

CHNEP *State of the Estuary and Watersheds* Environmental Indicators Survey

CHNEP is surveying the members of its Management Conference to identify environmental indicators which should be included in the *State of the Estuary and Watersheds* report. The audience for the report is citizens and elected officials. It is intended that one or two indicators will sit on each page, with status and trends information, and plenty of maps, graphs, and images. Data for all the environmental indicators will be posted on our website. Therefore, the report should include the most compelling and critical issues. Do not worry whether we have the data to support a particular indicator. For each indicator, mark your estimate of how important it is to include information related to the indicator in the report: essential, important, of interest, or unimportant. If it should not be used, mark "do not include."

| Indicators | Essential | Important | Of Interest | Un-important | Do not include |
|---|-----------|-----------|-------------|--------------|----------------|
| WQ-a: Water bodies (identified by water body IDs) on the Department of Environmental Protection's Planning or Verified Lists for impairments (see surface water quality criteria as listed in 62-302.530 in Appendix B). | | | | | |
| WQ-b: Percent of water quality stations showing declining and/or improving trends by parameter by basin. | | | | | |
| WQ-c: Parameters that affect living resources and are not sufficiently addressed by state water quality standards and the Watershed Resources Act. | | | | | |
| Enterococci (measure of mammalian bacteria, typically human in the urban setting) | | | | | |
| Total light attenuation--fractions due to color, chlorophyll a and non-chlorophyll turbidity | | | | | |
| Stream Condition Index/BioRecon where appropriate | | | | | |
| Lake Condition Index | | | | | |
| Fish Species Index | | | | | |
| SAV abundance | | | | | |
| Stream-side and shoreline vegetation changes in Charlotte Harbor, Lemon and Estero Bays and the Peace, Myakka and tidal Caloosahatchee rivers and major tributaries, first and last occurrence. | | | | | |
| Benthic organisms | | | | | |
| Salinity ranges at specific locations | | | | | |
| Isohaline locations | | | | | |

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| | Sediment heavy metal content, especially in conjunction with adjacent oyster bars and likely depositional areas | | | | | |
| | Pollutant loads--annual loads and yields of basins of TN, TP and TSS | | | | | |
| | Trophic State Index-using TP, TN and chlorophyll <i>a</i> with and without phosphorous | | | | | |
| | Hypoxia--extent, duration and severity of hypoxic episodes; relationship with stratification | | | | | |
| | Emerging contaminants—anthropogenically derived chemicals (e.g., ecoestrogens, pharmaceuticals, personal care products, fire retardants, gasoline additives, herbicides and pesticides) | | | | | |
| | WQ-d: Taxonomic composition, severity (cell count), extent, and duration of red tide blooms. | | | | | |
| | WQ-e: Taxonomic composition, severity (cell count), extent, and duration of blue-green algae blooms. | | | | | |
| | WQ-f: Taxonomic composition, severity, extent, and duration of nuisance blooms of macro-algae and filamentous green algae blooms. | | | | | |
| | WQ-g: Taxonomic composition, severity, extent, and duration of other toxic dinoflagellate HABs of concern. | | | | | |
| | WQ-h: Number and duration of shellfish harvesting closures by area by year. | | | | | |
| | HA-a: Amount of time that freshwater flows remain within the natural seasonal variation for the Caloosahatchee River. | | | | | |
| | HA-b: Amount of time that freshwater flows remain within the natural seasonal variation for the Upper Peace River to Zolfo Springs. | | | | | |
| | HA-c: Amount of time that freshwater flows remain within the natural seasonal variation for the Upper Myakka River. | | | | | |
| | HA-d: Amount of time that freshwater flows remain within the natural seasonal variation for the Estero Bay tributaries. | | | | | |
| | HA-e: Oligohaline, mesohaline, and polyhaline locations in the Myakka, Peace and Caloosahatchee River. | | | | | |

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| HA-f: Net difference between the acreage of subbasins that no longer contribute flows to their historic receiving water bodies and the acreage of subbasins returned to historic receiving water bodies. | | | | | |
| HA-g: Acres of watershed restored and percentage of watershed improved by projects that demonstrate, through comparison of pre and post project hydrologic conditions improvements to more natural hydrologic conditions the aforementioned structures. | | | | | |
| HA-h: Reforms within government development permitting and capital improvements that improve hydrology and water quality. | | | | | |
| FW-a: SAV acreage by seagrass segment. | | | | | |
| FW-b: SAV species presence/absence, annual fall percent cover by species and deep edge by basin. | | | | | |
| FW-c: Boat propeller scar acreage, severity and location by basin. | | | | | |
| FW-d: Fish community composition by strata. | | | | | |
| FW-e: Un-vegetated, soft and sandy intertidal and subtidal habitat acreage and location by basin. | | | | | |
| FW-f: Benthic index for mud flat, sand flat and subtidal un-vegetated by basin. | | | | | |
| FW-g: Mangrove acreage and location by basin. | | | | | |
| FW-h: Mangrove species composition for sample sites. | | | | | |
| FW-i: Condition of mangrove shoreline (i.e. percent hedged mangroves, hardened shoreline, and damaged mangroves) by basin. | | | | | |
| FW-j: Intertidal and high saltwater marsh acreage and location by basin. | | | | | |
| FW-k: Percent exotics within saltwater marshes by basin. | | | | | |
| FW-l: Freshwater wetland acreage and type (i.e. isolated, connected) by basin. | | | | | |
| FW-m: Kilometers of freshwater 1 st and 2 nd order streams by basin. | | | | | |
| FW-n: Percent exotics within freshwater wetlands by basin. | | | | | |
| FW-o: Oyster bar acreage and location by oyster segment (seagrass segment plus Dona and Roberts. Bay) | | | | | |
| FW-p: Number of living oysters per sq. meter. | | | | | |
| FW-q: Native upland acreage and location by basin and by type. | | | | | |

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| FW-r: Acreage in conservation status within study area and by basin. | | | | | |
| FW-s: Invasive exotic plants acreage and location by basin by species on public and submerged lands. | | | | | |
| FW-t: Exotic, nuisance animal reports by species by basin on public and submerged lands. | | | | | |