

APPENDIX E
TECHNICAL REQUIREMENTS AND REFERENCES

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The work to be performed consists of a feasibility level effort, in accordance with the schedules and budgets included herein, to further the development of the CERP. The study will also develop an implementation process that incorporates an adaptive management approach to project implementation to include an incremental justification process based on monitoring, evaluation and modeling. This work includes preparation of the appropriate NEPA document, environmental output evaluation, incremental cost analysis, cost effectiveness analysis, the necessary survey and geotechnical investigations, a hydraulic analysis, hydrologic investigations, design calculations and drawings, GIS database development, preparation of a detailed construction cost estimate, real estate investigations, socio-economic impact analysis, environmental justice study, study and project management, and coordination with local, state and Federal agencies as well as other interest groups and the public. The scope of studies in terms of content and level of detail for the feasibility phase study effort are as defined and required by the following Federal documents:

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| ER 1105-2-100
dtd 22 Apr 2000 | "Guidance for Conducting Civil Works Planning Studies"
Department of the Army regulation on Policy and Guidance
for the conduct of civil works planning studies. |
| ER 5-7-1(FR)
dtd 30 Sept 1992 | "Project Management"
Department of the Army regulation for the overall
management of civil works projects. |
| ER 200-2-2
dtd 4 Mar 1988 | "Procedures for Implementing NEPA"
Department of the Army regulation on 33 CFR 230
Environmental Quality. |
| EC 1165-2-201 (Draft)
dtd 1 June 1995 | "Ecosystem Restoration in the Civil Works Program"
Department of the Army policy guidance for ecosystem
restoration. This EC modifies PGL 24 by eliminating the
"project linkage" and "modern historic condition"
requirements. All other provisions of PGL 24 remain in
effect. |
| IWR Report 94-PS-2
dtd Oct 1994 | "Cost Effectiveness Analysis for Environmental Planning:
Nine Easy Steps" Report developed by the Institute of Water
Resources to assist field practitioners conduct cost |

effectiveness and incremental cost analysis in planning for environmental restoration and mitigation.

PGL No. 24
dtd 7 Mar 1991

"Restoration of Fish and Wildlife Habitat Resources"
Department of the Army Policy Guidance Letter (PGL) on accomplishing fish and wildlife habitat restoration.

ER 405-1-12 (Draft)
dtd 28 May 1991

"Real Estate Handbook - Local Cooperation" - Chapter 12
Department of the Army regulation establishing guidelines for real estate activities for local cooperation agreements.

ER 1110-2-1150
dtd 31 Mar 1994

"Engineering and Design for Civil Works Projects"
Department of the Army regulation describes engineering responsibilities during the planning, design, construction, and operations phases of civil works projects.

ER 1165-2-132
dtd 26 Jun 1992

"Hazardous, Toxic, and Radioactive Waste (HTRW)
Guidance for Civil Works Projects" Department of the Army regulation provides guidance for consideration of issues and problems associated HTRW which may be located within project boundaries or may effect civil works projects.

ER 1110-1-1300
dtd 26 Mar 1993

"Cost Engineering Policy and General Requirements"
Engineering Regulation providing cost engineering policy, guidance, and procedures for all projects assigned to the U.S. Army Corps of Engineers.

EC 1110-2-1302
dtd 31 Mar 1994

"Civil Works Cost Engineering"
Engineer Regulation providing policy, guidance, and procedures for cost engineering responsibilities for all Civil Works projects assigned to the U.S. Army Corps of Engineers.

U.S. Water Resources
Council Publication
dtd 10 March 1983

"Economic and Environmental Principles and Guidelines
for Water and Related Land Resources Implementation
Studies."

Policy Guidance on
Planning Civil Works
Projects to Contribute
to Environmental

"Detailed Guidance on Formulation and Evaluation of
Combined NED/NER Plan for Environmental
Sustainability."

Additional References

- Brockmeyer, R.E., Jr., J.R. Rey, R.W. Virnstein, R.G. Gilmore, and L. Earnest. 1997. Rehabilitation of impounded estuarine wetlands by hydrologic reconnection to the Indian River Lagoon, Florida (USA). *Wetlands Ecology and Management* 4: 93-109.
- Gilmore, R. 1988. Sutropical seagrass fish communities, population dynamics, species guilds and microhabitat associations in the Indian River Lagoon. Ph.D. Dissertation, Department of Biological Sciences, Florida Tech, Melbourne, FL: I-xvii, 199 pp.
- Horsley & Witten. 2000. On-site sewage disposal systems pollutant loading evaluation. Report to Indian River Lagoon National Estuary Program. Sandwich, MA.
- Indian River Lagoon National Estuary Program. 1996. Indian River Lagoon Comprehensive Conservation and Management Plan. Indian River Lagoon National Estuary Program. Melbourne, Florida.
- Indian River Lagoon Surface Water Improvement and Management (SWIM) Plan Draft Update. 2001. St. Johns River Water Management District. Palatka, Florida.
- Stewart, J. and Higman, J. 1989. A Preliminary Assessment of: I. The Effects on Salinity of the IRL from WCDSB Canal 1 Discharges, and II. The Possible Water Quality Impacts to the Upper St. Johns River from Westward Re-Diversion of WCDSB Canal 1 Discharges. SJRWMD Technical Memorandum.
- Steward, J., R. Virnstein, F. Lund, and D. Haunert. 1994. Surface Water Improvement and Management (SWIM) Plan for the Indian River Lagoon. St. Johns River and South Florida Water Management Districts, Palatka and West Palm Beach, Florida. 120 pp. plus appendices.
- Sheng, Y.P. 1996. A Preliminary Hydrodynamics and Water Quality Model of the Indian River Lagoon. University of Florida.
- Swain, H.M., S.E. Hopkins and C.L. Thornton. 1994. A Preliminary Species List for the Indian River Lagoon, Florida. Florida institute of Technology. Melbourne, Florida.

Trefry, J., Trocine, S., Metz, S., Iricanin, N., and Chen, N. 1989. Particulate nutrient and metal investigation in the Turkey Creek watershed. Final Report to the St. Johns River Water Management District. Florida Institute of Technology, Melbourne, Florida.

Virnstein, R.W. and R.K. Howard, 1987. Motile epifauna of marine macrophytes in the Indian River lagoon, Florida. II. Comparisons between drift algae and three species of seagrasses. *Bulleting of Marine Science* 41 (1): 13-26.

Virnstein, R.W., E.W. Carter IV, L.J. Morris, and J.D. Miller. 2000. Utility of Seagrass Restoration Indices Based on Area, Depth, and Light. St Johns River Water Management District, Palatka, Florida.

Woodward-Clyde Consultants. 1994. Status and Trends Summary for the Indian River Lagoon. Woodward-Clyde Consultants, Tampa, Florida.

Organizational Web Sites

http://cfpub.epa.gov/npdes/glossary.cfm?program_id=0

<http://sjr.state.fl.us/programs/index.html>

<http://www.epa.gov/owow/oceans/lagoon/>

http://www.evergladesplan.org/pm/studies/irl_north/index.shtml