

NC Division of PH Activities During NC Drought 2007-8

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- October 2007
- Activated as the Health and Medical Task Force of the Drought Management Advisory Council
- Convened through a series of conference calls
 - All 85 LHD's
 - HD's, PC's and many times EH people
 - Additional DHHS and DPH agencies

Tasks Assigned

- contact and coordinate with government and private agencies concerning drought related health issues
- investigate and evaluate environmental health aspects of the drought (to DENR)
- investigate and evaluate epi ramifications of the drought
- examine the affects of water shortage on foods and drugs (to NC DA&CS and DENR)
- evaluate drought related veterinary health problems, particularly those associated with meat and poultry that will affect human consumption (to NC DA&CS)
- evaluate and report drought effects on home health services, group care, detention centers and medial centers evaluate and
- report on the effects of the drought on susceptible population
- determine the requirements for mental health services for drought related difficulties
- assess the effects of water restrictions on community health

- Water use
 - Private Wells
 - Restaurants
 - Quantity
 - Quality
- Unusual in that this was surface level drought

Vulnerable Populations

Susceptible populations include the following:

Elderly

Pregnant and nursing women

Infants

Immune suppressed (e.g., chemotherapy and AIDS patients)

Dialysis patients

Persons with pre-existing health conditions, such as hypertension and diabetes,

Quantity

- Supplement hygiene practices if water is limited with the use of hand sanitizers, especially in light of the upcoming flu and cold season.
- Use single service pieces in homes and restaurants.
- Consume an adequate daily amount of drinking water.(8-10 8 ounce glasses/day)
- Health Care Organizations were alerted and advised to review water usage plans
- 2 emergency responses related to this
 - Dry well in a family with an infant
 - WIC
 - Elderly community
 - MOW

Quality

- Limiting recreational use of reservoirs to avoid contamination with chemicals and waste.
- Limit depositing bio-solids near reservoirs during the drought.

Contaminant	Susceptible Population
Aluminum	Dialysis patients
Disinfection Byproducts (DBPs)	Elderly men, pregnant women
Fluoride	Infants
Lead	Fetus, children
Microbes	Elderly, children, immune suppressed
Nitrate	Pregnant women, infants
Pesticides	Pregnant women, children
Sulfate	Infants
Sodium	Persons with hypertension

Development of Maximum Emergency Levels

- The MELs should only be used in emergency situations for one year or less.
- The MELs are the recommended maximum health-based water levels for drinking, cooking, showering, bathing, and washing clothes.
- higher intake of water per body weight for children (approximately five times higher) so the MELs can be safely used for children.
- Same safety factors as used in the development of the chronic oral reference dose (used to calculate the NCPHGs) to account for increased sensitivity among individuals so the MELs could be safely used for children and the elderly which are sensitive populations.

North Carolina Public Health Goals (NCPHGs) or health-based drinking water levels for chronic exposure

Dialysis pts

- Worked with GA PH, Southeastern Kidney Council (ESRD Network 6) to develop safe guideline
 - 2 liters per day (14 per week) compared to 350-500 liters per week
 - Inadequate barriers to contaminants
 - Can't excrete contaminants
- Contaminants most toxic to dialysis pts are those we add for PH reasons: aluminum, chloramines, fluoride
- Education and monitoring

Speed Bumps

- If the Public Drinking Water Providers declare a “Boil Water Advisory”, all tap water used for consumption should be boiled according to their specification.
 - Boil orders may increase toxicity if chemical contamination has occurred
- Use “brown water” on gardens
 - Limit use of “brown water” on consumable plants.
- Diversion of water to “critical infrastructure”