City of Valdosta Overview and Update

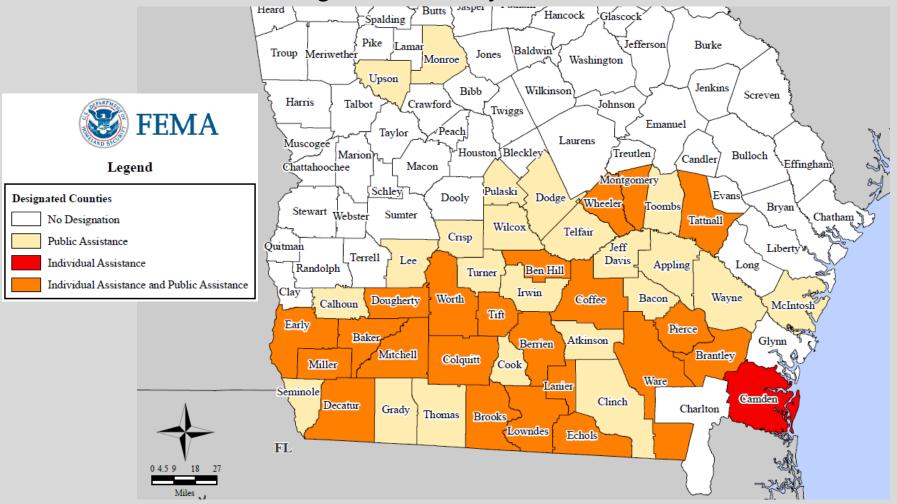
May 14, 2014







Due to severe storms and flooding, in April 2009 President Obama declared 46 Georgia Counties major disaster areas



^{**}In the State of Florida there were 17 Counties declared disaster areas**

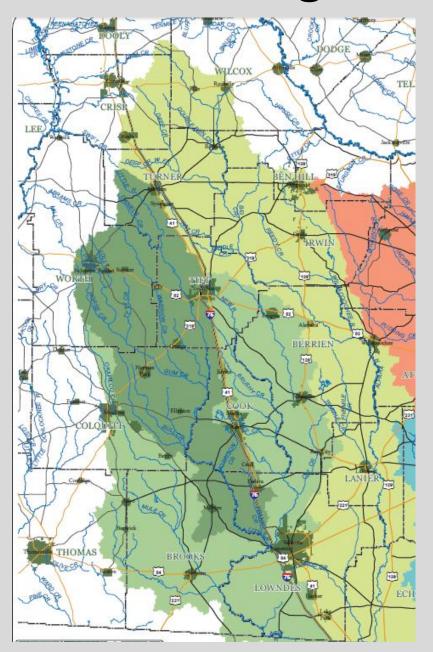
USGS rainfall gages recorded significant rainfall between March 27 – April 3, 2009

- 6.9 inches Satilla River (Atkinson)
- 7.2 inches Satilla River (Waycross)
- 13.3 inches Alapaha River (Alapaha)
- 14 inches Little River (Adel)
- 9.4 inches Withlacoochee River (Quitman)
- 8.7 inches Withlacoochee River (Valdosta)



The USGS Fact Sheet (2009 – 3079) reported that FEMA reported the following damages in 46 counties declared disaster areas:

- 1,875 homes
- 29 businesses
- \$60 million in public infrastructure (e.g. roads, culverts, bridges and a WWTP)



Alapaha River sub-watershed:

- 1,720 sq. miles
- 17 sq. miles of Valdosta drains to the Alapaha

Withlacoochee River sub-watershed:

- 1,295 sq. miles
 - About ½ drains to the west of the city
 - About ½ drains to the south of the city
- 20 sq. miles of Valdosta drains to the Withlacoochee

Little River sub-watershed:

- 891 sq. miles

- All of the Little River watershed and part of the Withlacoochee watershed (approx. 1450 sq. miles) join together just west of the city near Hwy 133
- Valdosta's drainage area to the river is only 1%

2009 Flood Pictures in Valdosta / Lowndes



US Highway 84 / Lowndes County Courtesy of Valdosta Daily Times



Park Lane – City of Valdosta Courtesy of Valdosta Daily Times



Lake Drive – City of Valdosta

Courtesy of Lowndes County EMA



Franks Creek – City of Hahira Courtesy of Valdosta Daily Times

Withlacoochee Wastewater Treatment Plant





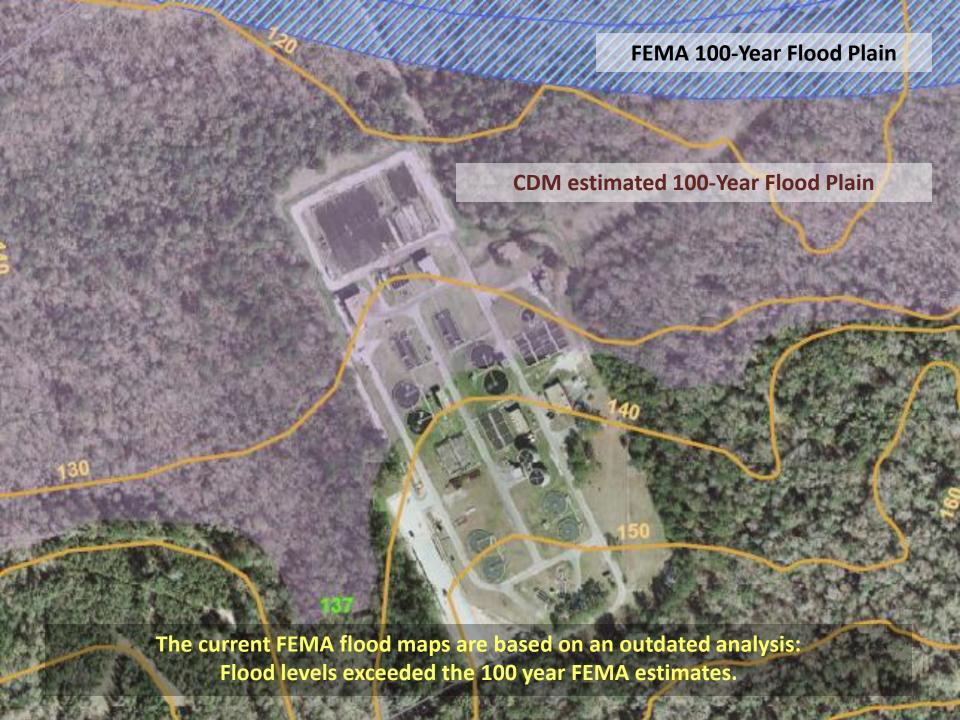
Before

During 2009 Flood

Withlacoochee River is approximately ¼ mile away from the plant Plant significantly impacted by flood waters

Experienced a complete loss of function for nine days

Not fully operational for over a month



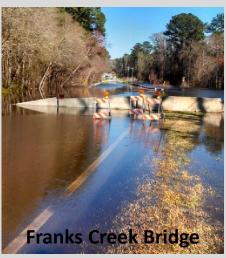
2013 Flood

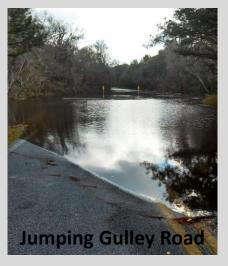
- Withlacoochee waste water treatment plant had to be shut down
- Numerous locations throughout Lowndes County were flooded
- 13 roads / bridges closed in Lowndes County, including US-84













Withlacoochee Wastewater Treatment Plant





Before

During 2013 Flood

Plant significantly impacted by flood waters Experienced a loss of function for three days

2013 Flood – USGS Recorded Data Flow at Multiple Locations

Station Name	Drainage Area (mi ²)	Date of Peak	Peak GH (ft)	Peak Q (cfs)
ALTAMAHA RIVER AT DOCTORTOWN, GA	13600	3/2/2013	13.56	66,900
SATILLA RIVER NEAR WAYCROSS, GA	1200	3/1/2013	19.37	19,400
LITTLE SATILLA RIVER NEAR OFFERMAN, GA	646	2/27/2013	11.20	6,080
SATILLA RIVER AT ATKINSON, GA	2790	3/4/2013	18.23	27,000
ALAPAHA RIVER NEAR ALAPAHA, GA	663	2/28/2013	16.97	9,650
ALAPAHA RIVER AT STATENVILLE, GA	1400	3/4/2013	29.41	18,400
WITHLACOOCHEE RIVER AT MCMILLAN RD,NEAR BEMISS, GA	502	2/28/2013	21.79	17,400
LITTLE RIVER NEAR ADEL, GA	577	2/26/2013	21.03	24,500
WITHLACOOCHEE RIVER AT US 84, NEAR QUITMAN, GA*	1480	3/1/2013	31.48	41,000
OKAPILCO CREEK AT GA 33, NEAR QUITMAN, GA	269	2/27/2013	16.30	10,100
OCHLOCKONEE RIVER AT GA 188, NEAR COOLIDGE, GA	260	2/26/2013	17.27	11,200
OCHLOCKONEE RIVER NEAR THOMASVILLE, GA*	550	2/27/2013	22.13	29,100
SPRING CREEK NEAR IRON CITY, GA	527	2/27/2013	19.33	12,400

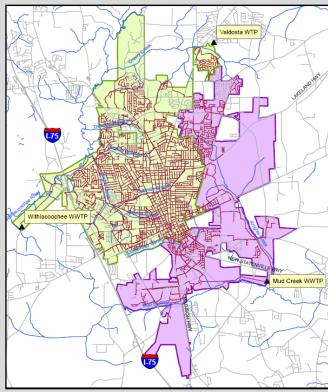
Based on the USGS river flow of 41,000 cfs, even if there was a plant spill of 17 MGD, it would only account for 0.064 % of the water volume in the river at any given second. This means that 99.94% of the river water quality is not directly related to sewage.

Sewer System Overview



Withlacoochee WWTP / WPCP

- Capacity of 8.0 MGD as an average annual daily flow
- Capability to treat peak flows up to 12.0 MGD

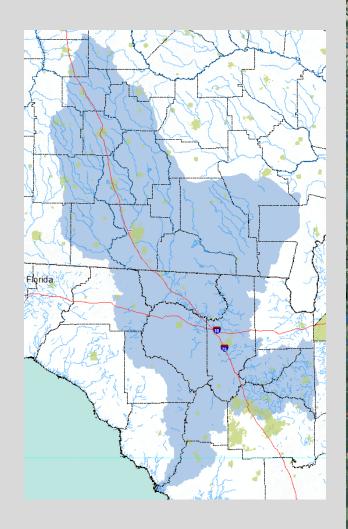


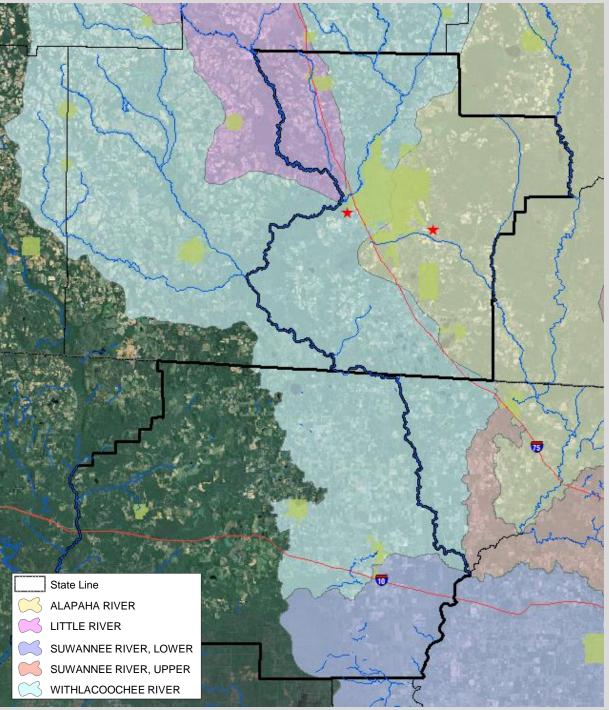


Mud Creek WWTP / WPCP

- Renovation and expansion completed in 2012
- Capacity of 5.7 MGD as an average annual daily flow
- Capability to treat peak flows up to 17.0 MGD







Sewer Improvements Update

- 2009 2013 City has completed \$49,453,784 sewer projects
- Consent Order / Five Year Action Plan Includes:
 - Relocation of the Withlacoochee Plant
 - New force main
 - Equalization basin
 - New headworks facility
 - Inspection of all sewer lines /manholes
 - Short term improvements

How do we plan to do this?

Completed Sewer Projects from 2009 to Present						
No.	Project		Cost			
1	CMMS for the Utility Department	\$	85,000			
2	Mud Creek Emergency Manhole Repair	\$	103,000			
3	Withlacoochee Biosolids Converyor Repair (FEMA)	\$	52,000			
4	Withlacoochee Multi-Media Filters Repair (FEMA)	\$	46,000			
5	Replacement of SO2 and CL2 systems (FEMA)	\$	82,700.00			
6	Replacement of Reuse system controls (FEMA)	\$	13,377.59			
7	Eectronics dryout and replacement of pannels, transformers, and misc components (FEMA)	\$	169,277.00			
8	30% Design for Force Main, EQ Basin and Lift Stations	\$	100,000			
9	CCVT Evaluation of Mud Creek and Knights Creek Trunk Lines	Ś	122,000			
10	Cleaning of Withlacoochee Influent Pump Station Wet Well	Ś	373,000			
11	Rehabilitation of Four Problematic Lift Stations	\$	1,500,000			
12	Withlacoochee Nitrification Pump Replacement	\$	60,000			
13	Withlacoochee Influent Pump Station Impeller Replacement	Ś	90,000			
14	Withlacoochee RAS Controller Replacement	Ś	36,000			
15	Thickener pump replacement	Ś	53,068.00			
16	Valve actuators for liftstation	\$	8,369.00			
17	3 - 14hp Wilo pumps	\$	38,110.50			
18	RAS pump impellers	\$	33,642.00			
19		\$				
	4 - 5hp submersible pumps	_	20,154.00			
20	Phase 1 Manhole Rehabilitation	\$	205,000			
21	Country Club Emergency Manhole Repair	\$	72,000			
22	Withlacoochee Roughing Tower Controller Replacement	\$	38,000			
23	Purchase of 75-acres for Relocation of Plant	\$	1,012,500			
24	Water and Sewer Rate Analysis	\$	50,000			
25	Construction of Tucker Road Lift Station	\$	204,000			
26	Withlacoochee Belt Press Major Repairs	\$	52,000			
27	Phase 2 Manhole Rehabilitation	\$	237,000			
28	Goodyear Lift Station Rehabilitation	\$	104,000			
29	CCTV work for Big County Lift Station Service Area	\$	108,000			
30	100% Design for Force Main, EQ Basin and Lift Station	\$	1,400,000			
31	Withlacoochee Emergency Repairs for broken 20-inch Valve	\$	616,000			
32	Withlacoochee Sludge Pump Replacement	\$	54,000			
33	Blanchard Street Emergency Repairs	\$	234,000			
34	Temporary Bar Screens at Withlachoochee	\$	104,770			
35	Temporary Blower System at Withlachoochee	\$	376,131			
36	Projected Easement costs for force main project	\$	370,000			
37	Recent emergency repairs at Withlachooche follow Flood	\$	203,225			
38	Repair to Tucker Road Outfall	\$	27,460			
40	Mud Creek WPCP Expamnsion and Upgrades	\$	41,000,000			
	Total:	\$	49,453,784			
	Total Expenditures Related to the Withlachoochee Plant since 2009 =	\$	5,583,784			

New Force Main Project / New Withlacoochee Wastewater Treatment Plant

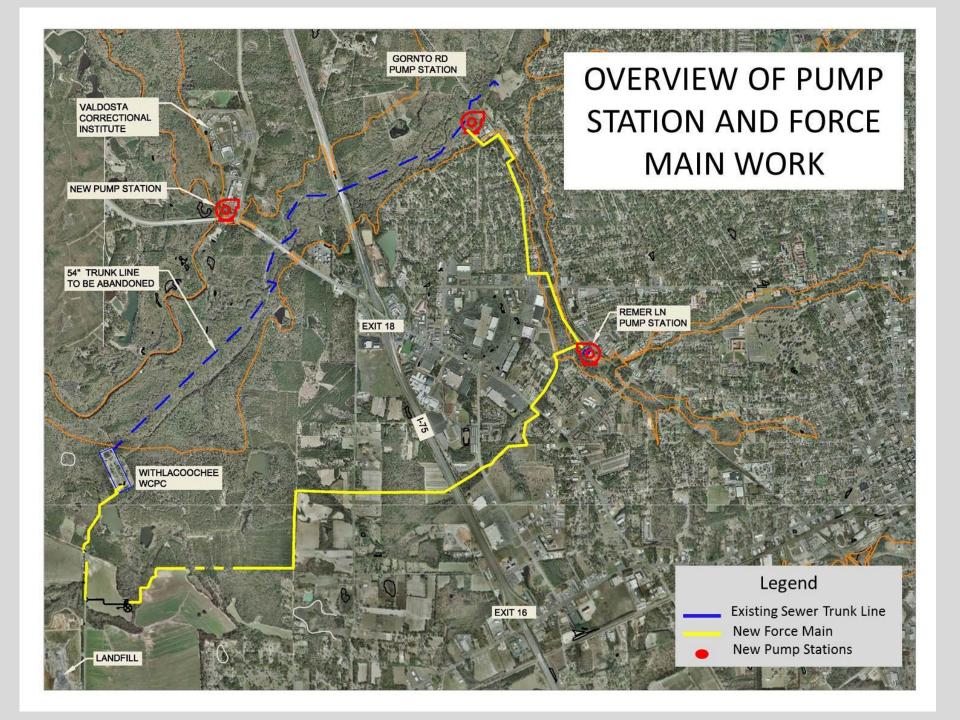
Total project cost is \$56+ million

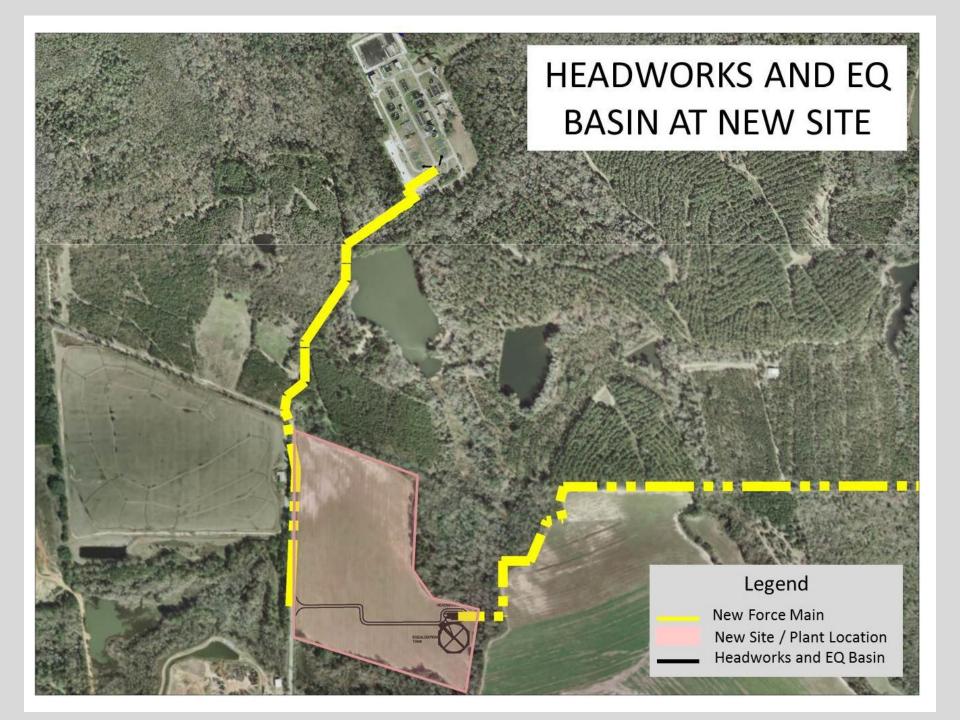
Force Main Project:

- Contract Awarded to Garney Construction on April 24, 2014
- 2 master pump stations
- 2 minor pump stations
- Over 6 miles of force main
- New headworks structure
- 6 million gallon per day (MGD) flow equalization (EQ) basin
- Project Cost: \$36.7 million Georgia Environmental Finance Authority (GEFA) Loan
- Completion date: July 2016 (Consent Order)
 - Contract has an 18 month timeframe Proposed completion date December 31, 2015

New Plant Project:

- Request for Proposals (RFP) closed on April 24, 2014
 - A selection committee has been formed and met on May 9th to review the proposals
- Relocation of the remainder of the old plant to the new site
- Project Cost: \$20+ million SPLOST VII
- Completion date: August 2017





Smoke Testing Sanitary Sewer System

- Hired Constantine Engineering
- Estimated \$700,000 to test 300 miles of sewer lines
- 4 year process
 - Year 1: 60 miles
 - Year 2: 60 miles
 - Year 3: 60 miles
 - Year 4: 120 miles
- Timeframe: January 2014 December 2018







Other Items

- \$2,250,000: Annual sewer manhole replacement / rehabilitation program
 - Minimum 30 manholes each year
 - · Approximately 90 replaced/rehabbed to date
 - Bids due for Phase 3 (35 manholes) on May 21, 2014
 - Estimated contract award is June 12, 2014
 - Estimated completion date is October 11, 2014
 - Complete by December 2018
- \$5,000,000: Pump station replacement / rehabilitation program
 - 8 lift stations replaced / rehabbed to date
 - Bids due for Phase 2 (4 lift stations) on May 23, 2014
 - Estimated contract award is June 12, 2014
 - Estimated completion date is April 18, 2015
 - Complete by December 2018
- \$250,000: Pump station emergency portable generators
 - Over 4 years (e.g. 1 per year for 4 years)
 - Complete by December 2018







Additional Information

\$2,500,000 in short term projects – Emergency Repairs Completed













Additional Information

- \$4 5 million each year on regular repairs, maintenance, etc. throughout the system
- Since 1992, the City has received \$179 million in SPLOST funds and utilized on capital improvement projects. During the same timeframe, the City has expended \$167 million for water/sewer projects from SPLOST proceeds, system revenues, bonds, and GEFA loans.
- SPLOST VII is expected to generate about \$150 million, of which Valdosta will receive \$80 million. Nearly 70 percent of the funding will be dedicated to wastewater projects, which is \$55.4 million.

To get accurate and current information on the sewer improvements and activities visit: www.valdostacity.com/utilities and go to "Valdosta Sanitary Sewer System Improvements"

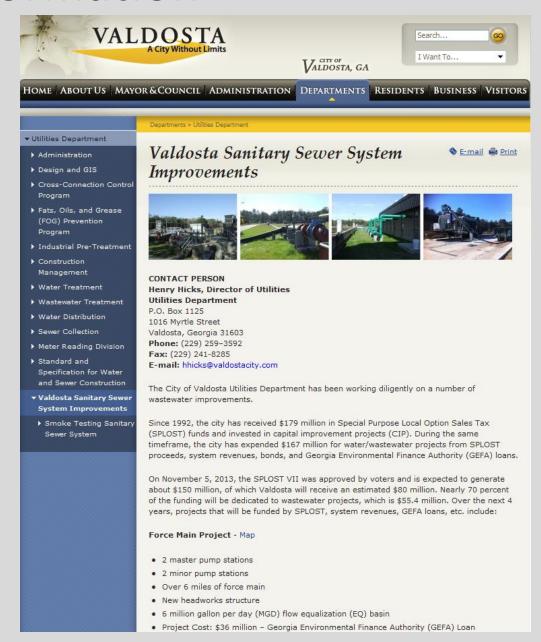
Also, sign up for City eNEWS:

- Press Releases
- City Council Meetings
- City Beat Newsletter

By doing this, it will help with confusion. Example:

Broken sewer line on Blanchard St

Media coverage stated the spill was at the Withlacoochee Plant and showed a picture of plant; however, it was not related to the plant and in a different watershed.



Name of City/County: VALDOSTA/LOWNDES	Spill Amount:
Date Spill Occurred: FEBRUARY 26, 2014	Date Spill Reported to EPD:
Spill Location:WITHLACOOCHEE WPCP	Date of Public Notice:
Name of Receiving Stream Affected : WITHLACOOCHEE	RIVER
Upstream Sampling Location:WITH. RIVER @ 133 WES	Written Report Submitted To EPD: (Y/N)

Downstream Sampling Location:WITH. RIVER @ 84 WEST Copy of PN Submitted to EPD: (Y/N)

		ABOVE			BELOW				
	DATE	DO	TEMP	рН	FCOLI	DO	TEMP	рН	FCOLI
DAY 1	2/27/2014	7.1	13.1 C	5.9	460	6.8	13.1 C	5.9	155
DAY 2	2/28/2014	7.0	13.4 C	5.7	160	7.3	13.2 C	5.8	220
DAY 3	3/1/2014	6.9	14.6 C	5.8	120	7.2	13.9 C	6.0	90
DAY 4	3/2/2014	6.7	13.4 C	5.7	80	7.4	13.8 C	5.9	50
DAY 5	3/3/2014	6.9	15.1 C	5.8	360	6.8	15.5 C	6.0	115
DAY 6	3/4/2014	5.3	13.1 C	5.7	90	5.6	13.6 C	5.9	30
DAY 7	3/5/2014	7.1	11.7 C	5.8	120	6.8	10.8 C	6.0	100
We	eek 1 Geom	etric Mea	an:		161				91
WEEK 2	3/12/2014	6.4	15.6 C	5.9	390	5.9	16.3 C	5.7	170
WEEK 3	3/19/2014	5.8	14.7 C	5.2	840	6.1	15.1 C	5.4	820
WEEK 4	3/26/2014	6.4	13.7 C	5.6	65	5.9	14.3 C	5.7	10
Month 1 Geometric Mean:(Use all 10 data points)				189				97	

Withlacoochee River Results

	Upstream of Pl	ant (Hwy 133)	Downstream of Plant - Hwy 84		
Date	Fecal Coliform*	E. coli**	Fecal Coliform	E. coli	
03/26/14	65 / 100 ml	55 / 100 ml	10 / 100 ml	30 / 100 ml	
03/30/14	180 / 100 ml	N/A	110 / 100 ml	N/A	
04/01/14	70 / 100 ml	30 / 100 ml	30 / 100 ml	50 / 100 ml	
04/02/14	70 / 100 ml	20 / 100 ml	40 / 100 ml	20 / 100 ml	
04/06/14	31 / 100 ml	N/A	100 / 100 ml	N/A	
04/08/14	10200 / 100 ml	N/A	6200 / 100 ml	N/A	
04/09/14	2820 / 100 ml	1270 / 100 ml	1310 / 100 ml	840 / 100 ml	
04/15/14	7400 / 100 ml	1720 / 100 ml	120 / 100 ml	40 / 100 ml	
04/19/14	1720 / 100 ml	N/A	430 / 100 ml	N/A	
04/24/14	710 / 100 ml	160 / 100 ml	80 / 100 ml	30 / 100 ml	
Geometric Mean	463.9 / 100 ml	150.3 / 100 ml	146 / 100 ml	55.81 / 100 ml	

^{*} EPD rule 391-3-6-.03 sets the fecal coliform standard between the months of November - April at 1,000 colony forming units per 100 milliliters of water (cfu/100ml). Between May – October the standard is 200 cfu/100 ml. These standards are not dependent upon a single test but are the geometric mean of at least four samples collected within two weeks and not less than 24 hrs apart.

^{**} E. coli samples are only taken as part of the watershed protection program.

Pollutant Facts

- Biggest contributor of fecal matter in streams, lakes, rivers and waterways:
 - Wildlife
 - Livestock operations
 - Domesticated animals
 - Septic Systems
 - Wastewater Treatment Plants
- In most cases of wastewater treatment plants, water quality is better downstream than above.
- Wastewater treatment plants are generally 4% of the mass loadings in waterways. The other 96% of pollutants are from non-point source pollution such:
 - Fertilizer, pesticides, herbicides and insecticides (Ag / residential land)
 - Oil, grease and other chemicals (Urban runoff)
 - Sediment (Constructions sites, crop/forest lands, streambanks)
 - Bacteria and nutrients (live stock, pet wastes, failing septic systems)

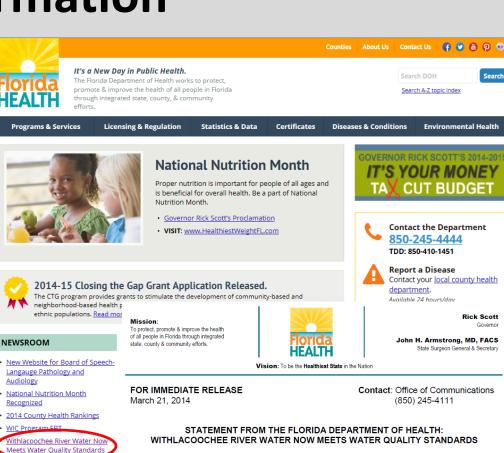
Board Launches New Website

Dangerous Black Henna Tattoos

In addition:

- Florida Department of Health issues / retracts advisories and can be found on their website under "Newsroom"
- Suwannee River Water Management District then adds them to their website under "Alerts" on the front page and emails those who have subscribed





Rick Scott

WITHLACOOCHEE RIVER WATER NOW MEETS WATER QUALITY STANDARDS

TALLAHASSEE - The Florida Department of Health today lifted its precautionary health advisory issued on March 19 for Madison and Hamilton counties after the City of Valdosta reported a reported a spill, made up of a combination of storm water and untreated sewage that overflowed into the One-Mile Branch, Two-Mile Branch, Sugar Creek and Cherry Creek which flow into the Withlacoochee River.

Recent river water samples taken by the Florida Department of Environmental Protection indicate the river water meets surface water quality standards for bacteria thus ensuring the public they may resume water-related activities.

Follow us on Twitter at @HealthyFla and on Facebook. For more information about the Florida Department of Health please visit www.floridahealth.gov.

DOH protects, promotes and improves the health of all people in Florida through integrated state, county and community efforts.

####

Regional Flooding

Georgia Silver Jackets Meeting April 2013

The Silver Jackets is an innovative program that provides an opportunity to bring together multiple state, federal, and sometimes tribal and local agencies to learn from one another and apply their knowledge to reduce risk.

ATTENDEES REPRESENTED

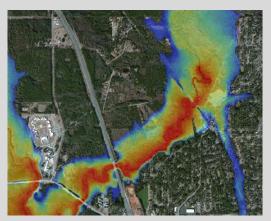
- City of Tifton
- City of Valdosta
- GEMA
- Georgia DNR
- Georgia EPD
- Lowndes County
- Office of Congressman Austin Scott
- Office of Congressman Jack Kingston

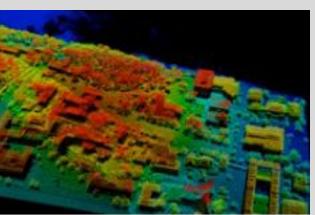
- Office of Congressman Sanford Bishop
- Office of Senator Johnny Isakson
- Office of Senator Saxby Chambliss
- Southern Georgia Regional Commission
- Suwannee Satilla Water Planning Council
- Tift County
- USACE (Jacksonville and Savannah offices)
- USGS

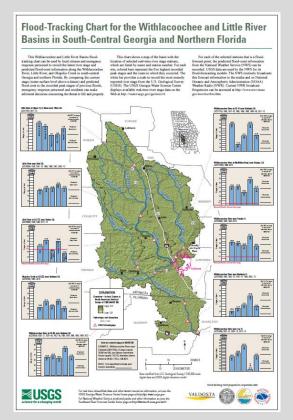
Regional Flooding

Additional Activities

- U.S. Geological Survey
 - Hosted a Regional Flood Preparedness Meeting June 2013
 - Developed a Flood Tracking Chart February 2014
- National Oceanic and Atmospheric Administration (NOAA)
 - Partner to acquire Light Detection and Ranging (LiDAR)
- Suwannee Satilla Regional Water Planning Council
 - Georgia's State Water Plan Suwannee Satilla's Water Development
 & Conservation Plan available at www.suwanneesatilla.org
- U.S. Army Corps of Engineers
 - Finalizing the Withlacoochee River and Sugar Creek Flood Analysis for the City of Valdosta
 - Flooding found to be a <u>regional issue</u> and seeking way to evaluate the entire Suwannee Basin







Any Questions

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