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Environmental Update



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**COOPERATIVE
EXTENSION**
Helping People Put Knowledge to Work

Public Drinking Water Systems:

According to the latest EPA numbers, there are roughly 170,000 public water systems in the United States. Water systems are grouped according to the number of people on the system, the source of the water (surface or ground), and whether they are used year-round or intermittently.

EPA considers a water system to be a **public water system** if it "provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days per year". Yes, a daycare center on a well may actually be considered a public water supply, and be subject to all applicable regulations!

The EPA definitions for public water systems are:

Community Water System (CWS): a public water system that supplies water to the same population year-round.

Non-Transient Non-Community Water System (NTNCWS): a public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round (examples: schools, factories, office buildings, and daycare centers that have their own water supply).

Transient Non-Community Water System (TNCWS): a public water system that provides water in a place such as a gas station or campground where people do not remain for long periods of time.

System sizes and their water source:

Water systems are also classified by the number of people they serve:

Very Small systems: 25-500 people

Small systems: 501-3,300 people
Medium systems: 3,301-10,000 people
Large systems: 10,001-100,000 people
Very Large systems: 100,001+ people

The most recent survey of systems and populations served found that:

54,064 CWS served 264 million people
19,738 NTNCWS served 6.9 million people
93,210 TNCWS served 12.9 million people

Of the CWSs, 11,403 used surface water and served 178.1 million people (nearly 2/3 of the US population). The remaining 42,661 systems used groundwater. The vast majority of people served by NTNCWS and TNCWS utilized groundwater.

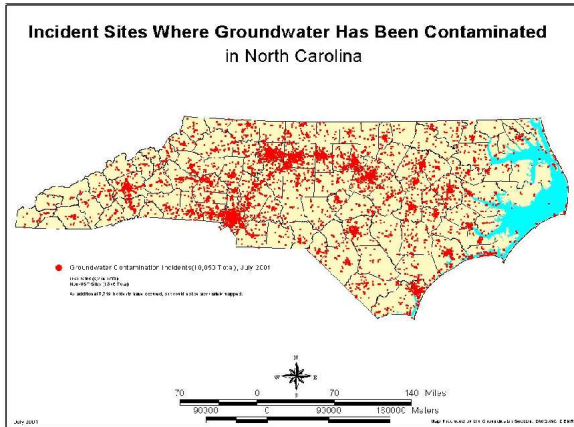
Only 15% of the CWSs are very large, large, or medium; however, they serve 90% of the population that gets its water from a CWS. Less than 1% of either NTNCWS or TNCWS are very large, large, or medium. What does all this mean? **There are a lot of small and very small systems!!**

How does North Carolina compare?

More than half of North Carolina's residents rely on groundwater for their drinking water supply: roughly 98% of all public water systems in North Carolina use groundwater, and virtually all private supplies use groundwater. This dependence on groundwater has prompted concern about the quality and quantity of those underground supplies. Rules have been established regarding its use, and the **NC Groundwater Protection Program** was developed.

It is a very difficult, lengthy, and expensive process to clean groundwater once it's been contaminated. According to the NCDENR Groundwater Section website, there are more than 14,000 documented incidences of groundwater

contamination in the state, many of which were caused by leaking underground storage tanks:



Source: NCDENR Groundwater Section

Groundwater isn't always groundwater!

Where groundwater intersects the surface, it becomes rivers, ponds, lakes, and swamps. Statewide, groundwater discharges to streams are responsible for roughly 60% of all streamflow. Overuse of an aquifer can, therefore, have an impact on local waterways and the aquatic populations they support. The following map shows the groundwater discharges:



Source: NCDENR Groundwater Section

Mosquitos!!

Mosquitos and West Nile Virus were quite prominent in the news last summer. It's not too early to think of ways you can reduce the number of those pesky insects this year. The following tips may help:

Do NOT use a "bug zapper"! It has been documented that these kill many more beneficial insects than they actually kill mosquitos.

Give a mosquito predator a home: put up bird and bat houses!

Remove potential mosquito breeding areas: old tires, buckets, and other containers that can hold small amounts of water for several days after a rain event. Birdbaths, dog waterbowls, and play pools should also have their water changed frequently enough that mosquito larvae cannot develop.

One common misconception is that ALL water will result in more mosquitos. Untrue! If the water is there long enough to develop populations of mosquito predators (frogs, dragonflies, etc.), they will help keep the mosquito population in check. Need proof? The 8-acre constructed wetland project for animal waste treatment in Onslow County did not have ANY mosquitos last summer. There were, however, numerous green, brown, and blue dragonflies. There were also birds and bats.

Sincerely,

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