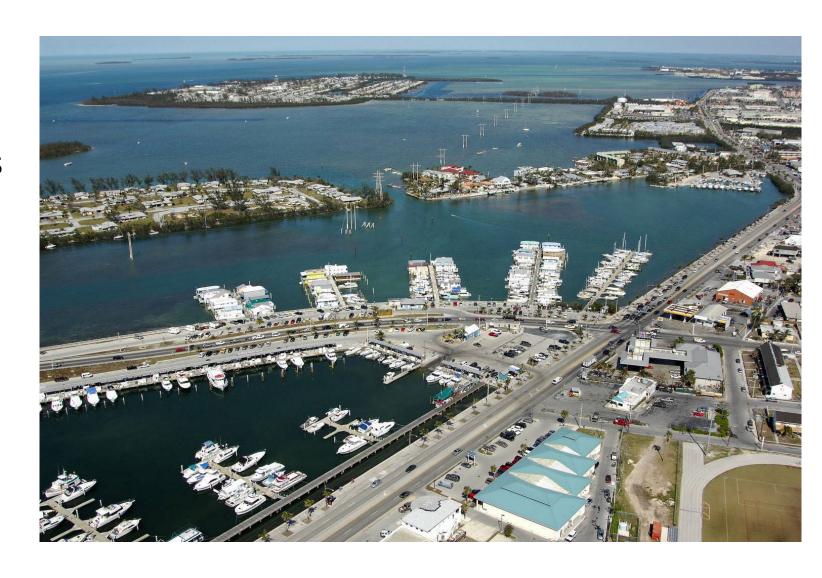
# Marinas and Liveaboards

## Overview of Issue Area

- Marine Sanitation Devices (MSDs)
- Cumulative effects
- No Discharge Zone
- Pumpout facilities
- Shortfalls in capacity



# Marinas and Liveaboards

#### Recommended Strategy

**9-2.** Ensure adequate marine pumpout services and/or facilities to eliminate discharge of waste from vessels into FKNMS. Marinas should have and maintain their own pumpout facilities and assume responsibility for ensuring they have adequate pumpout capacity for the liveaboards that use that facility.





Photo credit: Keys Weekly

Shelly Krueger, University of Florida IFAS Extension, Monroe County

# Marinas and Liveaboards

## Rationale for Selection

- Inadequate or reduced pumpout service
- Potential for reduced compliance
- No discharge rule

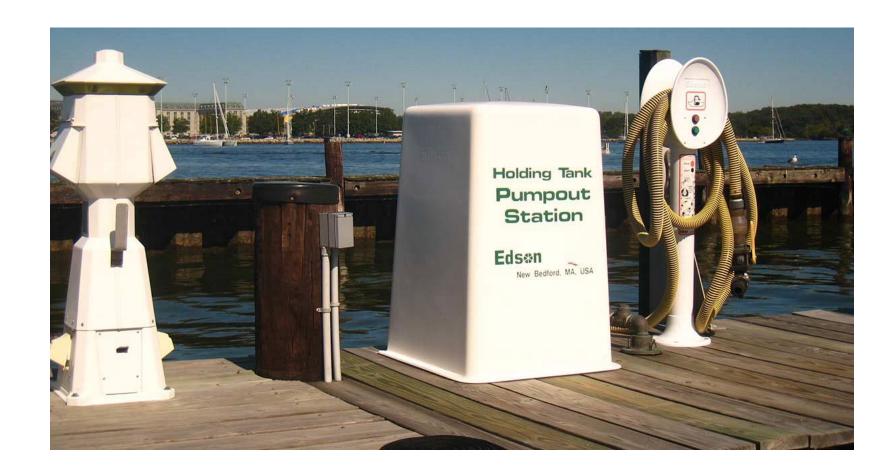


Photo credit: BoatUS Foundation

# **Emerging Pollutants of Concern**

## Overview of Issue Area

- Endocrine disruptors
- Pharmaceuticals
- Personal care products
- Pesticides and fertilizers
- Wastewater treatment
- Human health
- Ecological impacts



Photo credit: USGS

# **Emerging Pollutants of Concern**

#### **Recommended Strategies**

- **8-2.** Research emerging pollutants of concern to determine the magnitude of the problem posed by endocrine disruptors and other emerging pollutants.
- **8-3.** Incorporate emerging pollutants of concern into monitoring programs to determine the composition and concentration of pollutants in FKNMS waters.

## Rationale for Selection

High (Priority 2)

Very High Priority (Priority 1)

Further investigation



Photo credit: Megan Cox, St. Cloud State University