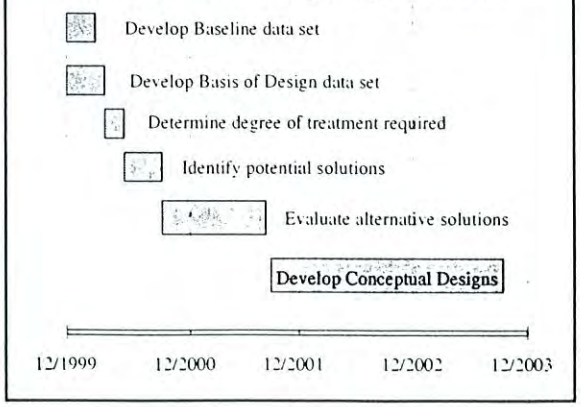
Long-term Water Quality Solutions

TOC Meeting
1/25/2000

OVERVIEW

- Background
- Process leading to long-term solutions
- Preliminary baseline data report and peer review comments
- Next steps in process

Overview of Process Leading to Long-term Solutions



Baseline Data Set

- First step in developing Basis of Design flow and water quality data
- Baseline data will be adjusted to account for future activities
- Basis of Design data set will be used to evaluate alternative solutions
- Baseline data set should preserve hydrologic variability and basin-specific water quality conditions

Preliminary Baseline Data Report

- Comments received from
  - Parsons Brinckerhoff
  - Audubon Society
  - Florida Fish & Wildlife Conservation Commission
  - Bill [illegible]
  - Florida DEP
- All comments to be addressed in final Report
- Key comments discussed today

Comments & Recommendations Overview

[illegible]

  - [illegible] activities
  - [illegible] Baseline data from Basis of Design data
  - on intended use of data

Water Quality - Report summary

- Phosphorus and dissolved oxygen were noted as parameters of concern at all inflow points
- Specific conductance was concern at northern inflow points
- Total beryllium and diazinon were concern at a few inflows

Comments & Recommendations - Water Quality

- Need to clarify that all parameters of concern will be considered in selection of long-term solutions
- [illegible] should be discussed
- If evaluation is sensitive to other phosphorus fractions, e.g., ortho-P, and if data are available, use additional phosphorus data
- Need to describe data error (e.g., measurement, random errors in flow data)

Phosphorus - Report summary

- STA inflows: WY 96-99 for EAA runoff with BMPs and WY 90-99 were used

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Comments & Recommendations: Water Quality

- **Period of record (WY 90-99)**
  - [illegible] is appropriate
  - differs from the STA design (WY 79-88) and the [illegible] (WY 79-88)
  - Presentations should be made to TOC, ETAC or subcommittees thereof, in addition to presentations already made to the STA Design review group to receive stakeholder input.

Flow: Report Summary

- **Period of Record (WY 90-99)**
  - Data from most recent ten year period was used to calculate flow-weighted mean TP concentrations
- **Simulation (31 year simulation of flows)**
  - simulates 1995 conditions with STAs in place
  - provides consistency across all basins and overall water balance
  - preserves hydrologic variability
  - is consistent with Restudy and water supply plans

Comments & Recommendations: Flow

- [illegible] that hydropattern restoration is also a long-term goal

Combining Flow and WQ Report Summary

- **Several methods were considered**
  - many based on regression of flow and TP
  - generally, very poor regressions
- **Applied long-term flow-weighted mean TP concentration to simulated flows**
  - preserves 31-yr hydrologic variability
  - preserves long-term TP concentration
  - preserves mass balance
  - is similar to method used in design of the STAs
- **Detail design could use more refined data if desired**

Comments & Recommendations: Combining Flow and WQ

- **Flow-TP regressions may be useful if slope is significantly different from "0"**
- **Recommendations included:**
  - [illegible] releases from EAA flows
  - [illegible]
  - [illegible]
  - use C-11 W basin (S-9 composite samples) characteristics for other urban basins
  - use simple TP reduction constant for STAs
- **We are currently looking at these recommendations to develop daily flow and water quality data for each basin**

Next steps

- **Identifying adjustments to** [illegible]
  - start [illegible]
  - complete fall 2001

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