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5.1. PREPARERS

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5.2. REVIEWERS

The following individuals were provided review copies of the EIS:

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6. PUBLIC INVOLVEMENT

6.1. SCOPING AND DRAFT EIS

A Notice of Intent (NOI) to prepare a draft EIS appeared in the Federal Register on August 4, 2000. A scoping letter was mailed on November 6, 2000. For a copy of NOI and scoping letter, see Appendix E.

6.2. AGENCY COORDINATION

- a. The DEIS was coordinated with the following agencies: Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, Florida State Clearinghouse, Florida State Historic Preservation Officer, and Florida Department of Environmental Protection, among others, during the public review period of the DEIS. Many of these agencies have already been involved with this project during ongoing informal discussions and meetings.
- b. This project is being coordinated with USFWS under the Endangered Species Act (ESA). USFWS suggested that the Corps request initiation of formal consultation in accordance with the ESA for impacts that the project may have on the endangered snail kite. Formal consultation has begun and USFWS is preparing a Biological Opinion (BO) for the snail kite. Refer to Appendix G for these letters.

6.3. LIST OF STATEMENT RECIPIENTS

Copies of the draft EIS were provided to Federal, State, local agencies, and interested groups and individuals for review and comment. A Notice of Availability of the DEIS was published in the federal register on January 18, 2002. The DEIS mail list is located in Appendix E.

6.4. COMMENTS TO SCOPING RECEIVED AND RESPONSES

The scoping letter was mailed on November 6, 2000 to State and Federal agencies as well as homeowners and concerned individuals. Numerous comment letters were received. The following is a list and brief summary of the content of the letters. Copies of letters and responses can be seen in Appendix E.

- a. **U.S. Fish and Wildlife Service**, letter dated September 22, 2000, recommends that provisions be made for snail kites and that organic spoil material be placed entirely in uplands outside of lake.
- b. **Alligator Lake Chain Homeowners Association**, letter dated November 7, 2000, supports action and recommends enhancement projects be conducted in regular 8-10 year cycles.
- c. **James Kelly**, letter dated November 9, 2000, had many questions concerning the lowering of the water levels and their effects. Requests to be kept informed of process.
- d. **Robert Schafer, Jr.**, letter dated November 10, 2000 comments on catch and release fishing techniques that may be considered during drawdown.
- e. **Marvin Johnson**, Moonlight Fisheries, letter dated November 13, 2000 states that drawdown would devastate his livelihood and that the Lake Alligator drawdown was responsible for previous economic losses.
- f. **Craig Lynch**, Personal Phone Call, November 15, 2000, supports drawdown and identifies areas he would like to see muck removal performed on.
- g. **Lloyd Geier**, letter dated November 15, 2000, concerned about Mill Slough area of Lake.
- h. **Sam Dower**, letter dated November 29, 2000, brought up issues concerning spoil islands, potential real estate conflicts, temporary settling basins, and policies regarding "non-owned canals."
- i. **National Marine Fisheries Service**, letter dated December 15, 2000, stated that they have no comments on project.
- j. **Florida Department of State Division of Historical Resources**, letter dated December 15, 2000, states that cultural resources may be affected and should be protected.
- k. **Florida State Clearinghouse**, letter dated January 19, 2001, states that FDEP has concerns about downstream nutrient levels, snail kite nesting season, exotic wildlife living on in-lake islands that may escape to mainland during low water levels. FNAI recommends that a site-specific survey be conducted.
- l. **Mike Rogers**, personal phone call January 25, 2001, concerned about performing a drawdown in a drought season, that fishing may be adversely affected, and the use of chemicals to control invasive plants.

- m. **Arlyne & William O’Gara**, letter dated February 19, 2001, supports action.
- n. **South Florida Water Management District**, letter dated February 20, 2001, states that analysis must include evaluation of the combined hydrology of the Kissimmee Upper Basin and Kissimmee River Valley, and that the use of pumps or weirs may have to be considered.
- o. **Ross Gwin**, letter dated April 23, 2001 supports drawdown.
- p. **U.S. Environmental Protection Agency**, letter dated May 9, 2001 states concerns about spoil islands and nutrient loads of lake.

6.5. COMMENTS RECEIVED (AND RESPONSES) ON DEIS

A copy of the mail list of recipients of the DEIS may be found in Appendix E. Many comment letters on the DEIS were received. Appendix F includes copies of the letters with responses to the issues and suggestions contained in them.

REFERENCES

- Allen, Herb. 1998. Fisheries Updates. Lake Restoration for Fish and Wildlife. Florida Fish and Wildlife Conservation Commission. Kissimmee, Florida.
- Allen, Mike S. and K. Tugend. 2001. Effects of Habitat Enhancement on Largemouth Bass Recruitment and Habitat Quality at Lake Kissimmee. Final Report, University of Florida, Department of Fisheries and Aquatic Sciences. Gainesville, Florida.
- Bartholic, J.F. and R.J. Bill. 1977. Final Report on Freeze Study for Lake Apopka Vicinity, Phase I and II, to the Florida Department of Environmental Protection and the Environmental Protection Agency. Fruit Crops Department, Institute of Food and Agricultural Sciences (IFAS), University of Florida. Gainesville, Florida.
- Bill, R.G., R.A. Sutherland, J.F. Bartholic, and E. Chen. 1977. Observations of the Convective Plume of a Lake under Cold-Air Advective Conditions. IFAS Journal Series No. 1006. University of Florida. Gainesville, Florida.
- Butler, R.S., E.J. Moyer, M.W. Hulon, and V.P. Williams. 1992. Littoral Zone Invertebrate Communities as Affected by a Habitat Restoration Project on Lake Tohopekaliga, Florida. Division of Fisheries, Lake Restoration Section. Kissimmee, Florida.
- Cooke, G.D. and R.H. Kennedy. 1989. Water Quality Management for Reservoirs and Tailwaters; Report 1, In-Reservoir Water Quality Management Techniques. Technical Report E-89-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.
- Darby, P. C., P.L. Valentine-Darby, and H.F. Percival. 1998. Assessing the impact of the Lake Kissimmee Restoration on Apple Snails. Final Report. Florida Game and Fresh Water Fish Commission, Bureau of Nongame Wildlife; Tallahassee, Florida.
- Dooris, P.M. and W.D. Courser. 1976. Determining Stages and Fluctuation Schedules for Regulated Lakes in Central and South Florida. Florida Scientist 39(1):14-18.
- Feller, Ernie, Mike Bodle, and Ed Harris. 1998. The Progression of Hydrilla Management in the Kissimmee Chain of Lakes. Aquatics, Volume 20, number 1.
- Florida Fish and Wildlife Conservation Commission. 1986. Mechanical Removal of Organic Sediments from Lake Tohopekaliga during the 1987 Extreme Drawdown. Fresh Water Fisheries Division. Kissimmee, Florida.

- Florida Fish and Wildlife Conservation Commission. 2000. 2002 Lake Tohopekaliga Habitat Enhancement Project. Fresh Water Fisheries Division. Kissimmee, Florida.
- Henry, J.A., K.M. Portier, and J. Coyle. 1994. The Climate and Weather of Florida. Pineapple Press. Sarasota, Florida.
- Holcomb, D. and W. Wegener. 1971. Hydrophytic Changes Related to Lake Fluctuation as Measured by Point Transects. Proceedings of the 25th Annual Conference of the Southeastern Association of Game and Fish Commissioners 25:570-583.
- Hulon, M., J. Buntz, Hujik, J.J. Sweatman, and A.S. Furukawa. 1996-1997. Kissimmee Chain of Lakes Studies. Study II. Lake Kissimmee and Lake Jackson Annual Performance Report. Florida Game and Fresh Water Fish Commission, Tallahassee, FL
- Hulon, M., A. Furukawa, J. Buntz, J. Sweatman, and C. Michael. 1998. Lake Jackson Wildlife Islands, Aquatics, Winter 1998.
- Hulon M., C.K. McDaniel, A.S. Furukawa, J. Buntz, C.S. Michael, D.C. Arwood, and A.C. Jacent. 1999. 1994-1999 Completion Report for Kissimmee Chain of Lakes Studies. Study IV. Lakes Jackson and Marian Investigations. Florida Game and Fresh Water Fish Commission, Tallahassee, FL
- Hurkey, William H. 1957. Recommended Program for the Kissimmee River Basin. Florida Fish and Wildlife Conservation Commission, Kissimmee, Florida.
- Ingram, W. 1983. Technical Report No. 20, Hydrologic and Engineering Study for Extreme Drawdown of Lake Griffin. St. Johns River Water Management District. Palatka, Florida.
- James, R. Thomas, Kim O'Dell, and Val H. Smith. 1994. Water Quality trends in Lake Tohopekaliga, Florida, USA: Responses to watershed management. American Water Resources Association
- Miller, K.A. and M.A. Downton. 1993. The Freeze Risk to Florida Citrus. Part I: Investment Decisions. American Meteorological Society. Journal of Climate. 6, 354-363.
- Moyer, Edwin J. 1991. Florida Lake Management Society. Volume 4, Number 2. Florida Game and Fresh Water Fish Commission. Kissimmee, Florida.

- Moyer, E.J., Mikel Hulon, James Sweatman, Robert Butler, and Vincent Williams. 1995. Fishery Responses to Habitat Restoration in Lake Tohopekaliga, Florida. *North American Journal of Fisheries Management* 15:591-595.
- Moyer, E.J., M.W. Hulon, R.W. Hujik, J.C. Buntz, J.J. Sweatman, A.S. Furukawa, D.C. Arwood, and S.C. Jasent. 1996. 1992-1996 Completion Report for Kissimmee Chain of Lakes Studies. Study III. East Lake Tohopekaliga/Alligator Lake Chain Investigations. Florida Fish and Wildlife Conservation Commission. Tallahassee, Florida
- Piper, R.G., I.B. McElwain, L.E. Orme, J.P. McCraren, L.G. Fowler, and R.J. Leonard. 1989. Fish Hatchery Management. United States Department of Interior, Washington, D.C.
- Poplin, Eric C. Todd McMakin, and Bruce G. Harvey. 1997. Phase I Historic Resources Survey, Kissimmee River Restoration Project. Osceola and Polk Counties, Florida. Manuscript on file, US Army Corps of Engineers, Jacksonville District.
- Readle, E. 1979. Soil Survey of Osceola County Area, Florida. Soil Conservation Service, U.S. Department of Agriculture.
- Rodgers, J.C. and R.V. Rohli. 1991. Florida Citrus Freezes and Polar Anticyclones in the Great Plains. *American Meteorological Society. Journal of Climate.* 4, 1103-1112.
- Shaw, J. and S. Trost. 1984. Technical Publication 84-1, Hydrogeology of the Kissimmee Planning Area, South Florida Water Management District. South Florida Water Management District. West palm Beach, Florida.
- Schiner, G. 1993. Geohydrology of Osceola County, Florida
- Sorensen, Henrik R. and Paula Turner. 2001. Intergrated Surface and Groundwater Model for Lake Tohopekaliga Drawdown Project. DHI Water & Environment, Trevese, PA.
- US Army Corps of Engineers. 1988. Visual Assessment Procedures for U.S. Army Corps of Engineers, I.R. EL-88-1, Waterways Experiment Station, Vicksburg, Mississippi, March.
- USACE. 1991. Water Control Plan for Kissimmee River-Lake Istokpoga Basin. Jacksonville District. U.S. Army Corps of Engineers. Jacksonville, Florida.
- USACE. 1991. Central and Southern Florida Project, Environmental Restoration of the Kissimmee River, Florida. Final Integrated Feasibility Report and Environmental Impact Statement. U.S. Army Corps of Engineers. Jacksonville, Florida.

- USACE. 1996. Central and Southern Florida Project, Final Integrated Project Modification Report and Supplement to the Final Environmental Impact Statement. Kissimmee River, Florida Headwaters Revitalization Project. U.S. Army Corps of Engineers. Jacksonville, Florida
- Wegener, W., V. Williams, and J. Buntz. 1973. Preliminary Fish Population Investigations on Lakes Kissimmee and Hatchineha, Osceola County, Florida. Florida Game and Freshwater Fish Commission. Kissimmee, Florida.
- Wegener, W. and V. Williams. 1974. The Effect of Extreme Lake Drowdown on Largemouth Bass Populations. Florida Game and Freshwater Fish Commission. Kissimmee, Florida.
- Wegener, W. and V. Williams. 1974. Water Level Manipulation Project Completion Report for Lake Tohopekaliga Drawdown Study. Florida Game and Freshwater Fish Commission. Kissimmee, Florida.
- Wegener, W., V. Williams, and T. McCall. 1974. Aquatic Macroinvertebrate Responses to an Extreme Drawdown. Proceedings of the 28th Annual Conference of the Southeastern Association of Game and Fish Commissioners_28:126-144
- Wegener, W. and V. Williams. 1977. The Effect of Extreme Lake drawdown on Largemouth Bass Populations, presented at Big Bass Seminar. Florida Game and Freshwater Fish Commission. Kissimmee, Florida
- Williams, V and E. Moyer. 1978. Lake Tohopekaliga Drawdown and Long Term Management Proposal. Florida Game and Fresh Water Fish Commission. Tallahassee, Florida
- Williams, V and E. Moyer. 1979. 1974-1979 Completion Report for Water Level Manipulation Project. Study III. Lower Kissimmee Basin Study. Florida Game and Fresh Water Fish Commission. Tallahassee, Florida
- Williams, Vince. 1980. Major Problems affecting Lakes of the Upper Kissimmee River Basin, presented to Florida League of Anglers. Florida Game and Freshwater Fish Commission. Kissimmee, Florida.
- Williams, Vince. 1980. Impact of Sewage Plant Discharge on Lakes of the Upper Kissimmee River Basin. Florida Game and Freshwater Fish Commission. Kissimmee, Florida.
- Williams, Vince. 1980. Major Problems affecting Lakes of the Upper Kissimmee River Basin. Florida Game and Freshwater Fish Commission. Kissimmee, Florida.

Williams, Vince. 1984. Management and Mis-management of the Upper Kissimmee River Basin Chain of Lakes. Florida Game and Fresh Water Fish Commission. Kissimmee, Florida

Williams, V.P. 2001. Effects of Point Source Removal on Lake Water Quality: A Case History of Lake Tohopekaliga, Florida. Lake and Reservation Management. 17(4): 315-329.

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