Florida Center for Community Design + Research
School of Architecture + Community Design

Atlas Newsletter October 2007

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**Upcoming Issue:**



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# Data Download Tool Version 2.0 Released!

The Florida Center of Community Design and Research has released the Data Download Tool (Ver 2.0). Working in concert, the Database Applications Team and the Web Software Team re-designed the tool for greater customization, functionality, and ease of use.

**Most of Survey Respondents rate the Data Download Tool as Good or Excellent**

Version 2.0 offers the user a choice between six different data types: surface water quality, surface water hydrology, groundwater quality, groundwater hydrology, meteorological, and (near) real-time water data. By filtering with location, site information, or sample information – or any combination thereof – the user can design a sophisticated and customized query which can be saved and used again and again. In addition, the parameter grouping filter offers convenient reporting of commonly clustered data such as nutrients, metals, and water quality index. The query results can be further refined through station selection (all, some, or one). Version 2.0 also features a "map it" function to verify station location and the report can be generated in Excel™ or in text file type in either row or column format. Offering greater ease of use, Version 2.0 provides a query summary and query change option prior to report generation.

Please take a moment to explore the Data Download Tool (Ver 2.0) at Data Download and don't forget to fill out the user survey!

Images from Hillsborough County Lake Assessments

# You Asked. We Listened.

### FCCDR Proudly Announces the Launch of an Improved Digital Library

The Florida Center for Community Design and Research is proud to announce the launch of an improved Digital Library feature. Based on your suggestions, the FCCDR re-coded the digital library to provide greater ease of use and subject search refinement.

The original digital library was coded with an "off-the-shelf" product which provided for basic searches of Atlas content. The search engine was largely automated, with little room for in-house customization. As a result, the engine returned a long (and varied) document list for the user to sort thorough. Although a great first step, the search was too elementary and gave inconsistent results. As your comments were collected, the FCCDR realized that the off-the-shelf product was returning a generalized list and creating unnecessary work for the user.

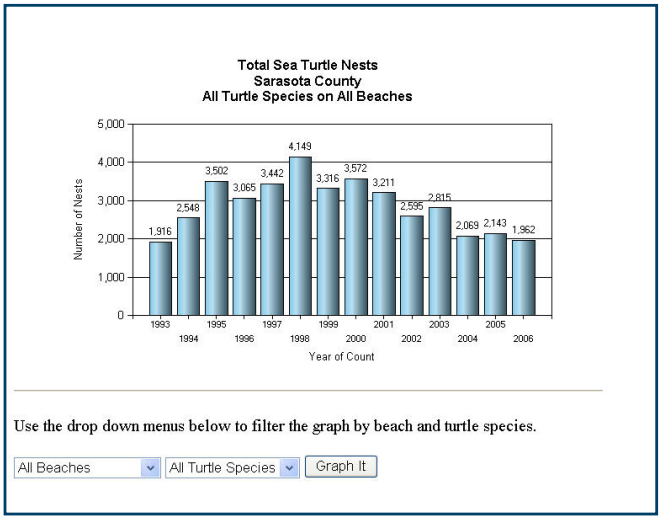
With your feedback in mind, the Design Team went to work! The result is a completely re-coded digital library feature which includes both a Google™ search engine and an in-house, custom-coded, application. This new .net application provides a search engine customized for the types of searches required on the Water Atlas. In addition, the in-house tailoring lets the Content Management Team catalog documents once, rather than in two different places and assign keywords to a document, regardless of whether or not the word(s) appear in the text. A great example of this is an article entitled "Urban Run-Off". A keyword search of "stormwater" would not have returned this document. However, with our customized ability to *force* a keyword, the document would be returned by the search. The **.**net application also allows the Design Team to program for user-specified word matches (e.g. any, all, exact), as well as defining the specific library to be searched. The Google™ and **.**net application also eliminates the need for third party software, effectively saving $3,000 annually! Additional, in-progress, features for the Digital Library include a library standard compliant cataloging system with a more comprehensive keyword list. Our Design and Content Management Teams will continue to improve the Digital Library to meet your needs. Stay tuned and please keep your comments coming!

Together, these improvements bring the FCCDR one step closer to **One Atlas** implementation.

Please visit the Hillsborough County Water Atlas to see the improved Digital Library: Hillsborough County Water Atlas.

## Sarasota County Water Atlas Charts Sea Turtle Nests

Sarasota County has added an interactive Sea Turtle graphing component to the Gulf and Area Beaches Fish and Wildlife page, proving that a picture is indeed worth one thousand words. The interactive charting feature includes the six County beaches monitored for sea turtle nests (Casey Key, Lido Key, Longboat Key, Manasota Key, Siesta Key, and the Venice Beaches), as well as data on three sea turtle species (Loggerhead, Green and Leatherback). Atlas users can graph any combination of the beach or sea turtle nest variables and view annual nesting counts from the year 1993 through 2006.




> *"The charting feature is a real benefit to the Atlas user, allowing quick visual access to sea turtle nesting data from the past 13 years"*, says Project Manager Jim Griffin, Ph.D.

# HISTORIC LAKE COUNTY AERIALS AVAILABLE

Historic aerials from the years 1941, 1947, 1958, 1972, 1979, and 1987 have now been added to the Lake County Water Resource Atlas. Viewable from the Interactive Mapping Application, the aerials are a fascinating study in the County's development through time. The images below show Clermont in 1941 (left) and in 2006 (right).

Clermont 1941

Clermont 2006

Map themes (predefined dataset displays), have been created for user-friendliness. You'll find the themes in the upper right corner of the Interactive Map. Check out the aerials at: Lake County GIS.

## Seminole County in Vanguard for New Vertical Datum Adoption

Although in use for close to 80 years, the National Geodetic Vertical Datum of 1929 (NGVD29) is being replaced by the North American Vertical Datum of 1988 (NAVD88). Seminole County is one of the first of Florida's Counties to officially make the change.

A vertical datum provides a point of reference for elevation measurements. The 1929 North American Vertical Datum was established using Mean Sea Level (MSL) at 26 tide stations in the United States and Canada. The datum then became the elevation standard for survey benchmarks. A major deficiency of NGVD29 is the assumption that MSL is the same equipotential surface at all tidal stations. In reality, ocean currents, wind, temperature and salinity variations create a sea surface topography that is quite variable. As a result, NGVD29 does not accurately represent sea and lake levels, nor does it allow for the accurate delineation of flood zones.

The North American Vertical Datum of 1988 corrects for the diffencencies of NGVD29. NAVD88's reduced reliance on tidal stations is largely responsible for the improvement. The figure below illustrates elevational differences between the two datums (NOAA Map).

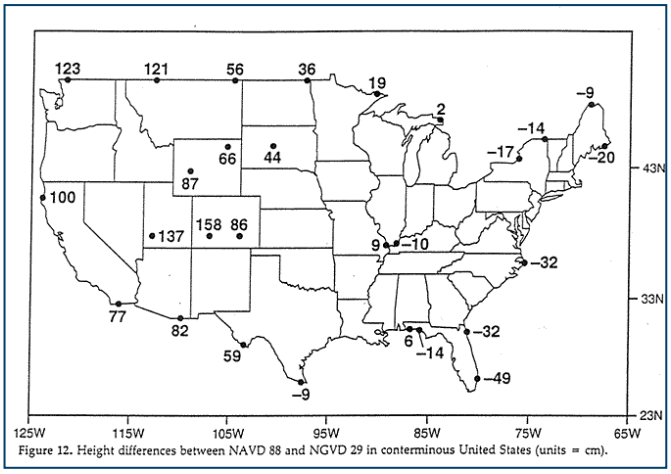


Figure 12. Height differences between NAVD 88 and NGVD 29 in conterminous United States (units = cm).

NAVD88 is the **only** official vertical datum for the continental United States, and the Federal Emergency Management Agency (FEMA) is currently converting all elevational references to the NAVD88 standard. In addition, NAVD88 is more compatible with modern surveying and mapping technologies like Global Positioning Systems (GPS) and Light Detection and Ranging (LIDAR). Seminole's adoption of the NAVD88 is an investment in the County's future.

# FCCDR Launches New Sarasota Facility Data Management System

The Florida Center has launched the Facility Data Management System (FDMS) for Sarasota County. The FDMS is a web-based software package designed to streamline wastewater facility self-monitoring data collection, calculation, and reporting.

The FDMS provides a single, central point of management for both stand-alone and multiple facility networks. Scalable access permission includes read-only, write, and multi-facility administrative privileges. The FDMS is Florida Department of Environmental Protection compliant and can be customized for permit-specific conditions.

The data collection component of the FDMS was designed for ease of data entry by multiple facility operators. The component can accommodate several monitoring sites, with numerous parameters, on a daily, monthly, or annual basis. Data calculations are Florida Administrative Code compliant and can include weekly, monthly, and annual averages with monthly geometric mean, rolling arithmetic mean, and monthly median values. Fecal coliform values include percent-less-than-detection and 90th percentile. The system also provides a facility data archive.

Wastewater Discharge Monitoring Reports are electronically compiled from the database and generated in FDEP format. The FDMS allows Managers to efficiently collect, calculate, report, and archive facility data and is ideal for the reduced-paper environment. It can also accommodate water treatment facilities. Contact Shawn Landry, Interim Director of the FCCDR, for a demonstration of the FDMS (813-974-4590).

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | |
| 2 | Part A continued | | Facility Name: Major WWTP | | | | | | | | | Facility ID No.: FL0011111 | |
| 3 | Month/Year: | May, 2007 | Final Limits | | | | | | | | | **Discharge Point No.: D001** | |
| 4 | | | **Please read instructions before completing this form.** | | | | | | | | | | |
| 5 | | | | Quanity or Loading | | | Quality or Concentration | | | | No. | Frequency | Sample |
| 6 | Parameter | | | | | | | | | | Ex. | of | Type |
| 7 | | | | Average | Maximum | Units | | | Maximum | Units | | Analysis | |
| 8 | NITROGEN EFFLUENT | | Sample | ******** | ********** | ******** | ********* | 0.96 | 2.46 | mg/L | 0 | WEEKLY | 16 HOUR FLOW |
| 9 | Total as N | | Measurement | | * | * | | | | | | | PRO COMPOS. |
| 10 | PARM Code 00600 W | | Permit Requirement | ******** | ********** | ******** | ********* | 3.75 | 6.0 | mg/L | | WEEKLY | 16 HOUR FLOW |
| 11 | Mon. Site No. EFD-01 | | | | * | * | | MoAvg | Max | | | | PRO COMPOS. |
| 12 | NITROGEN, EFFLUENT | | Sample | ******** | ********** | ******** | ********* | 1.46 | ********* | mg/L | 0 | MONTHLY | CALC. |
| 13 | Total as N | | Measurement | | * | * | | | | | | | |
| 14 | PARM Code 00600 Y | | Permit Requirement | ******** | ********** | ******** | ********* | 3.0 | ********* | mg/L | | MONTHLY | CALC |
| 15 | Mon. Site No. EFD-01 | | | | * | * | | AnnulAvg (1) | | | | | |
| 16 | PHOSPHOROUS | | Sample | ******** | ********** | ******** | ********* | 0.56 | 0.74 | mg/L | 0 | WEEKLY | 16 HOUR FLOW |
| 17 | Total as P | | Measurement | | * | * | | | | | | | PRO COMPOS. |
| 18 | PARM Code 00665 W | | Permit Requirement | ******** | ********** | ******** | ********* | 1.25 | 2.0 | mg/L | | WEEKLY | 16 HOUR FLOW |
| 19 | Mon. Site No. EFD-01 | | | | * | * | | MoAvg | Max | | | | PRO COMPOS. |
| 20 | PHOSPHOROUS | | Sample | ******** | ********** | ******** | ********* | 0.51 | ******** | mg/L | 0 | MONTHLY | CALC. |
| 21 | Total as P | | Measurement | | * | * | | | | | | | |
| 22 | PARM Code 00665 Y | | Permit Requirement | ******** | ********** | ******** | ********* | 1.0 | ******** | mg/L | | MONTHLY | CALC |
| 23 | Mon. Site No. EFD-01 | | | | * | * | | AnnulAvg (1) | | | | | |
| 24 | TSS EFFLUENT | | Sample | ******** | ********** | ******** | ********* | ********* | 1.20 | mg/L | 0 | WEEKLY | GRAB |
| 25 | (For Disinfection) | | Measurement | | | | | * | | | | | |
| 26 | PARM Code 00530 B | | Permit Requirement | ******** | ********** | ******** | ********* | ********* | 5.0 | mg/L | | WEEKLY | GRAB |
| 27 | Mon. Site No. EFB-01 | | | | | | | * | Max | | | | |
| 28 | CHLORINE, TOTAL RESIDUAL | | Sample | ******** | ********** | ******** | 1.4 | ********* | ********* | mg/L | 0 | CONTINUOUS | MTR (2) |
| 29 | | | Measurement | | | | | * | | | | | |
| 30 | PARM Code 50060 A | | Permit Requirement | ******** | ********** | ******** | 1.0 | ********* | ********* | mg/L | | CONTINUOUS | MTR (2) |
| 31 | Mon. Site No. EFA-01 | | | | | | DailyMin. | * | | | | | |
| 32 | COLIFORM, FECAL | | Sample | ******** | ********** | ******** | ********* | ********* | <1 | #100ml | 0 | WEEKLY | GRAB |
| 33 | | | Measurement | | | | | * | | | | | |

DMR-A1 | DMR-A2 | DMR-A3 | DMR-A4 | DMR-B1 | DMR-B2 | DatabaseSource | DatabaseAverageSource