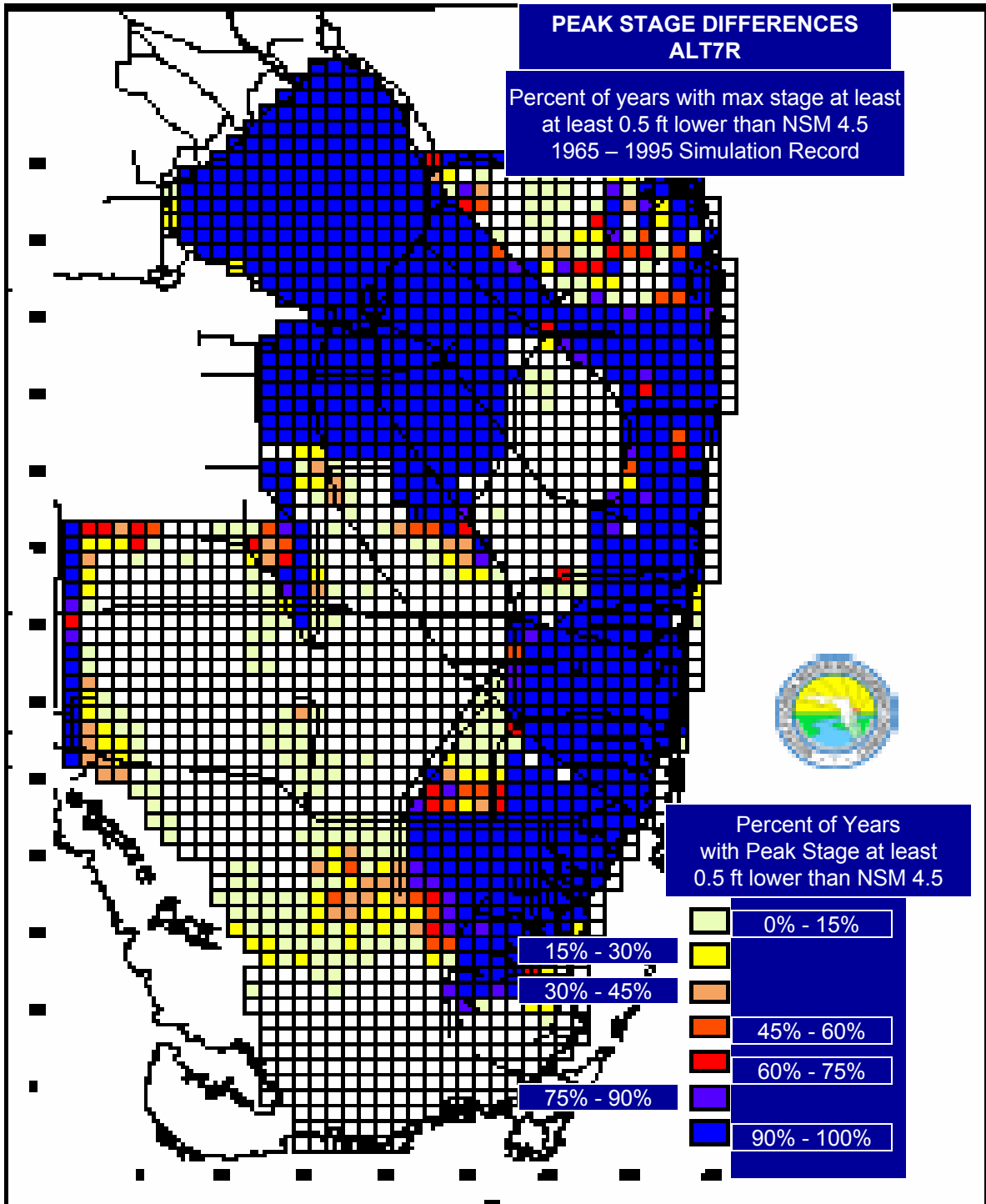


CSOP Advisory Committee
Miami, FL
March 8, 2004

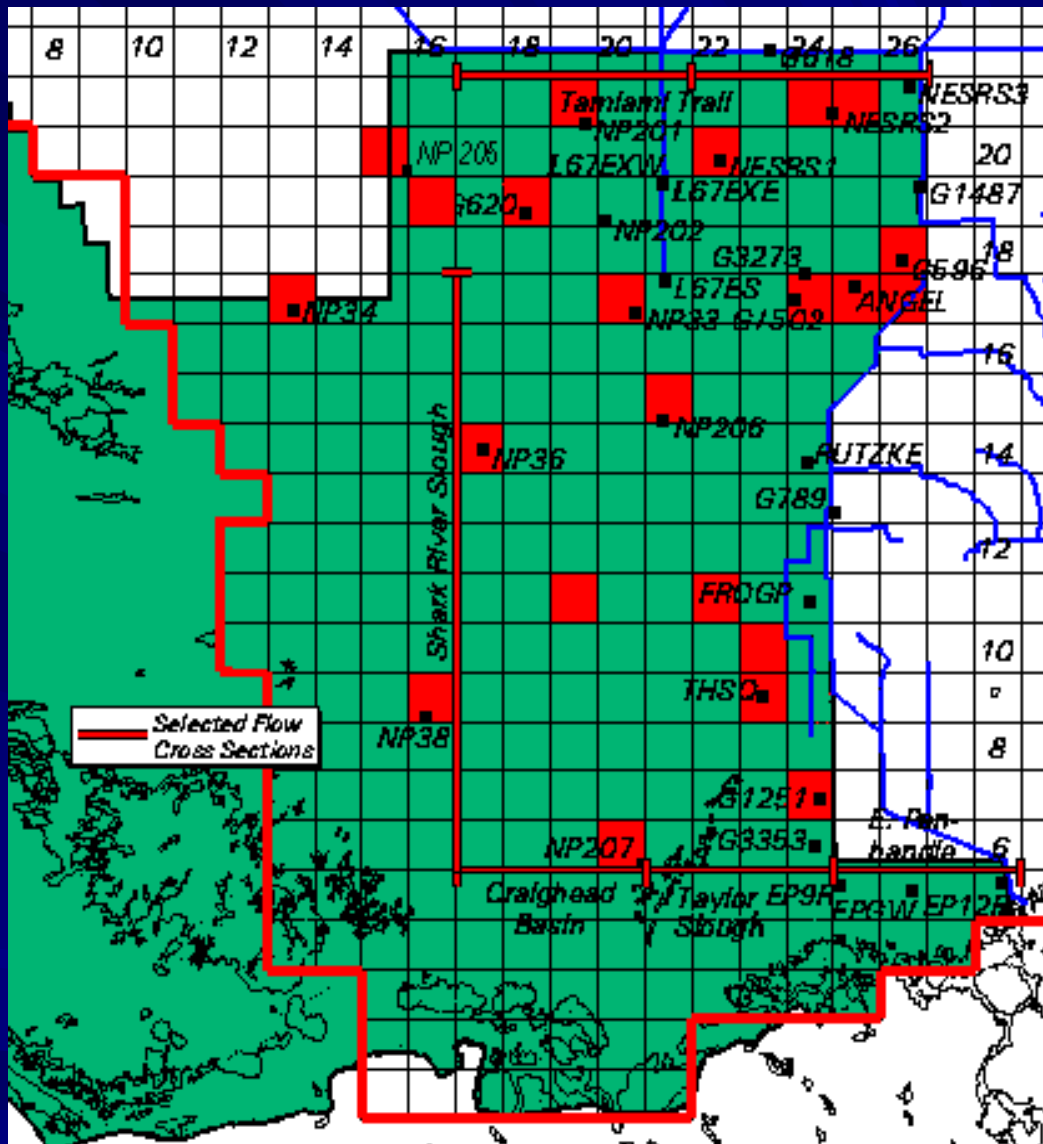
Water Conservation Area 3A
Getting the Water Right

Terry L. Rice
Colonel (Ret'd), Ph.D., P.E.

UNDER IOP, ENP IS MUCH LOWER THAN NSM AND HEADED IN THE WRONG DIRECTION

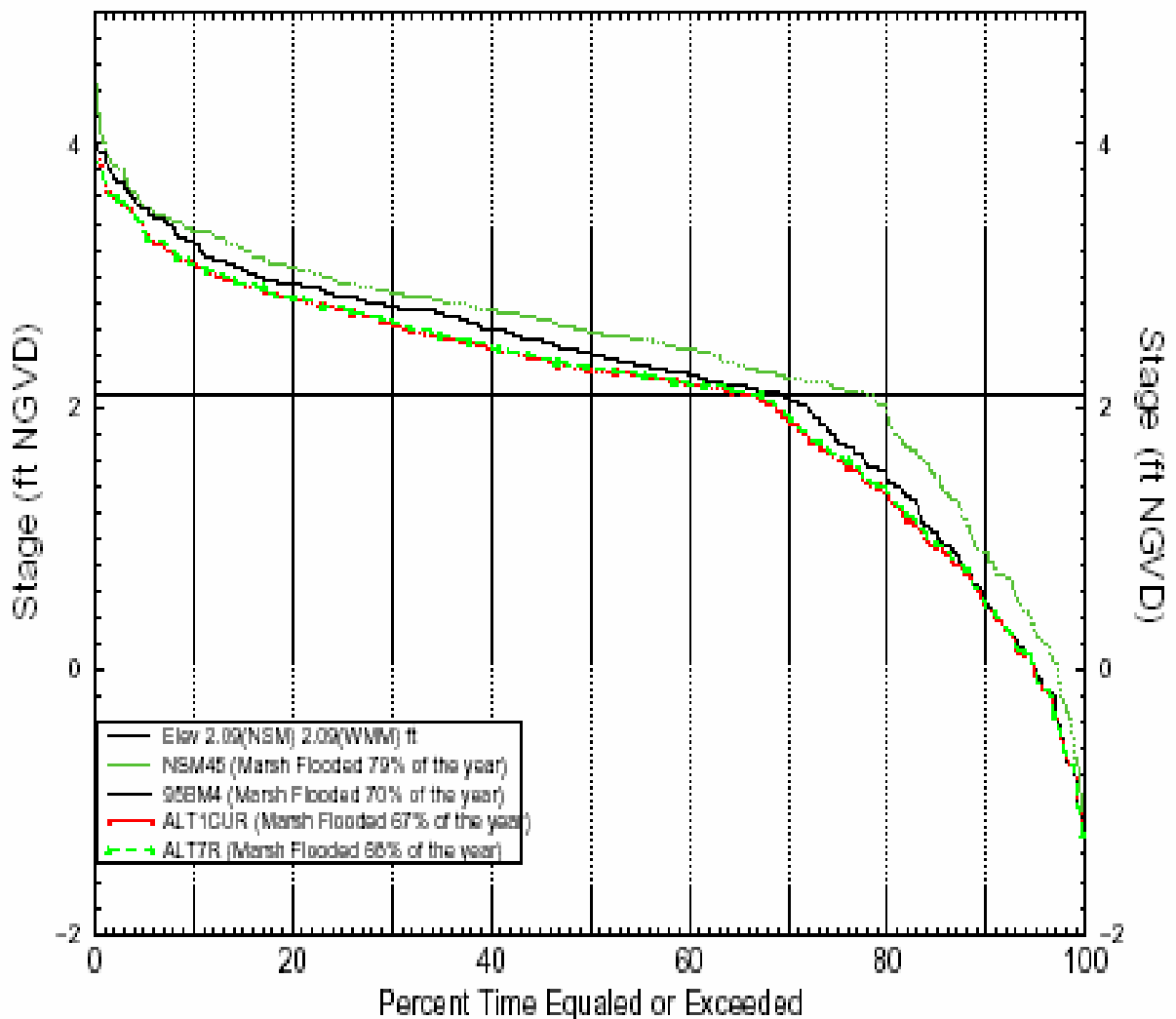


ENP Indicator Cells



ENP Cell R17 C13

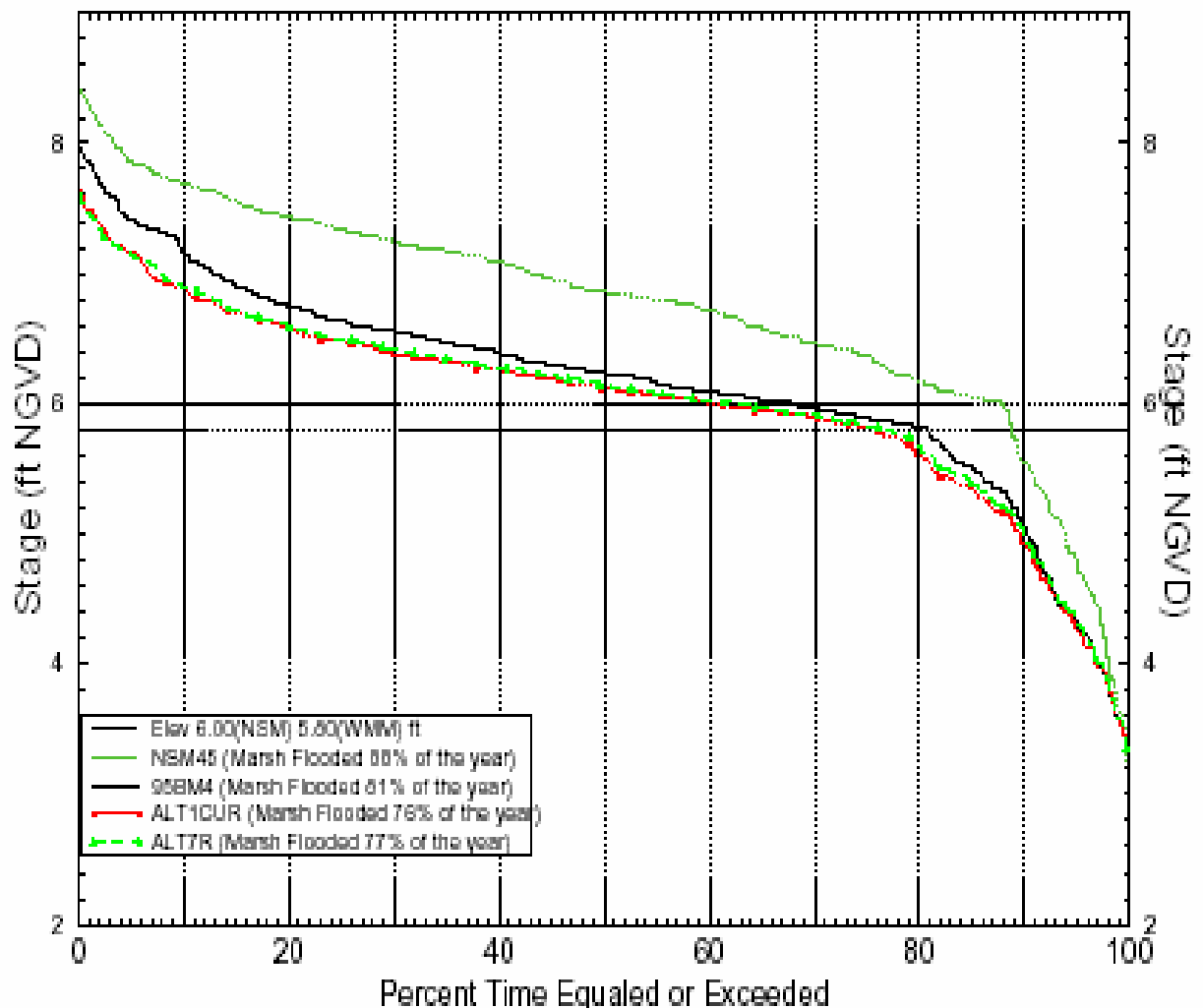
Stage Duration Curves at Marl Lands West of SRS
Gage NP-34, Cell R17 C13



Run date: 10/25/02 15:20:22
Continuous Analysis
SPTWMM V4.1

ENP Cell R19 C18

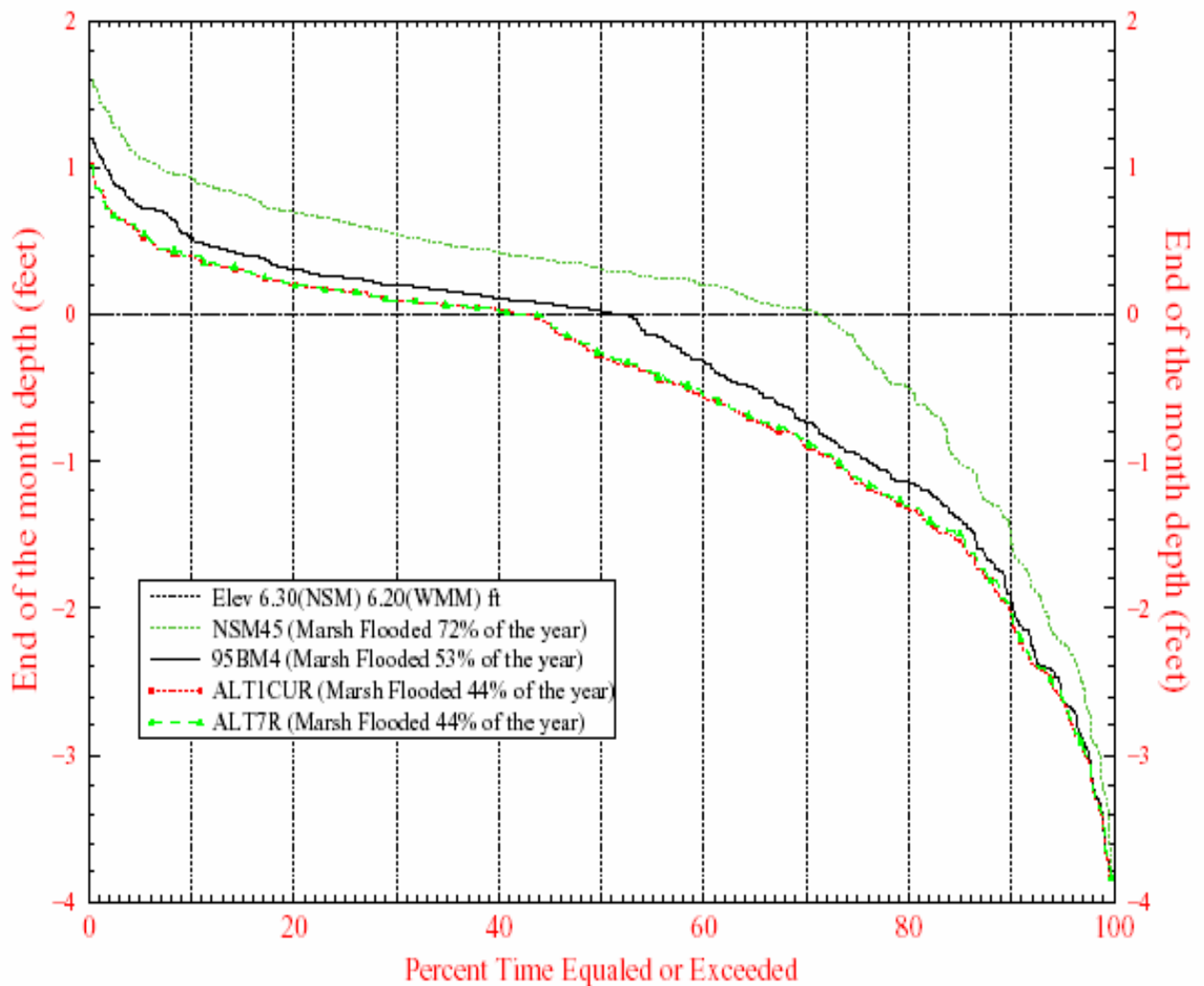
Stage Duration Curves at NW SRS
Gage G-620, Cell R19 C18



Run date: 10/26/07 15:20:33
Continuance Analysis
SPWMM 14.4

ENP Cell R19 C16

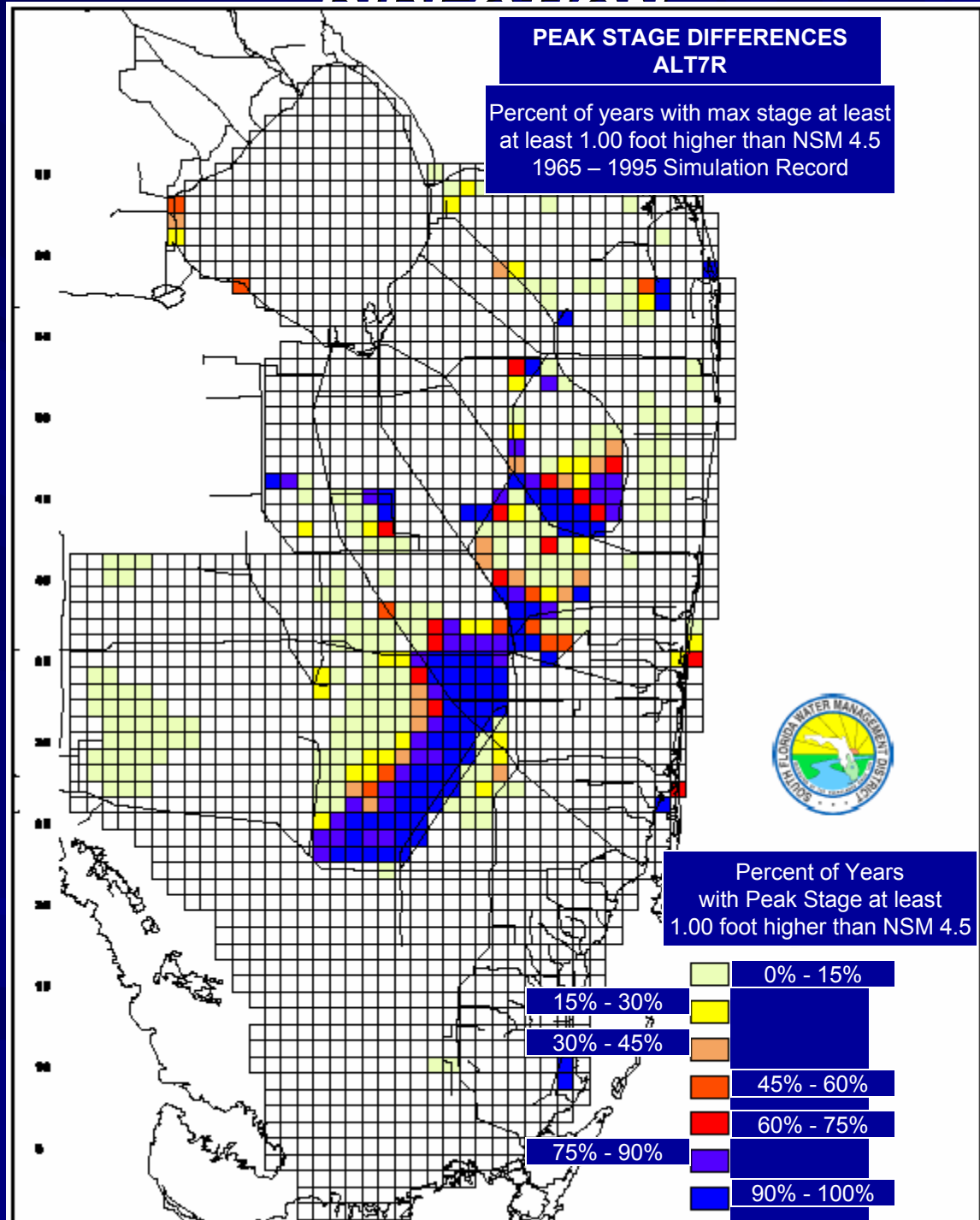
Normalized Stage Duration Curves at Cell (R19 C16)
ENP Gage NP205



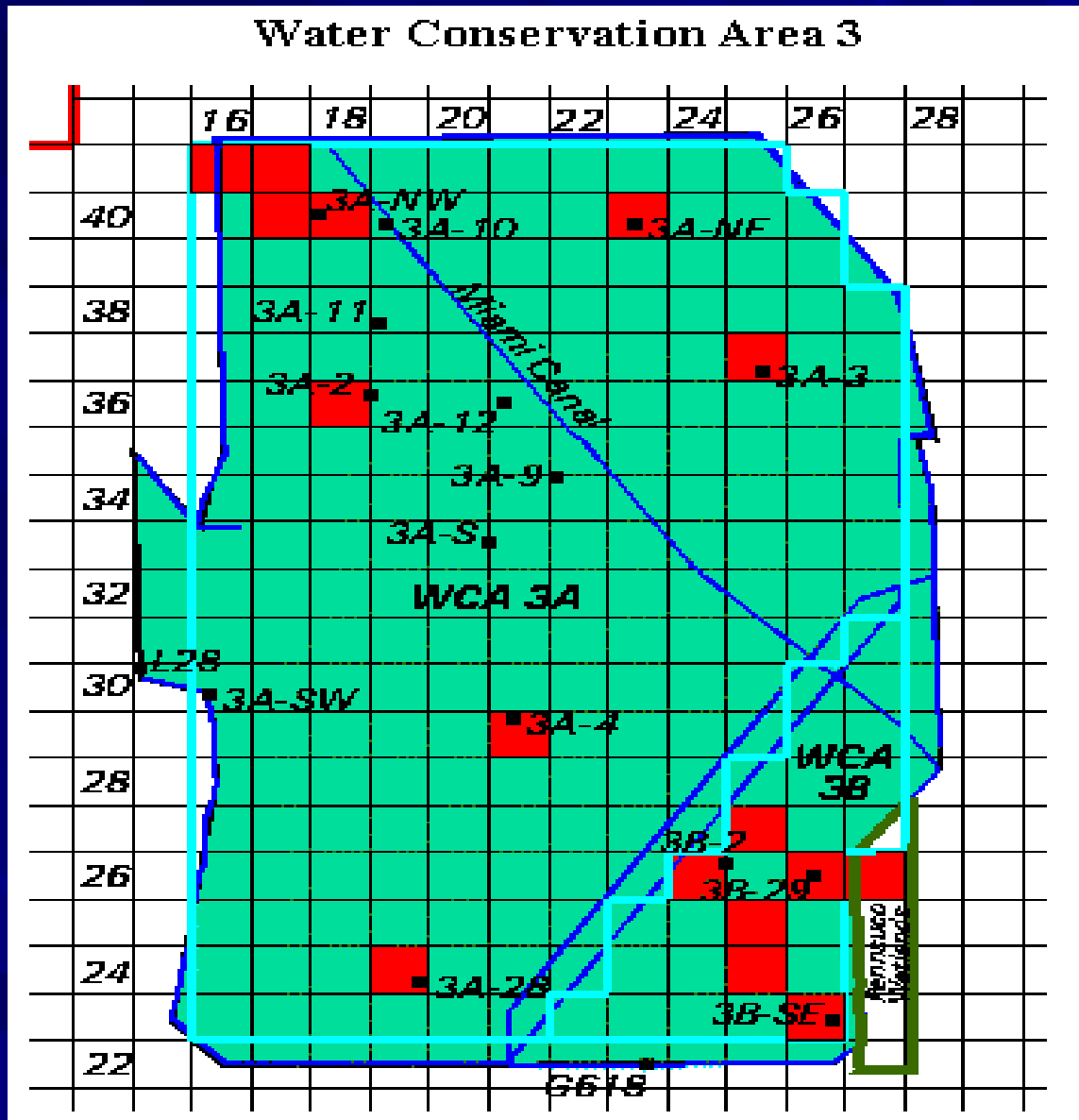
Note: Normalized stage is stage referenced to Land Elevation. Thus, values above zero indicates ponding while below zero indicates depth to the water table.

Run date: 10/25/02 15:23:49
Continuous Analysis
SFWMM V4.4

UNDER IOP, WCA 3A & SNAIL KITE CRITICAL HABITAT IS MUCH HIGHER THAN NSM AND HEADED IN THE WRONG DIRECTION



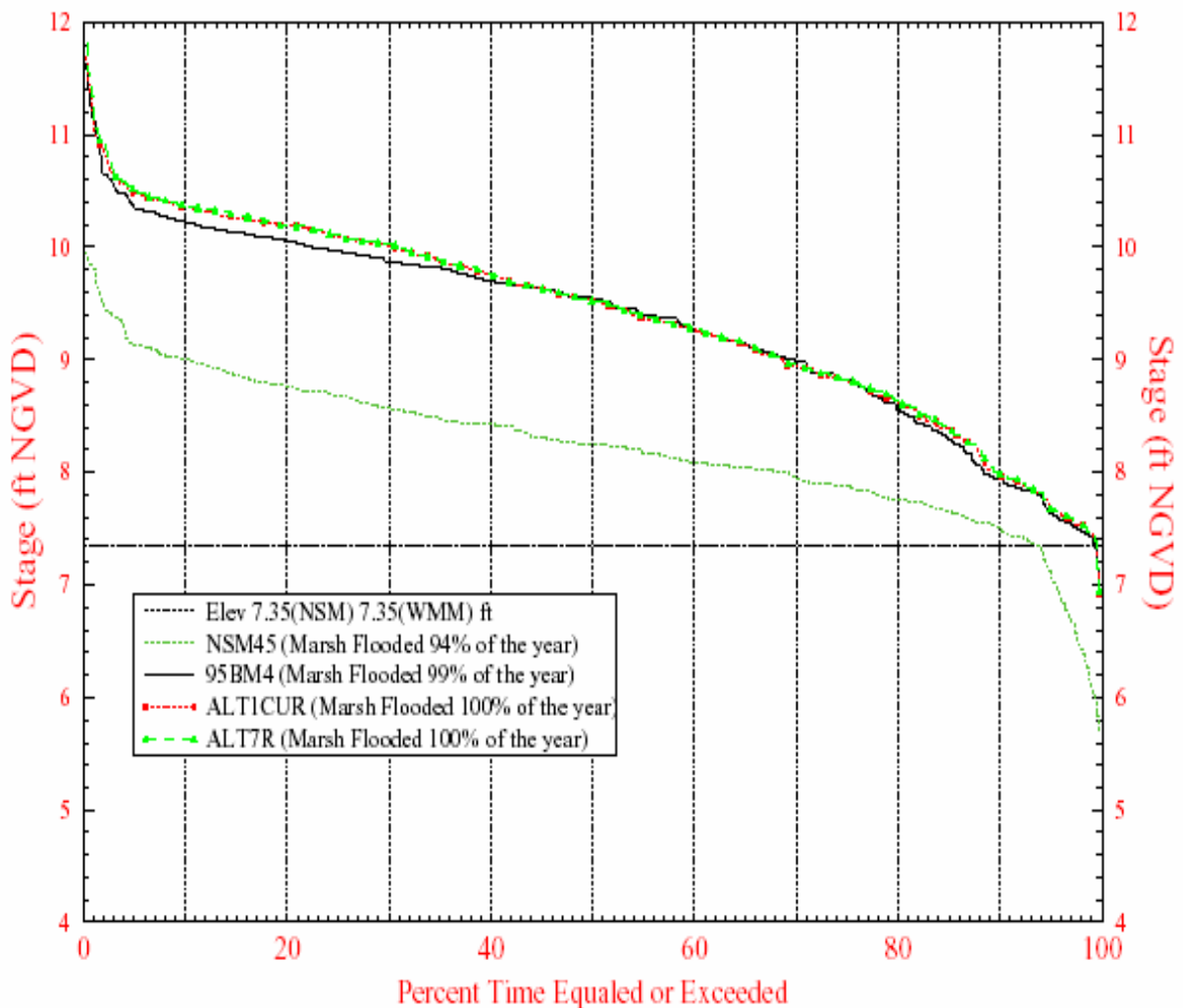
WCA 3A Indicator Cells



WCA 3A Cell R24 C19

SNAIL KITE CRITICAL HABITAT MUCH WETTER THAN NSM ... AND GETTING WETTER BECAUSE OF THE SPARROW

Stage Duration Curves at South End of WCA-3A
(Gage 3A-28, Cell R24 C19)

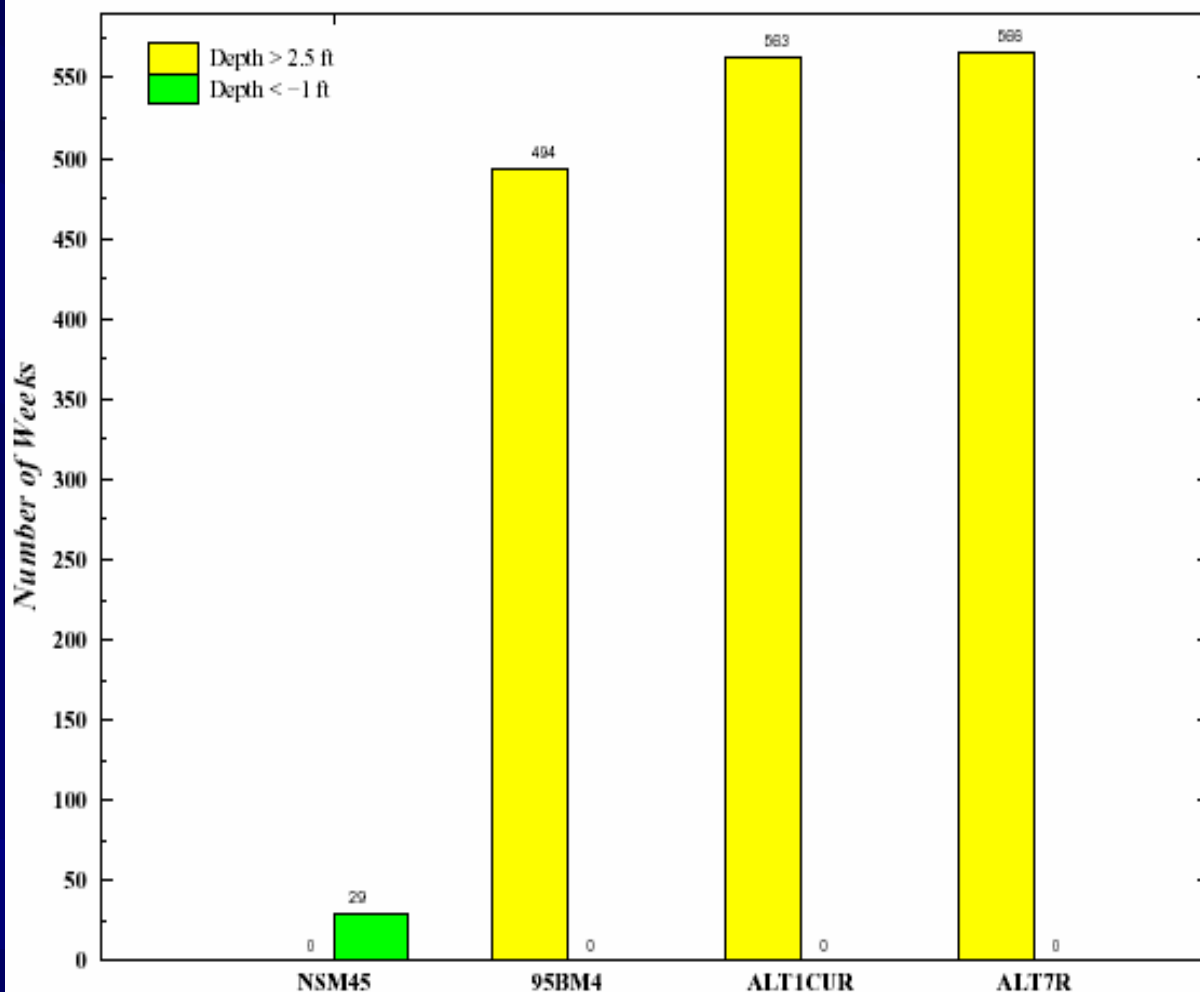


Run date: 10/25/02 15:19:04
Continuous Analysis
SFWMM V4.4

WCA 3A Regional Indicator

Number of Weeks High/Low Water Depth Criteria Exceeded

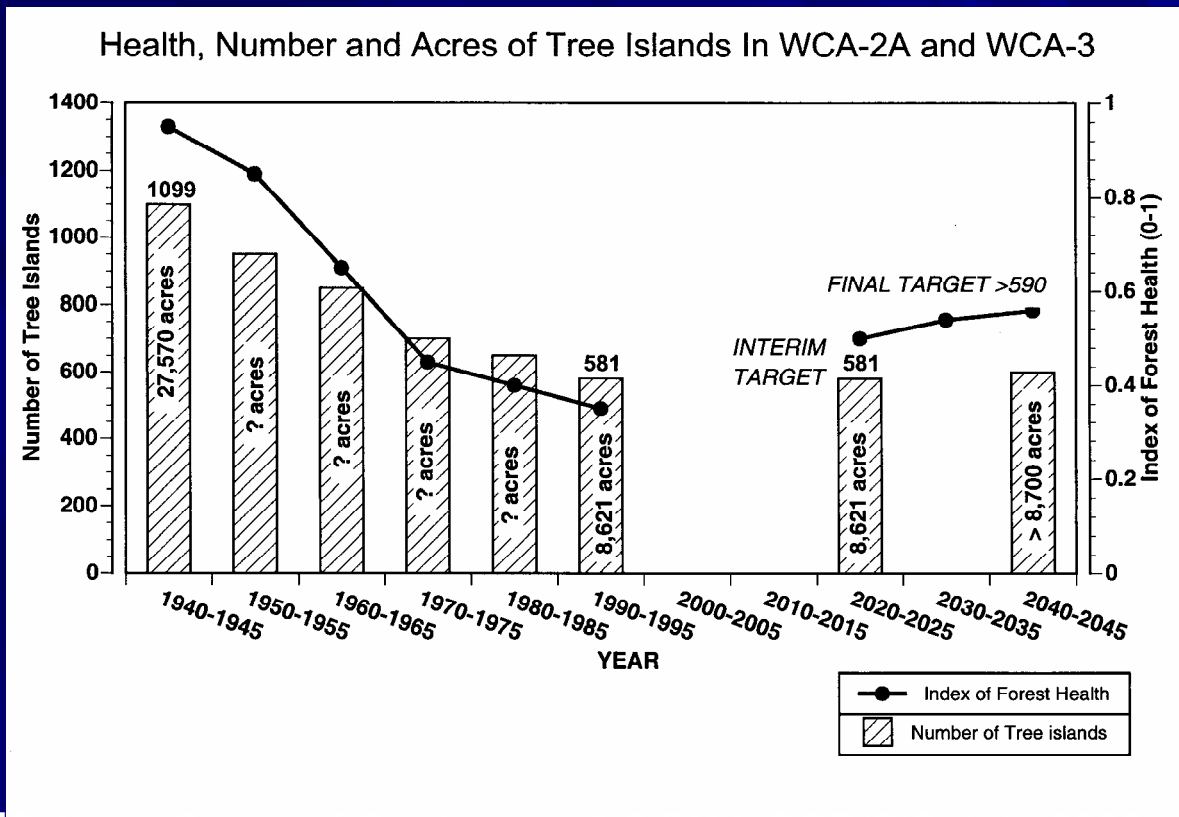
Indicator Region 14 (R23C17-20 R24C17-20 R25C17-21)



Note: The desired condition is to exceed the high water depth as few times as possible and go below the low water depth as few times as possible.

Run date: Fri Oct 25 16:09:54 EDT 2002
For Planning Purposes Only
BFWM V3.4

Tree Island Destruction 1940 to 1995



US Army Corps of Engineers—8.5 SMA GRR/EIS July 2000—
cost of delay in implementing Mod Waters project:

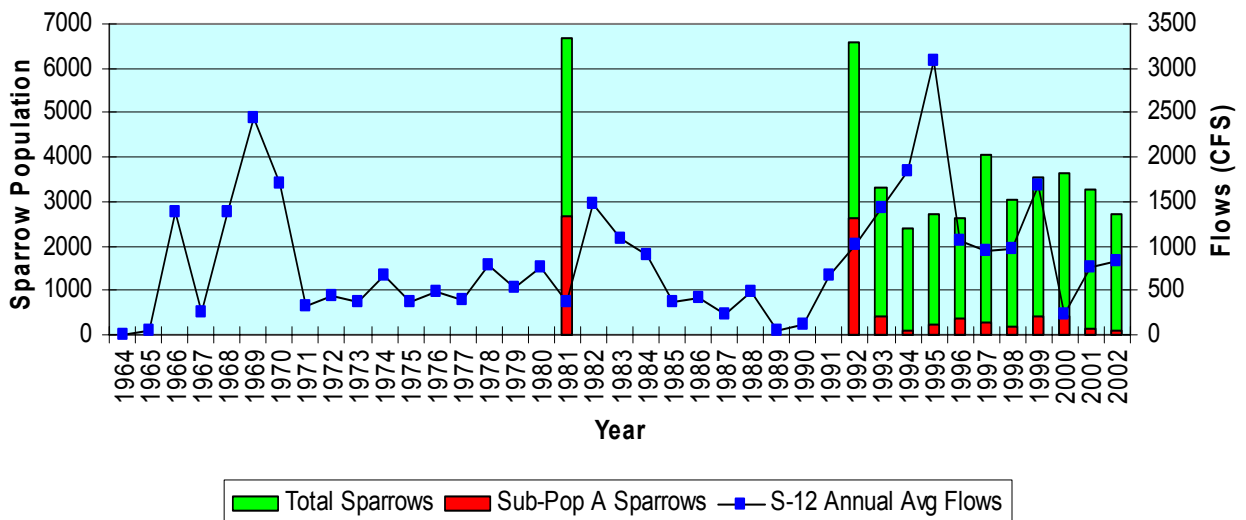
- “loss of tree islands has an impact on the critical habitats and cultural resources”
- “it is estimated as loss of 8.4 islands and 246 acres per year”
- “estimated values for full restoration of tree islands may range from \$50,000 to \$500,000 per acre”

In Summary

- Lower than historical/natural flows and levels in the Park
- Higher than historical/natural flows in WCA 3A
- High water in WCA 3A is causing irreversible damage to tree islands and, thus, other natural attributes
- Both ISOP and IOP have made this condition worse
- CSOP/Modified Water Deliveries must reverse this trend and move WCA 3A toward restoration goals

Cape Sable Seaside Sparrow Population vs. S-12 Flows

Water Flows Thru S-12's Versus Sparrow Population



Cape Sable Seaside Sparrow History Since 1992

Cape Sable Seaside Sparrow Population
(Source of Population Numbers: "Sparrow in the Grass," Pimm, et al, 2002)

