

Briefing Memo

To: Special Master John Barkett
CC: TOC Members
From: Frank Nearhoof
Date: 5/2/2006
Re: Everglades Ambient P-criterion Monitoring Network

Background

Florida Department of Environmental Protection staff have designed an ambient monitoring network for purposes of assessing achievement of the state's Class III total phosphorus criterion rule in accordance with paragraph 62.302.540(4)(d), Florida Administrative Code, within the Everglades Protection Area (Figures 1-4). Achievement of the criterion in WCA-1 (Refuge), WCA-2, and WCA-3 shall be determined based upon the application of the criterion to data collected monthly from stations that are evenly distributed and located in freshwater open-water sloughs within each water body (i.e., areas similar to those utilized during the derivation of the numeric TP criterion). Furthermore, achievement of the TP criterion in the impacted and unimpacted areas within each water body will be determined separately.

Impacted and unimpacted areas were delineated based on sediment phosphorus concentrations interpolated from sediment samples collected in 2004. Areas with sediment concentrations in excess of 500 mg P/kg were deemed impacted. Representative stations were distributed throughout the impacted area within each Water Conservation Area. The numbers of stations were based on the spatial extent of each impacted area. Stations within the unimpacted areas were evenly distributed through the unimpacted marsh consistent with subparagraph 62.302.540(4)(d)1., FAC. Existing monitoring stations with established total phosphorus data records were utilized in the network wherever possible, for both unimpacted and impacted areas. The use of existing monitoring stations will allow the Department and District to assess achievement of the criterion immediately for a large portion of the stations, rather than waiting five years as would have been required for a network consisting entirely of new stations.

Department staff have developed the aforementioned network through a public process. A draft monitoring network was presented at a public workshop on August 17, 2005, in West Palm Beach, FL. Comments were received from the U.S. EPA and the Department of Interior following this workshop. These comments were incorporated into a second draft of

the network. The second draft was discussed with SFWMD, U.S. EPA, and Department of Interior staff and was subsequently revised based on additional comments received from these three groups as well as information acquired during field reconnaissance conducted in early December 2005.

Implementation

Department and District staffs intend to present the final monitoring network (Figures 1-4) in the 2007 South Florida Environmental Report. Additionally, the report will present an initial assessment of the achievement of the P-criterion using data from the network of existing stations. Full implementation (monitoring) of new stations being added to the existing network is expected to begin at the beginning of the District's next fiscal year (October 2006) to allow the District to budget for anticipated costs such as field labor, helicopter rental, laboratory analysis and contract labor. Although assessments of achievement of the phosphorus criterion will be conducted using all available data during the intervening years, a complete assessment of the achievement of the phosphorus criterion across all stations in this network, including all components of the phosphorus criterion achievement methodology, will be conducted five years later (i.e., in 2011). The Department will perform a complete technical review of this network as well as the achievement assessment methods at a minimum of five year intervals and will report the results in the South Florida Environmental Report.

Figure 1. Phosphorus criterion monitoring network for the A.R.M. National Wildlife Refuge (WCA-1).

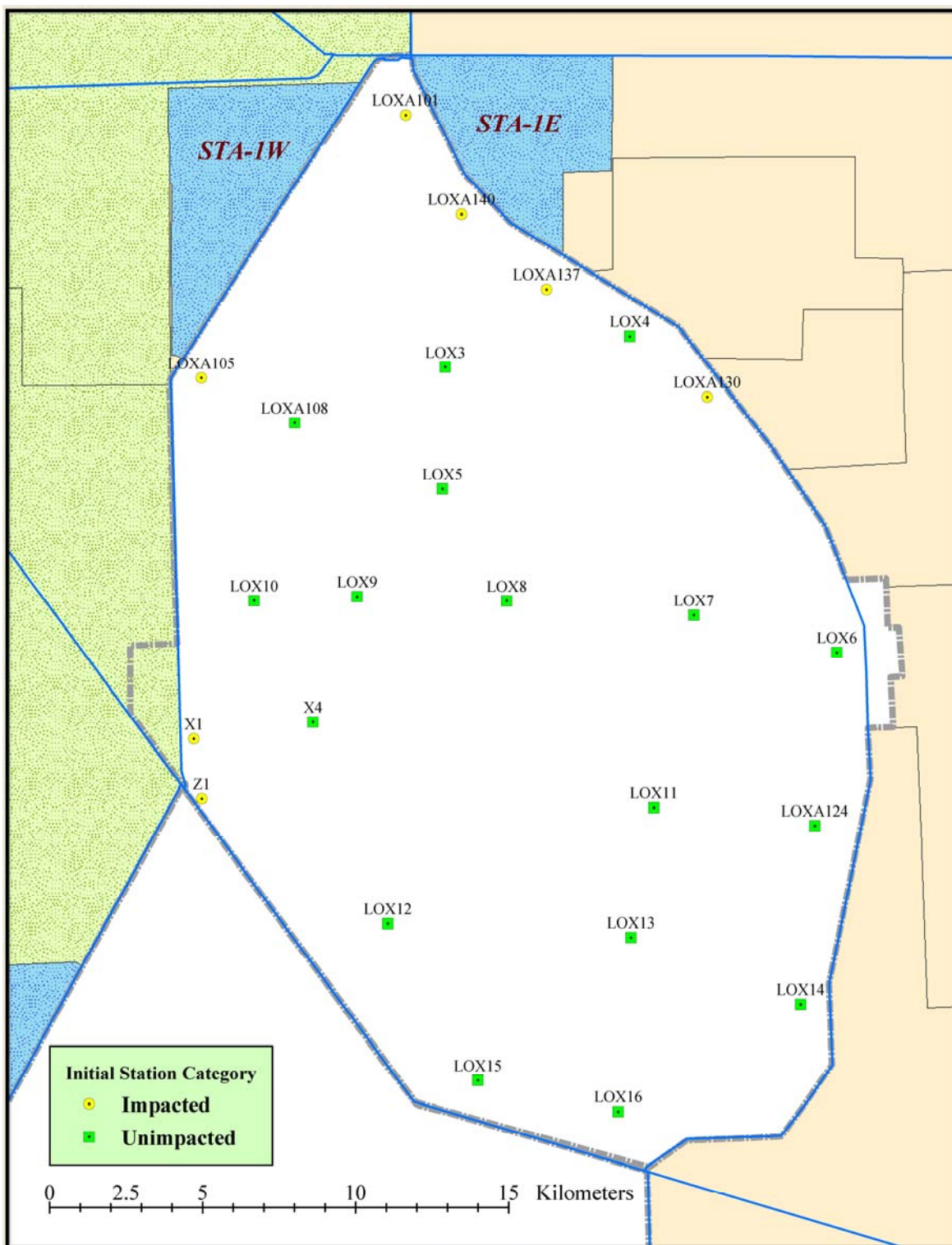


Figure 2. Phosphorus criterion monitoring network for WCA-2.

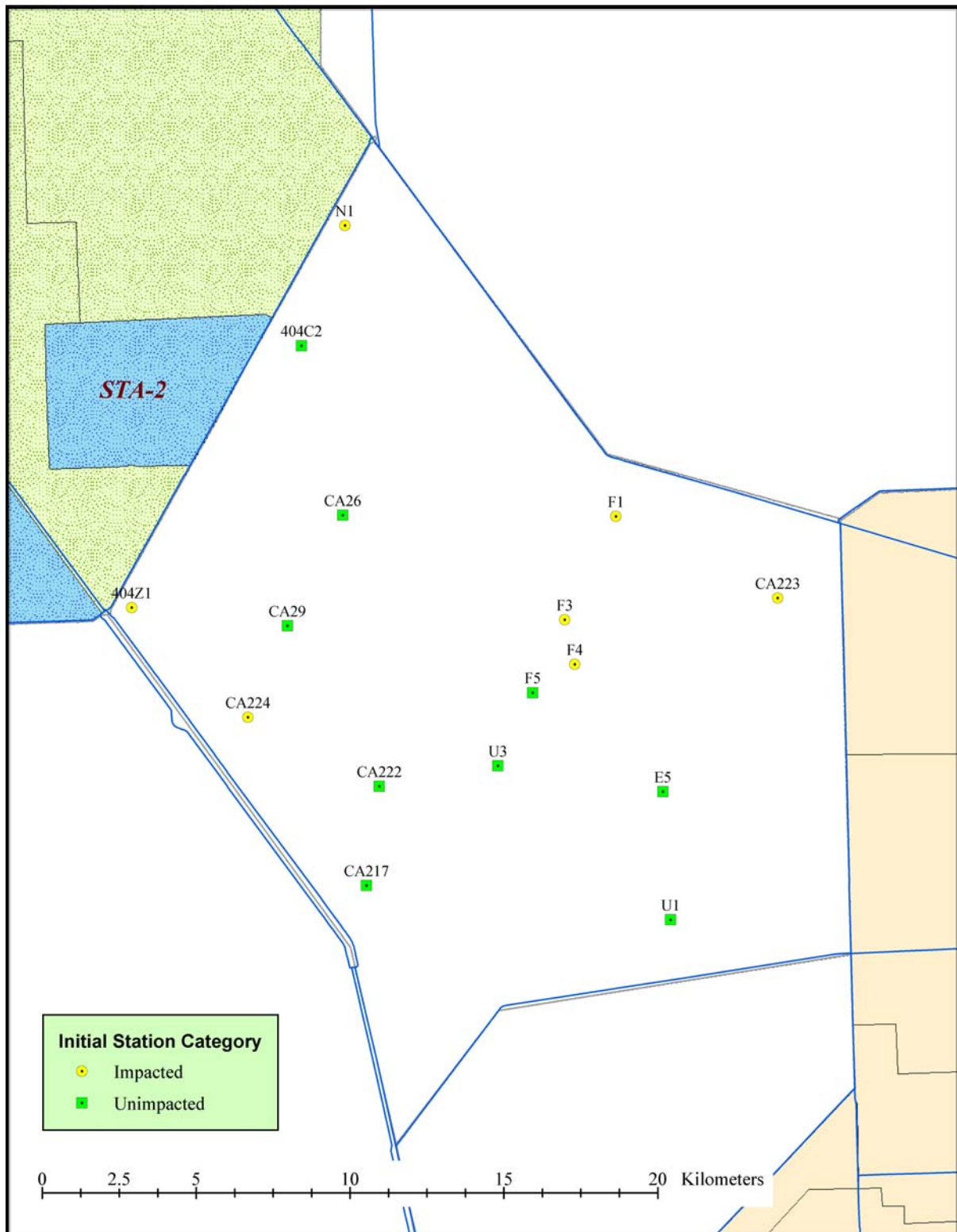


Figure 3. Phosphorus criterion monitoring network for WCA-3.

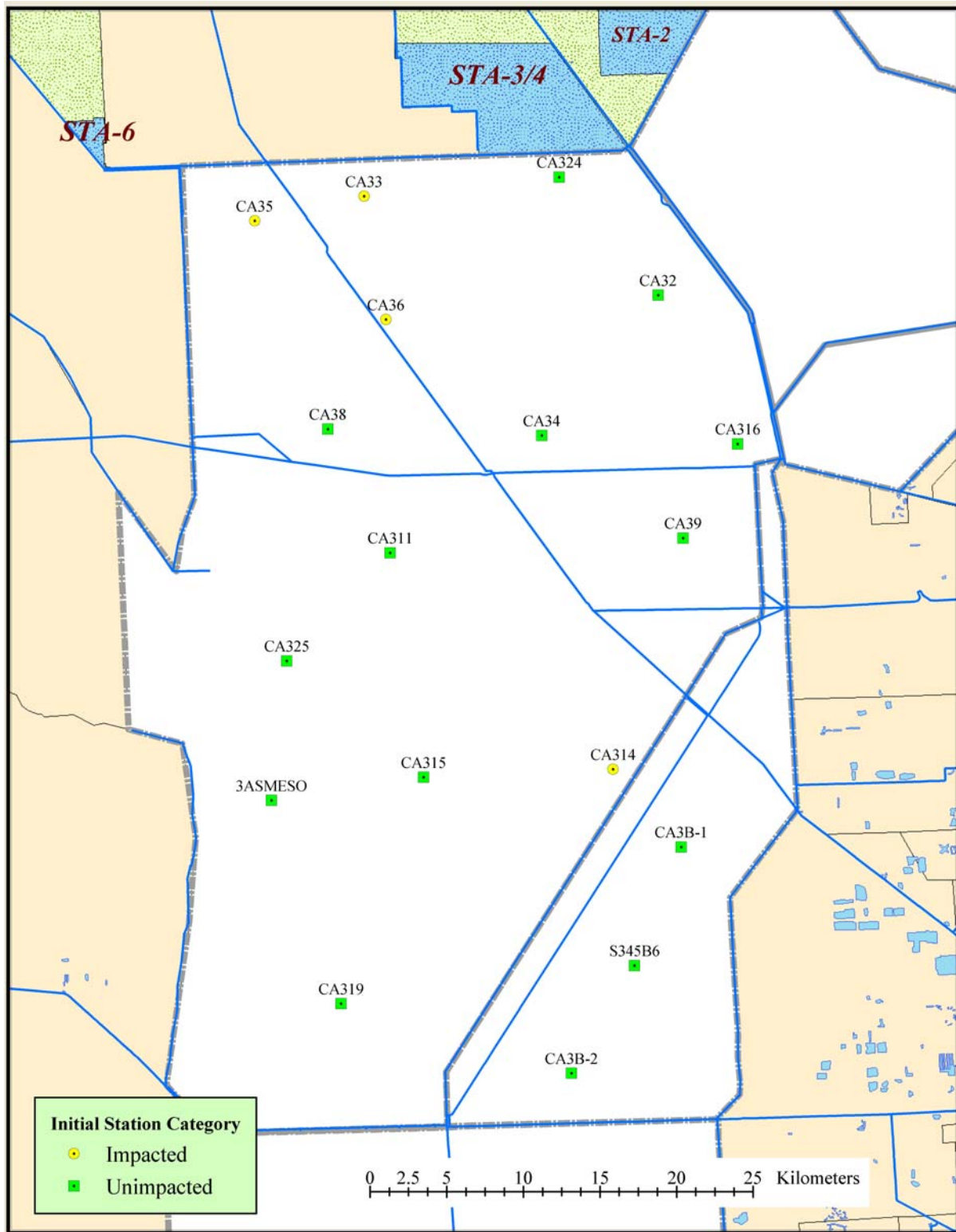


Figure 4. Phosphorus criterion monitoring network for Everglades National Park

