

## **Vital Sign: Contaminants**

[shortened name: Contaminants]

### **Parks Where Vital Sign will be Implemented:**

BICY, BISC, BUIS, DRTO, EVER, SARI, VIIS – SFCN will summarize reports from existing programs

**Justification/Issues being addressed:** Contaminants ranked 19<sup>th</sup> among the 44 SFCN vital signs. Point-source and non-point source contaminants are a growing concern in most natural areas. Determining a proper monitoring protocol to establish a baseline and to determine trends in contaminants is critical for proper resource management, especially regarding modifications of water management from Everglades Restoration. For example, mercury (Hg) bioaccumulation in particular is a serious concern in the greater Everglades system.

### **General Monitoring Questions to be Addressed by the Vital Sign:**

- What are the distribution, range, variability and concentrations of contaminants, including Emerging Pollutants of Concern (EPOCS), (PPCP's - Pharmaceuticals and Personal Care Products), endocrine disruptors and metals in the water column, organisms, and sediments (surface and core)?

### **Measures**

Concentrations in water column, organisms, and sediments of : Hg (Total/Methyl), Metals, Hydrocarbons, Polycyclic aromatic hydrocarbon (PAHs), Pesticide/Herbicide/Insecticide, Polychlorinated biphenyl (PCB's), EPOC's, (Pharmaceuticals and Personal Care Products, Caffeine, Estrogen/hormone related), non-regulated contaminants (vessel anti-fouling paint).

**Basic Approach:** SFCN will summarize reports from existing programs and post on webpage.

### **Principal Investigators/Key Contacts and NPS Lead: N/A**

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- Joffre Castro, National Park Service, Everglades National Park. Joffre\_Castro@nps.gov

**Development Schedule, Budget, and Expected Interim Products:** SFCN will work to implement as reports become available but will make a strong push to gather, summarize and fully post existing reports by 2012. Coordination of this indicator is to be accomplished by the Quantitative Ecologist and the GIS/ Data Tech. Initial webpage work will be accomplished by intern. Table indicates proposed SFCN workload upon full monitoring implementation.

Expected SFCN staff time requirements once program is fully implemented in 5 years:

| SFCN Staff                          | Full Time Equivalent (FTE) |
|-------------------------------------|----------------------------|
| Coordinator                         |                            |
| Marine Ecologist                    |                            |
| Fisheries Biologist                 |                            |
| Marine Biologist Technician (So FL) |                            |
| Marine Biologist Technician (VI)    |                            |
| Community Ecologist                 |                            |
| Wildlife Technician (Wildlife)      |                            |
| Wildlife Technician (Vegetation)    |                            |
| Quantitative Ecologist              | 0.02                       |
| Data Manager                        |                            |
| GIS/Data Tech                       | 0.02                       |
| Interns                             |                            |
| SFCN Total                          | 0.04                       |