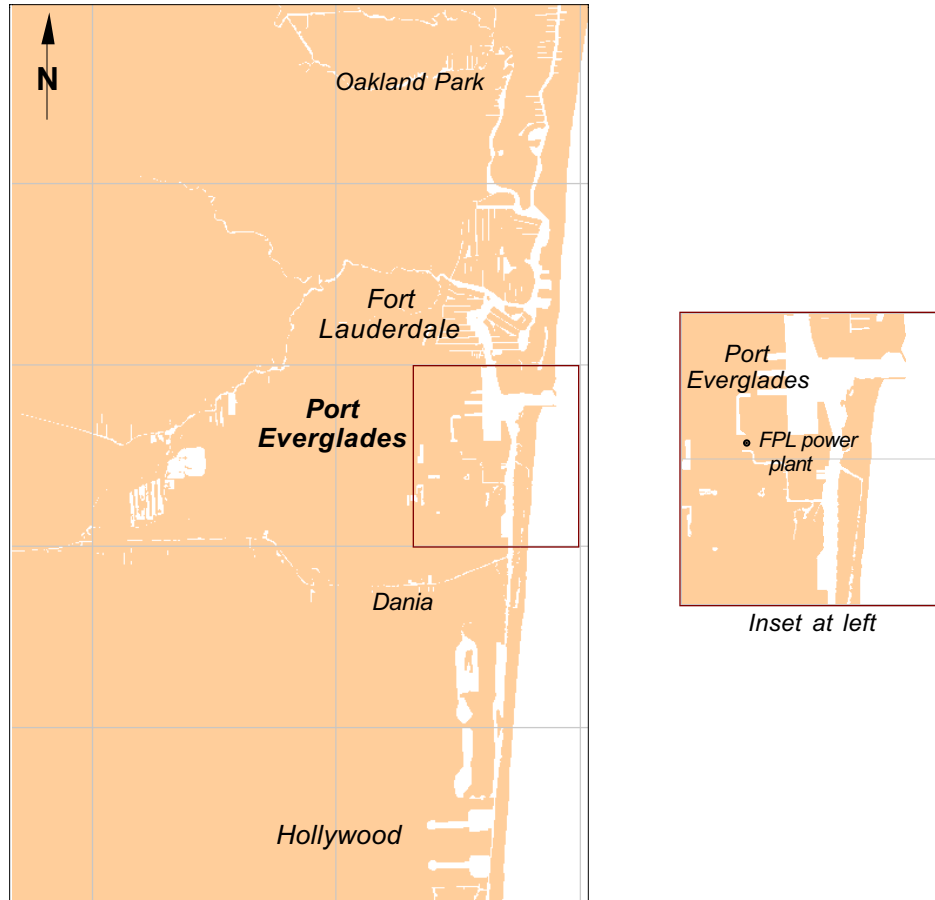


## User's Guide

Welcome to the Location File for Port Everglades, a deep-water port located on the southeastern coast of the Florida peninsula. Port Everglades is situated within the three cities of Fort Lauderdale, Hollywood and Dania Beach, with a small portion located in unincorporated Broward County. The seaport's operations include a thriving cruise industry, a major petroleum storage and distribution hub, and a growing containerized cargo business.



NOAA has created Location Files for different U.S. coastal regions to help you use the General NOAA Oil Modeling Environment, GNOME. In addition, on a case-by-case basis, NOAA develops international Location Files when working with specific partners.

Each Location File contains information about local oceanographic conditions that GNOME uses to model oil spills in the area covered by that Location File. Each Location File also contains references (both print publications and Internet sites) to help you learn more about the location you are simulating.

As you work with the Location File for Port Everglades, GNOME will prompt you to:

1. Choose the model settings (start date and time, and run duration).
2. Input the wind conditions.
3. Choose whether or not to include effects from the power plant discharge channel.

GNOME guides you through each of these choices. Each window has a button that leads you to helpful information and the general Help topic list. If you need help setting up the model, click the "Help" button. When you need to input the wind conditions in the "Choosing Wind Type" window, you can click the "Finding Wind Data" button to see a list of web sites that publish wind data for this region. Finally, in the "Power Plant Discharge" window, you can choose whether or not to simulate the effects from the outflow of a power plant cooling water discharge canal. To get more information about the effects, click the button, "Finding Discharge Information," or check the "Power Plant Discharge" Help topic.

More information about GNOME and Location Files is available at <http://response.restoration.noaa.gov/software/gnome/gnome.html> .

## **Technical Documentation**

### ***Background***

Port Everglades is an enclosed port with a narrow opening to the Atlantic Ocean. The Intracoastal Waterway runs through the port from north to south. The port area is approximately 2 miles long and half a mile wide. The port and its approaches are dredged and maintained at a minimum depth. To the north of the port, in the Fort Lauderdale area, there are a number of smaller waterways dedicated to small boat traffic. The average water depth in these areas averages 9 feet.

There are no major rivers entering Port Everglades. The largest river entering the area is the New River to the north, in Fort Lauderdale. The New River does not input enough fresh water to significantly drive surface currents when compared to the tides. Current patterns were therefore not included for the New River system.

Cooling water discharge from the Florida Power and Light discharge canal south of Berth 29 is reported to affect ships in varying ways, depending upon the output of the plant and the size and draft of the ship. The discharge canal outfall is predicted to have minimal effects on the currents of the Port Everglades area and is limited to daytime hours.

### ***Current Patterns***

The Port Everglades Location File contains three current patterns: tides, Florida Power and Light discharge canal, and near shore for the outer coast.

All current patterns were created with the NOAA Current Analysis for Trajectory Simulation (CATS) hydrodynamic application. The tidal current pattern is scaled to the tidal prediction station near the 17<sup>th</sup> Street Bridge (26° 06.02' N, 80° 07.13' W).

The Florida Power and Light discharge canal pattern can be turned on or off, with no option to modify the current speed.

The outside mean current pattern is set to flow from the north to the south. This pattern should not be relied upon to reflect any variability in the currents. Caution should be exercised with the use of these currents.

## **References**

You can get more information about the Port Everglades area from these publications and web sites:

### **Oceanography**

U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS). 2003. United States Coast Pilot 4, Atlantic Coast: Cape Henry, VA to Key West, FL. 35th Edition. Washington, DC: NOS. 505 pp.

U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS). 2003. Tide Tables 2003, East Coast of North and South America including Greenland. Silver Spring, MD: NOS. 416 pp.

U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS). 2003. Tide Current Tables 2003, Atlantic Coast of North America. Silver Spring, MD: NOS. 223 pp.

### **Wind and Weather**

National Weather Service (NWS) - Fort Lauderdale, FL  
<http://www.srh.noaa.gov/data/forecasts/FLZ072.php?warncounty=FLC011&city=Fort+Lauderdale>  
Current conditions and forecast for Fort Lauderdale, Florida.

National Weather Service Forecast Office – Miami-South Florida  
<http://www.srh.noaa.gov/mia/newpage/cgi-bin/master.pl?suite=home>  
Weather forecasts, observations, and warnings for the Miami/South Florida area.

National Weather Service - Telecommunication Operations Center  
Current Conditions, Forecasts, Watches and Warnings for Broward Metropolitan, FL  
<http://weather.noaa.gov/cgi-bin/iwszone?Sites=:flz072#t0?Sites=:flz072>  
Zone forecasts for South Florida.

National Data Buoy Center - Station Information for Station LKWF1  
[http://seaboard.ndbc.noaa.gov/station\\_page.phtml?station=LKWF1](http://seaboard.ndbc.noaa.gov/station_page.phtml?station=LKWF1)  
Observations and marine forecast for Station LKWF1, Lake Worth, Florida.

Interactive Weather Information Network (IWIN)  
<http://iwin.nws.noaa.gov/iwin/fl/zone.html>  
Text only version of zone forecast for Florida.

## **Oil Spill Response**

NOAA Hazardous Materials Response Division (HAZMAT)

<http://response.restoration.noaa.gov>

Tools and information for emergency responders and planners, and others concerned about the effects of oil and hazardous chemicals in our waters and along our coasts.