

On-Site Water Protection NC Coastal Plain Data

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On-Site Water Protection Branch

- Oversight sub-surface wastewater systems
- State's private drinking water wells program
- Develop, amend and implement regulations
- Provide statewide regulatory and consultative services to LHD, developers, designers, installers, operators, owners, and the public

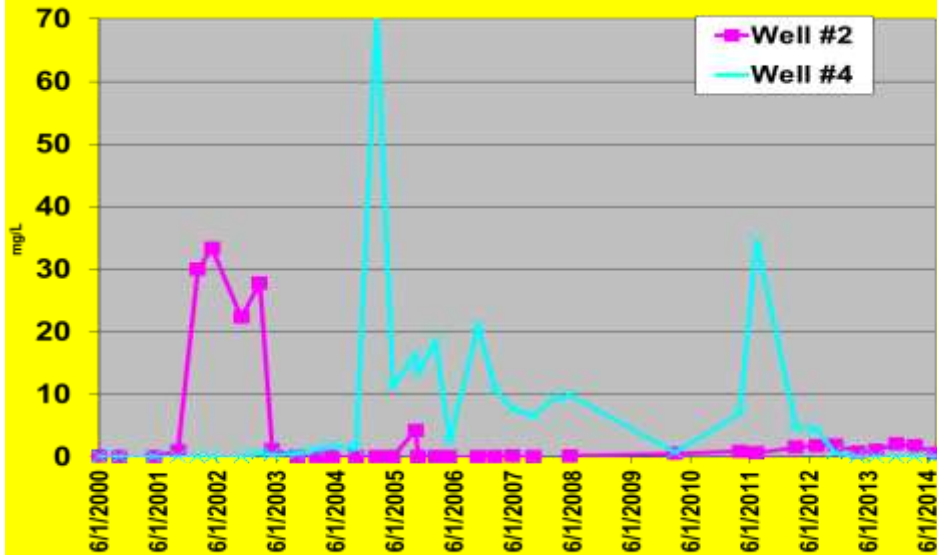
On-Site WW Systems: Data Sources

- County EH - Monthly activity reports
- Operator/LHD inspection/sampling reports:
 - Larger or IPWW systems
 - Residential/smaller systems with advanced pretreatment component
- OWPB reviewed systems database (mostly large/IPWW systems)
- Shellfish sanitation program
 - shoreline surveys for all active shellfish harvesting areas every 3-years

On-site WW Systems: Data Type

- Groundwater monitoring data (60 sites)
- Effluent quality data
- Operation Permits data
 - Numbers of New, Expansion and Repair Systems, by county/month/year
 - Types of Systems
 - By Management Class (Types I to VI)
 - By Drainfield and Pretreatment System Type
 - Details on Malfunctioning Systems Repaired
 - New: Details on “Type V” wells project status
- Private Well Program Activities/Sample Results

Croatan Schools, Well NO3-N



Water Sample MCL Excedences

Select Parameters	2007	2008	2009	2010	2011	2012	2013	2014
Arsenic	29	85	71	49	25	21	22	41
Cooper	5	2	5	4	3	2	1	4
Fecal Coliform	49	138	124	104	94	69	64	56
Iron	101	263	476	455	349	321	375	346
Lead	26	50	71	74	47	123	156	54
Magnesium	10	18	28	23	11	6	3	15
Manganese	60	145	292	350	238	210	150	229
Nitrates	16	20	28	4	16	7	8	17
Sodium	1	9	49	41	17	19	16	28
Zinc	3	32	23	43	14	30	18	33

NC Well Permitting and Inspection Program



15A NCAC 18A .3800 Sampling Rules



- All wells permitted after July 1, 2008 are sampled for: bacteria, pH, nitrate, nitrite, arsenic, barium, cadmium, chromium, copper, fluoride, lead, iron, magnesium, manganese, mercury, selenium, silver, sodium, and zinc
- Must be sampled within 30 days of Certificate of Completion and be taken from the tap at the well head
- Sampled by Env. Health Spec. or another approved party
- Samples sent to State Public Health Lab, or Certified Lab

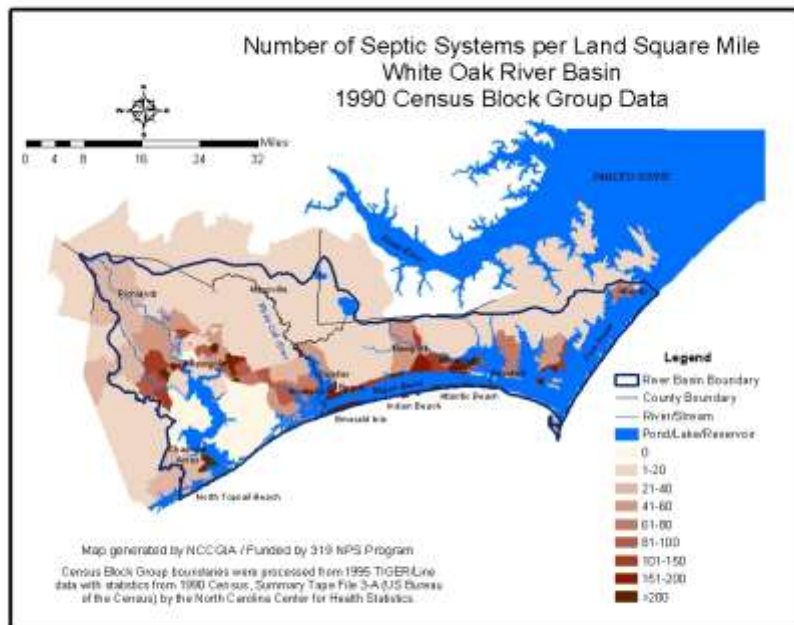
- Results of samples analyzed by the State Public Health lab can be found at:
- <http://slph.ncpublichealth.com/>
- Data is stored here, however there is little comparing and contrasting the water quality data across the state.
- Counties also store results, but again, very little is done to examine trends throughout the state.

Good News!

- There is funding to assist Occupational and Environmental Epidemiology Branch (OEEB) with establishing a data-sharing process with the State lab.
- This would make it easier to track waterborne contaminants in private wells and keep up with water quality trends.
- Eliminate the need for OEEB to request customized data files for tracking.

On-Site WW Systems: Data Gaps

- No record of
 - Total number of active systems in each county
 - Number of systems hooked onto sewer systems
 - Spatial location of all systems
- Lack of central data depository of effluent quality data
- Reports by ORCs and County LHD's not centrally available



Recommendations

- Method to track number and location of on-site systems on county and watershed basis.
- Central depository for effluent quality data from on-site systems.