field data and that has significant implications in phosphorus management issues.	http://www.idealibrary.com or see Theoretical Population Biology, Vol. 61: 1-13 (2002)
35	LWL Hydrodynamic Salinity Modeling	Salinity Distribution and Flow Management for Lake Worth Lagoon	SFWMD	Coastal Lake Worth Lagoon	Lake Worth Lagoon/Lake Worth Creek: Jupiter-Ocean Ridge	Lagoon/freshwater discharge structures	EFDC	Salinity	Feb. 02	Nov. 02	\$160,000	Research Study	Currently under development	Gordon Hu, ghu@sfwmd.gov	The model examines the circulation and simulated salinity distribution using existing and proposed freshwater discharge scenarios.	
36	Florida Bay and Southwest Coastal Salinity model development	Tides and Inflows to Mangrove Ecotone (TIME) model development	USGS	Everglades	Florida Bay and Southwest Gulf Coast	Hydrology and estuarine salinity within ENP		Salinity				Research Study	Currently under development	Harry Jenter hjenter@usgs.gov or Ray Schaffranek rws@usgs.gov	This model simulates water level, flow and salinity within ENP, including southwest Gulf Coast estuaries.	
37	Florida Bay Water Quality Modeling	Florida Bay / Florida Keys Feasibility Study	USACE SFWMD	Everglades	Florida Bay	Water Quality in Florida Bay and the Keys	Not selected yet	Nutrients and toxins				CERP Project, Research Study	Currently under development	Dave Rudnick David.Rudnick@sfwmd.gov, Dewey Worth dworth@sfwmd.gov, Erwin.J.Wunderlich Erwin.J.Wunderlich@usace.army.mil	The model will predict nutrient status in Florida Bay and adjacent marine waters and will use output from proposed Florida Bay hydrodynamic model. The current WES Florida Bay WQ Model uses RMA10 hydrodynamic model output (Carl F. Cerco@usace.army.mil or Mark.S.Dortch@usace.army.mil)	www.evergladesplan.org/pm/studies/flbay/index.shtml

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38	Florida Bay Mangrove Model	Florida Bay / Florida Keys Feasibility Study	USACE SFWMD	Everglades	Florida Bay	Mangrove Transition Zone Groundwater and Water Quality	Not selected yet	Flows, Nutrients, and Toxins				CERP Project, Research Study	Planned for future	Dave Rudnick David.Rudnick@sfwm.d.gov, Dewey Worth dworth@sfwmd.gov, Erwin Wunderlich Erwin.J.Wunderlich@usace.army.mil	The model will predict groundwater input and nutrient patterns and processes in mangrove transition zones affecting Florida Bay and the Keys.	www.evergladesplan.org/pm/studies/flbay/index.shtml
39	Taylor Slough/C-111 Hydrologic Model	Southern Inlands and Coastal System (SICS) model	USGS	Everglades	Florida Bay	Hydrology and salinity of Taylor Slough/C-111 Basin simulates flow to FL Bay	SICS	Salinity				CERP Project, Research Study	Currently under development	Eric Swain edswain@usgs.gov Ray Schaffranek rws@usgs.gov	This model simulates water level, flow and salinity within part of the Taylor Slough/C-111 basin and in northeastern Florida Bay.	
40	Florida Bay Salinity Model	FATHOM and possibly FL Bay FL Keys Feasibility Study	ENP and possibly USACE SFWMD	Everglades	Florida Bay	Basins in Florida Bay		Salinity				CERP Project, Research Study, Explore sensitivity to climate	Currently under development	Jim Fouqueran fourqure@fiu.edu Bill Nuttle wnuttle@eco-hydrology.com Jack Cosby b.j.cosby@virginia.edu	This mass balance box model predicts salinity in 47 sub-basins within Florida Bay	
41	Water Quality Modeling using DMSTA and others	ECP & ESP Basin Wide Feasibility Study	SFWMD	ECP-EAA and Everglades Stormwater Program	n/a	PC	Visual Basic	Total Phosphorus	Jan. 01	Aug. 02	not available	Research Study, Other	Operational	Chandra Pathak Phone 561-682-2567	The models will be used to predict nutrient removal efficiency in STAs planned for the Everglades Agricultural Area.	
42	Estuarine fish community structure-pattern of stability, changes and succession in relation to C-111 hydrology modification	South Florida Ecosystem	USGS	Everglades	Barnes Sound, Florida Bay	Ecological Study		N/A	Jul. 98	Sept. 01		Research Study	Completed	Keneth Sulak, USGS, 7920 NW 71st St., Gainesville, FL 32653	The overall objective is to provide a basis for predicting the direction of fish community change in response to restoration actions relative to the South Florida Restoration Program.	
43	Chemical stressors/contaminants and wildlife	Chemical Exposure and Ecological Risk in South Florida	USGS	Everglades	N/A	Toxicology		Pesticides, Metals				Research Study	In Progress	Timothy Gross, USGS, 7920 NW 71st St., Gainesville, FL 32653	Results of this study are expected to determine evidence of wildlife exposures to chemical stressors/contaminants in south Florida. Effects characterization will focus on non-lethal effects such as decreased health status, altered reproductive success, and endocrine disruption.	
44	Transport of dissolved and suspended materials in surface waters NR147	South Florida Ecosystem	USGS	N/A	N/A	Surface Water Transport	Model development	??	Oct. 89			Research Study	??	Harry Jenter, USGS, 12201 Sunrise Valley Dr., MS 430, Reston, VA 20192	Development/validation of multidimensional, computational models describing the transport of dissolved and suspended materials in surface waters	
45	Reaction-transport phenomena in hydrogeologic settings NR153	South Florida Ecosystem Program	USGS	N/A	N/A	Groundwater Geochemistry		??	Oct. 91			Research Study	??	Ward Sanford, USGS, 12201 Sunrise Valley Dr., MS 430, Reston, VA 20192	The objective of this project will be to understand the interaction of ground-water transport and geochemical reactions in hydrogeologic settings. Including interactions between geochemical reactions and heat transport, variable density flow in natural systems.	
46	Open-channel and wetland flow/transport interaction NR165	South Florida Ecosystem Program	USGS	Everglades	N/A	Canal/wetland flow	Development of new model	Nutrients	Oct. 94	Sept. 99		Research Study	Completed	Raymond Schaffranek, USGS, 12201 Sunrise Valley Dr., MS 430, Reston, VA 20192	The objective of this project will be to simulate canal and wetland flow and transport interactions. Driving forces, nutrient sources and cycling patterns can be quantified, and investigated.	
47	Hydrologic interactions between surface and ground water	South Florida Ecosystem Program	USGS	N/A	N/A	Surfacewater/ Groundwater		??	Oct. 97			Research Study	Completed	Judson Harvey, USGS, 12201 Sunrise Valley Dr., MS 430, Reston, VA 20192	The objective is to improved field modeling methods to characterize hydrologic fluxes and chemical reactions in coupled surface and shallow sub-surface flow systems. Quantify enhanced rates of chemical reactions and isolate the contributing roles of physical and chemical factors	

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48	Restoration Ecology Branch		USGS	Everglades	Everglades, Big Cypress, Florida Bay, Biscayne Bay	N/A		N/A				Research Study	Completed	http://www.fcsc.usgs.gov/Greater_Florida_Everglades/greater_florida_everglades.html	The Branch is developing a digital library capability to ensure that all of its information, data, metadata and ecological modeling tools are widely available to resource managers, other scientists and the general public.	
49	Windermere Humic Aqueous Model (WHAM)			Everglades	WCA-2A	Surface water at site U3 in WCA-2A		Dissolved inorganic mercury species	1995	1999		Research Study	Operational	Steve Loftis, Center for Ecology & Hydrology, The Ferry House, Far Sawery, Ambleside, Cumbria LA220LP, The United Kingdom, stlo@ceh.ac.uk	WHAM includes a sophisticated model of ion-binding to humic substances (Humic Ion Binding Model 6), a surface complexation model and a model for cation exchange on clay.	http://whamquest.quest@sharepoint.nwi.ac.uk/wham
50	TIME/SICS Modeling of surface water and interactions with ground water	South Florida Ecosystem Program	USGS	Everglades	Everglades, Florida Bay	Wetlands and Florida Bay	SWIFT2D and SEAWAT	Nutrients			\$190,000	Research Study	Planned for future	Eric Swain edswain@usgs.gov, Melinda Wolfert mwolfert@usgs.gov	The objective is to incorporate nutrient interactions and kinetics into the SICS model of coupled surface-water/ground-water. The goal is to develop the ability to determine the effects of different hydrologic control schemes on nutrient distributions and outflows.	
51	Across Trophic Level System Simulation (ATLSS)	South Florida Ecosystem Program	USGS	Everglades	Everglades, Big Cypress Region	Trophic Levels	ATLSS	??	Jan. 95	Dec. 00		Research Study	Operational, Continued Development	Donald L. DeAngelis, Dept. of Biology, Univ. of Miami, Coral Gables, FL 33124	ATLSS is an integrated set of computer simulation models representing the biotic community of the Everglades/Big Cypress region of south Florida and the biotic factors that affect this community.	
52	NW Wellfield Rockmine Setback Study		DERM	Biscayne Aquifer	Biscayne Surficial Aquifer	Surface water, Ground water, Production wells		??	Nov. 00	Jul. 01	\$96,500	Reassessment of the Miami-Dade's rockmine setback	Operational	Tim Sharp, Ch2M Hill, Hillsboro Exec. Ctr. N., 800 Fairway Dr. Ste 350, Deerfield Beach, FL 33441		
53	DMSTA (Dynamic model for stormwater treatment areas)		DOI (developed by contractor)	South Florida		Surface water in Stormwater Treatment Areas	Excel/Visual Basic	Phosphorus, Conservative substances	Jan. 01	ongoing		TMDL, CERP, SWIM, Permit, Research, Design STA for P removal	Operational	William Walker, 1127 Lowell Rd., Concord MA 01742, 978-369-8061, bill@wwwalker.net	DMSTA simulates daily water & mass balances in a user-defined series of wetland treatment cells, each with specified morphometry, hydraulics, and phosphorus cycling parameters. Each cell is further divided into a series of continuous stirred tank reactors (CSTR's) to reflect residence time distribution	
54	Myakka TMDL		EPA	S.W. Florida	Myakka River & Estuary	Surface water	EFDC, WASP, WAMview	Phosphorus, Nitrogen, Pathogens, DO	Jun. 01	Dec. 01	\$100,000	TMDL	Operational	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com	Development of TMDLs for nutrients and pathogens. 1-D, Non-steady state, hydrodynamic flow-transport model in freshwater wetlands and estuary. Will examine point versus non-point contributions and control strategies.	
55	C-43 Pollutant Loading Analysis		DEP	C-43	Entire C-43 Basin	Surface water	WAMview	Phosphorus, Nitrogen, TSS, Chlorophyll a	May. 02	ongoing	\$150,000	CERP, Water quality for FDEP	Currently under development	Barry Jacobsen, Soil & Water Engineering Technology, 352-378-7372	Comprehensive assessment of the C-43 WQ conditions includes development of a simulation model to predict nutrient concentrations and loads.	
56	Florida Bay Salinity Analysis		SFWMDC	Everglades	Florida Bay and Gulf of Mexico	Bay	EFDC	salinity				CERP	Ongoing	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		

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									START	FINISH							
57	Lake Okeechobee Sediment Transport Model		SFWMD	Okeechobee	Lake Okeechobee	Lake	EFDC	sediment					CERP	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
58	Lake Worth Salinity Analysis		Palm Beach County	Upper East Coast	Lake Worth	Estuary/Lake	EFDC	salinity					CERP	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
59	Optimization of S. FL Stormwater Treatment Areas		SFWMD	Everglades Agricultural Area	6 S. FL STAs	STAs	EFDC	Phosphorus					CERP	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
60	Lake Okeechobee Temperature Model		SFWMD	Okeechobee	Lake Okeechobee	Lake	EFDC	temperature, stratification					Research	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
61	Hillsboro River Salinity Intrusion Model		Nestle Food Inc.	S.W. Florida	Hillsboro River (Tampa Bay)	River	EFDC	salinity					Permit Support	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
62	Flow & Particulate Removal in Everglades Nutrient Removal Program		SFWMD	Everglades Agricultural Area	Everglades Nutrient Removal Project	STAs	EFDC	Phosphorus					CERP	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
63	Flow & Transport in WCA-2A		SFWMD	Everglades	WCA-2A	Surfacewater/wetlands	EFDC	Phosphorus					CERP	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		
64	Sedimentation in Rose Bay, Halifax River		Volusia County	Lower East Coast (LEC)	Rose Bay, Halifax River	River	EFDC	sediment					Permit Support	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetratech-ffx.com		

	TASK NAME	PROJECT NAME	LEAD ORGANIZATION	BASIN NAME	WATER BODY	SIMULATED ENVIRONMENT	MODEL CODE	POLLUTANTS OF INTEREST	SCHEDULE		ESTIMATED COST	MODELING PURPOSE	STATUS OF MODEL	CONTACT INFORMATION	DESCRIPTION	WEB PAGE
									START	FINISH						
65	Fenholloway River Hydrodynamic & Transport Model		EPA	Panhandle Florida	Fenholloway River	River	EFDC	Color, nutrients, chlorophyll_a				TMDL	Ongoing	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetrachfx.com		
66	Impact of High Fresh Water Discharge in N. Indian River		SJRWMD	Upper East Coast	N. Indian River	River/Estuary	EFDC	salinity				SWIM	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetrachfx.com		
67	Vero Beach Breakwater Evaluation		Indian River County	SJRWMD	Coast		EFDC	sediment				design evaluation	Completed	Steve Preene, 1401 Oven Park Dr. Ste 201, Tallahassee, FL 32308, 850-385-9899, steven.peene@tetrachfx.com		

	TASK NAME	PROJECT NAME	LEAD ORGANIZATION	BASIN NAME	WATER BODY	SIMULATED ENVIRONMENT	MODEL CODE	POLLUTANTS OF INTEREST	SCHEDULE		ESTIMATED COST	MODELING PURPOSE	STATUS OF MODEL	CONTACT INFORMATION	DESCRIPTION	WEB PAGE
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