

**Vital Sign: Land Use Change**  
[shortened name: Land\_Use]

**Parks Where Vital Sign will be Implemented:**  
BICY, BISC, EVER, SARI, VIIS

**Justification/Issues being addressed:** Land Use Change ranked 11<sup>th</sup> among the 44 SFCN vital signs. Changes in land use, sizes of the non-urban buffers around park boundaries, development of inholdings within park boundaries, and connectivity with other conserved natural areas impact park resources. Monitoring of changes over time would allow parks to understand the effects of these changes and to take appropriate actions to mitigate impacts.

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

- What are the status and long-term trends in landscape change in and around SFCN parks (e.g. changes in land use (municipal, private, commercial, agriculture), land cover, road density, housing density, etc.)?
- What are the near future changes expected in and around SFCN parks based upon building permits, zoning changes, and community planning decisions?

**Measures:**

Land use change, permitting/zoning changes, demographics within 1 mile of USVI parks, 75 miles of S. Florida parks

**Basic Approach:**

SFCN GIS Technician will coordinate with FIU, County, and SFWMD efforts. GIS Layers of in-holdings will be collected.

Future land use change will require the periodic review of building permits and zoning changes. On a semi-annual basis contact will be made with each of the county level or equivalent permitting offices effecting areas around the park. The latest list of permit applicants including information on location type and size of development would be obtained from the government entity (especially Developments of Regional Impact, DRIs, for the state of Florida). The location of these permits will then be mapped to show the latest areas of planned development. SFCN would also work to get copies of state and county long-term plans so that parks can be alerted to long-term changes before it is too late to take action.

**Principal Investigators/Key Contacts and NPS Lead:**

- SFCN GIS Technician, National Park Service, South Florida/Caribbean Inventory and Monitoring Network, 305-252-0347 [SFCN lead]
- Troy Mullins, Everglades National Park. 305-224-4288, troy\_mullins@nps.gov
- Frank Partridge, Big Cypress National Preserve. 941-695-1162, frank\_pratridge@nps.gov
- Trust for Public Lands
- South Florida Water Management District

- Florida International University
- County Governments
- USVI Department of Planning and Natural Resources

**Development schedule, budget, and expected interim products:**

SFCN will develop a “Land Use Change” protocol by 2009. The WASO office is working on a protocol for compiling general land use statistics which SFCN can pull from. Initial deliverables for network parks should include updated boundaries and layer of known inholdings. For the general land use portion of the protocol, each park would receive an update on land use every 5-10 years, but SFCN may work on these in rotation depending on whether work is done by NPS or contractor. If this work is contracted it is expected to cost approximately \$100,000. Tracking of building permits would be on an annual basis but in theory this could be accomplished by an intern. The product from their internship would be a report listing and mapping all of the permits affecting a specific park. Anticipated staff time and additional costs: 1 FTE every 5 years plus 1/2 intern annually; \$5,000 per year for imagery (majority of imagery would be obtained from local governments).

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

SFCN Staff	Full Time Equivalent (FTE)
Coordinator	0.04
Marine Ecologist	
Fisheries Biologist	
Marine Biologist Technician (So FL)	
Marine Biologist Technician (VI)	
Community Ecologist	
Wildlife Technician (Wildlife)	
Wildlife Technician (Vegetation)	
Quantitative Ecologist	
Data Manager	
GIS/Data Tech	
Interns	0.5
SFCN Total	0.54