# *2010 Annual Drinking Water Quality Report*
# *Town of Burnsville*
**PWS ID# 01-00-010**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about from where your water comes, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information, because informed customers are our best allies. **If you have any questions about this report or concerning your water, please contact Anthony Hensley at 828-682-2420 . We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. Our board meetings are held on the first Thursday of each month at 6:00 PM. in the Town Hall.**

## What EPA Wants You to Know

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

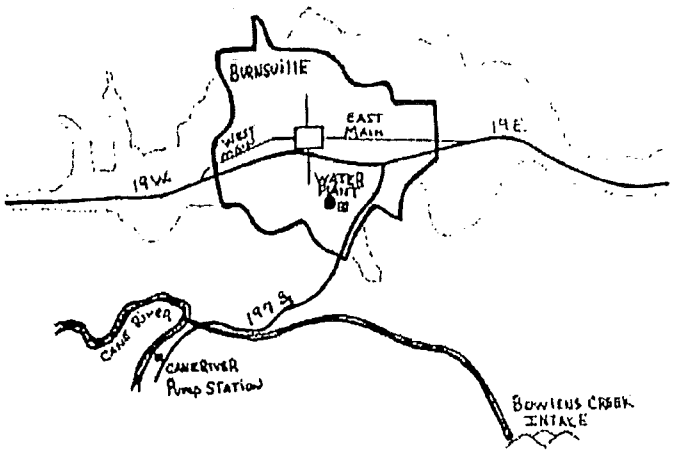
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [Name of Utility] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

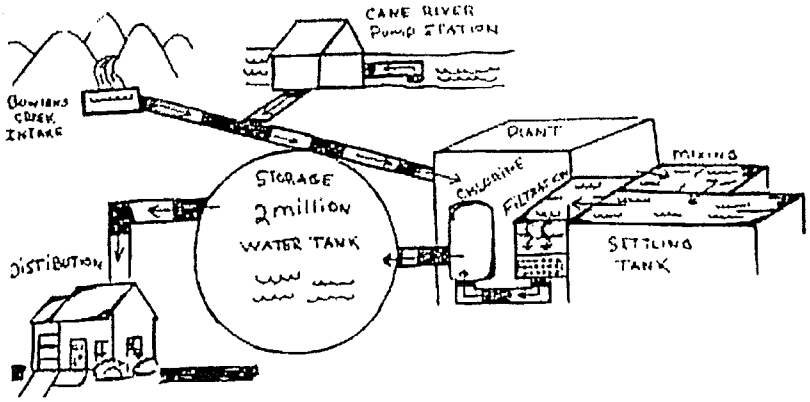
In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

**When You Turn on Your Tap, Consider the Source**

The water that is used by this system is Surface Water. Our water source is drawn from, Cane River and Bolens Creek.




Raw water from Cane River and Bolens Creek and is treated at the Town of Burnsville Water Plant. The treatment process has four main steps: coagulation, sedimentation, filtration, and disinfection. First, chemicals are mixed into the water which form a solid material around small particles in the raw water, causing them to clump together. The particles are allowed to settle to the bottom of large settling tanks and then removed. The water flows through filters of carbon and sand to remove any remaining particles. Finally chlorine is added to disinfect and to ensure that the water is safe to drink when it reaches the customers.



## Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for Town pf Burnsville was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

| Source Name | Susceptibility Rating | SWAP Report Date |
|---|---|---|
| Cane River | Moderate | March 2007 |
| Bolens Creek | Moderate | March 2007 |

The complete SWAP Assessment report for Town of Burnsville may be viewed on the Web at: http://swap.deh.enr.state.nc.us/swap/. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncmail.net. Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-715-2633.

It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the systems' potential to become contaminated by PCS's in the assessment area.

# NOTICE TO THE PUBLIC

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### Town of Burnsville Has Not Met Monitoring Requirements

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period(s) specified in the table below, we ['did not monitor or test' or 'did not complete all monitoring or testing'] for the contaminants group(s) listed and therefore cannot be sure of the quality of our drinking water during that time.*

| CONTAMINANT GROUP** | COMPLIANCE PERIOD BEGIN DATE | SAMPLING FREQUENCY | WHEN SAMPLES WERE OR WILL BE TAKEN (Water System to Complete) |
|---|---|---|---|
| INORGANIC COMPOUNDS | JANUARY 1, 2010 | 1 SAMPLE ANNUAL | 03-16-2011 |
| NITRATE | JANUARY 1, 2010 | 1 SAMPLE ANNUAL | 03-23-2011 |

** See back of this notice for the complete list of individual contaminants for each contaminant group

What should I do? There is nothing you need to do at this time.

What happened? What is being done? When will the problem be corrected?

Samples were not taken in 2010. The correct samples have been taken in March of 2011.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

For more information, please contact:

| | | |
|---|---|---|
| Anthony Hensley | Town of Burnsville | System Address 2 Town Square |
| 828-682-2420 | System PWSID # 01-00-010 | System Address Burnsville NC 28714 |

Violation Awareness Date: APRIL 7 2011 INORGANIC COMPOUNDS
MAY 4 2011 NITRATE

Date Notice Distributed: June 27 2011

Method of Distribution: CCR

### *Public Notification Certification:*

*The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.*

Owner/Operator: Anthony T Hensley (Signature) Anthony Hensley (Print Name) 06-17-2011 (Date)

## Contaminant Group List

**(BA) Total Coliform Bacteria** includes Fecal/*E.coli* bacteria. Testing for Fecal/*E.coli* bacteria is required if repeat samples confirm presence of total coliform.

**(AS) Asbestos** - includes testing for Chrysotile, Amphibole and Total Asbestos.

**(TTHM) - Total Trihalomethanes** - include Chloroform, Bromoform, Bromodichloromethane, and Chlorodibromomethane.

**(TOC) - Total Organic Carbon** - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.

**(HAA5)- Haloacetic Acids** - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.

**(BB) Bromate/Bromide** – includes testing for Bromate and/or Bromide.

**(CD) Chlorine Dioxide/Chlorite** – includes testing for Chlorine Dioxide and/or Chlorite.

**(IC) Inorganic chemicals** - includes Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.

**(LC) Lead and copper** are tested by collecting one sample and testing that sample for both lead and copper.

**(NT) Nitrate/ (NI) Nitrite** – includes testing for nitrate and/or nitrite.

**(RA) Radionuclides** - includes Gross Alpha, Radon, Uranium, Combined Radium, Radium 226, Radium 228, Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.

**(SOC) – Synthetic Organic Chemicals/Pesticides** - SOC's are commonly used in industrial and manufacturing processes. SOC's include 2,4-D, 2,4,5-TP (Silvex), 3-Hydroxycarbofuran, Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Atrazine, Benzo(a)pyrene, Butachlor, Carbaryl, Carbofuran, Chlordane, Dalapon, Dieldrin, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dicamba, Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methomyl, Metolachlor, Methoxychlor, Metribuzin, Oxamyl(vydate), PCBs, Propachlor, Pentachlorophenol, Picloram, Simazine, Toxaphene.

**(VOC) - Volatile Organic Chemicals**, - VOCs are commonly used in industrial and manufacturing processes. VOCs include p-Isopropyltoluene, Chloromethane, Dichlorodifluoromethane, Bromomethane, Chloroethane, Fluorotrichloromethane, Hexachlorobutadiene, Naphthalene, 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Dibromomethane, 1,1-Dichloropropene, 1,3-Dichloropropane, 1,3-Dichloropropene, 1,2,3-Trichloropropane, 2,2-Dichloropropane, 1,2,4-Trimethylbenzene, 1,2,3-Trichlorobenzene, n-Butylbenzene, 1,3,5-Trimethylbenzene, Tert-Butylbenzene, Sec-Butylbenzene, Bromochloromethane, Chloroform, Bromoform, Bromodichloromethane, Chlorodibromomethane, Xylenes (Total), Dichloromethane, o-Chlorotoluene, p-Chlorotoluene, m-Dichlorobenzene, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, 1,1-Dichloroethane, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, 1,1,1,2-Tetrachloroethane, Tetrachloroethylene, 1, 1,2,2-Tetrachloroethane, Chlorobenzene, Benzene, Toluene, Ethylbenzene, Bromobenzene, Isopropylbenzene, Styrene, and n-Propylbenzene.

# NOTICE TO THE PUBLIC

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### TOWN OF BURNSVILLE Did Not Meet Reporting Requirements

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period(s) specified in the table below, we ['did not monitor or test' or 'did not complete all monitoring or testing'] for the contaminants group(s) listed and therefore cannot be sure of the quality of our drinking water during that time.*

| CONTAMINANT GROUP** | ENTRY POINT/ LOCATION CODE | COMPLIANCE PERIOD BEGIN DATE | SAMPLING FREQUENCY | WHEN REPORTS WERE OR WILL BE COMPLETED (Water System to Complete) |
|---|---|---|---|---|
| PUBLIC EDUCATION | N/A | 12/2009 | N/A | 04/28/2010 |
| OPTIMAL CORROSION CONTROL STUDY | N/A | 3/2010 | N/A | 04/28/2010 |
| | | | | |
| | | | | |
| | | | | |

(LC) Lead and copper are tested by collecting one sample and testing that sample for both lead and copper

What should I do? There is nothing you need to do at this time.

What happened? What is being done? When will the problem be corrected?

We were late submitting the reports above to the State. Both violations have been resolved.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

For more information, please contact:

| | | |
|---|---|---|
| Anthony Hensley | Town of Burnsville | System Address 2 Town Square |
| 828-682-2420 | System PWSID # 01-00-010 | System Address Burnsville NC 28714 |

Violation Awareness Date: 04/14/2009

Date Notice Distributed: 02-20-2011

Method of Distribution: Mail to Customers

### *Public Notification Certification:*

*The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.*

Owner/Operator: Anthony T. Hensley (Signature) Anthony Hensley (Print Name) 06-17-2011 (Date)

## Contaminant Group List

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**(AS) Asbestos** - includes testing for Chrysotile, Amphibole and Total Asbestos.

**(TOC) - Total Organic Carbon** - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.
**(BB) Bromate/Bromide** – includes testing for Bromate and/or Bromide.
**(CD) Chlorine Dioxide/Chlorite** – includes testing for Chlorine Dioxide and/or Chlorite.
**(IC) Inorganic chemicals** - includes Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.

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**(SOC) – Synthetic Organic Chemicals/Pesticides** - SOC's are commonly used in industrial and manufacturing processes. SOC's include 2,4-D, 2,4,5-TP (Silvex), 3-Hydroxycarbofuran, Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Atrazine, Benzo(a)pyrene, Butachlor, Carbaryl, Carbofuran, Chlordane, Dalapon, Dieldrin, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dicamba, Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methomyl, Metolachlor, Methoxychlor, Metribuzin, Oxamyl(vydate), PCBs, Propachlor, Pentachlorophenol, Picloram, Simazine, Toxaphene.
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## Water Quality Data Table of Detected Contaminants

The Town of Burnsville routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2010.** The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Important Drinking Water Definitions:

*Not-Applicable (N/A)* – Information not applicable/not required for that particular water system or for that particular rule.

*Non-Detects (ND)* - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

*Parts per million (ppm) or Milligrams per liter (mg/L)* - One part per million corresponds to one minute in two years or a single penny in $10,000.

*Parts per billion (ppb) or Micrograms per liter (ug/L)* - One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

*Parts per trillion (ppt) or Nanograms per liter (nanograms/L)* - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

*Parts per quadrillion (ppq) or Picograms per liter (picograms/L)* - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

*Picocuries per liter (pCi/L)* - Picocuries per liter is a measure of the radioactivity in water.

*Million Fibers per Liter (MFL)* - Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

*Nephelometric Turbidity Unit (NTU)* - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

*Action Level (AL)* - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*Maximum Residual Disinfection Level Goal (MRDLG)* – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

*Maximum Residual Disinfection Level (MRDL)* – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

*Maximum Contaminant Level (MCL)* - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

*Maximum Contaminant Level Goal (MCLG)* - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Extra Note: MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

**Microbiological Contaminants**

| Contaminant (units) | MCL Violation Y/N | Your Water | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|
| Total Coliform Bacteria (presence or absence) | N | 0 | 0 | one positive monthly sample | Naturally present in the environment |
| Fecal Coliform or E. coli (presence or absence) | N | 0 | 0 | 0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive) | Human and animal fecal waste |

**Turbidity* - Systems with population ≥10,000**

| Contaminant (units) | MCL Violation Y/N | Your Water | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|
| Turbidity (NTU) | N | .32 | N/A | TT = 1 NTU | Soil runoff |
| | | 99% | | TT = percentage of samples ≤ 0.3 NTU | |

* Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

*While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.*

**Nitrate/Nitrite Contaminants**

| Contaminant (units) | MCL Violation Y/N | Your Water | Range Low | Range High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Nitrite (as Nitrogen) (ppm) 5-24-1993 | N | <.01 | N/A | | 1 | 1 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |

## Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low | Range High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| 2,4-D (ppb) | 04-15-09 | N | ND | ND | | 70 | 70 | Runoff from herbicide used on row crops |
| 2,4,5-TP (Silvex) (ppb) | 04-15-09 | N | ND | ND | | 50 | 50 | Residue of banned herbicide |
| Alachlor (ppb) | 04-15-09 | N | ND | ND | | 0 | 2 | Runoff from herbicide used on row crops |
| Atrazine (ppb) | 04-15-09 | N | ND | ND | | 3 | 3 | Runoff from herbicide used on row crops |
| Benzo(a)pyrene (PAH) (ppt) | 04-15-09 | N | ND | ND | | 0 | 200 | Leaching from linings of water storage tanks and distribution lines |
| Carbofuran (ppb) | 04-15-09 | N | ND | ND | | 40 | 40 | Leaching of soil fumigant used on rice and alfalfa |
| Chlordane (ppb) | 04-15-09 | N | ND | ND | | 0 | 2 | Residue of banned termiticide |
| Dalapon (ppb) | 04-15-09 | N | ND | ND | | 200 | 200 | Runoff from herbicide used on rights of way |
| Di(2-ethylhexyl) adipate (ppb) | 04-15-09 | N | ND | ND | | 400 | 400 | Discharge from chemical factories |
| Di(2-ethylhexyl) phthalate (ppb) | 04-15-09 | N | ND | ND | | 0 | 6 | Discharge from rubber and chemical factories |
| DBCP [Dibromochloropropane] (ppt) | 04-15-09 | N | ND | ND | | 0 | 200 | Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards |
| Dinoseb (ppb) | 04-15-09 | N | ND | ND | | 7 | 7 | Runoff from herbicide used on soybeans and vegetables |
| Endrin (ppb) | 04-15-09 | N | ND | ND | | 2 | 2 | Residue of banned insecticide |
| EDB [Ethylene dibromide] (ppt) | 04-15-09 | N | ND | ND | | 0 | 50 | Discharge from petroleum refineries |
| Heptachlor (ppt) | 04-15-09 | N | ND | ND | | 0 | 400 | Residue of banned pesticide |
| Heptachlor epoxide (ppt) | 04-15-09 | N | ND | ND | | 0 | 200 | Breakdown of heptachlor |
| Hexachlorobenzene (ppb) | 04-15-09 | N | ND | ND | | 0 | 1 | Discharge from metal refineries and agricultural chemical factories |
| Hexachlorocyclo-pentadiene (ppb) | 04-15-09 | N | ND | ND | | 50 | 50 | Discharge from chemical factories |
| Lindane (ppt) | 04-15-09 | N | ND | ND | | 200 | 200 | Runoff/leaching from insecticide used on cattle, lumber, gardens |
| Methoxychlor (ppb) | 04-15-09 | N | ND | ND | | 40 | 40 | Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock |
| Oxamyl [Vydate] (ppb) | 04-15-09 | N | ND | ND | | 200 | 200 | Runoff/leaching from insecticide used on apples, potatoes and tomatoes |
| PCBs [Polychlorinated biphenyls] (ppt) | 04-15-09 | N | ND | ND | | 0 | 500 | Runoff from landfills; discharge of waste chemicals |
| Pentachlorophenol (ppb) | 04-15-09 | N | ND | ND | | 0 | 1 | Discharge from wood preserving factories |
| Picloram (ppb) | 04-15-09 | N | ND | ND | | 500 | 500 | Herbicide runoff |
| Simazine (ppb) | 04-15-09 | N | ND | ND | | 4 | 4 | Herbicide runoff |
| Toxaphene (ppb) | 04-15-09 | N | ND | ND | | 0 | 3 | Runoff/leaching from insecticide used on cotton and cattle |

## Volatile Organic Chemical (VOC) Contaminants

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low | Range High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| Benzene (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from factories; leaching from gas storage tanks and landfills |
| Carbon tetrachloride (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from chemical plants and other industrial activities |
| Chlorobenzene (ppb) | 06-23-10 | N | N/D | N/D | | 100 | 100 | Discharge from chemical and agricultural chemical factories |
| o-Dichlorobenzene (ppb) | 06-23-10 | N | N/D | N/D | | 600 | 600 | Discharge from industrial chemical factories |
| p-Dichlorobenzene (ppb) | 06-23-10 | N | N/D | N/D | | 75 | 75 | Discharge from industrial chemical factories |
| 1,2 – Dichloroethane (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from industrial chemical factories |
| 1,1 – Dichloroethylene (ppb) | 06-23-10 | N | N/D | N/D | | 7 | 7 | Discharge from industrial chemical factories |
| cis-1,2-Dichloroethylene (ppb) | 06-23-10 | N | N/D | N/D | | 70 | 70 | Discharge from industrial chemical factories |
| trans-1,2-Dichloroethylene (ppb) | 06-23-10 | N | N/D | N/D | | 100 | 100 | Discharge from industrial chemical factories |
| Dichloromethane (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from pharmaceutical and chemical factories |
| 1,2-Dichloropropane (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from industrial chemical factories |
| Ethylbenzene (ppb) | 06-23-10 | N | N/D | N/D | | 700 | 700 | Discharge from petroleum refineries |
| Styrene (ppb) | 06-23-10 | N | N/D | N/D | | 100 | 100 | Discharge from rubber and plastic factories; leaching from landfills |
| Tetrachloroethylene (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from factories and dry cleaners |
| 1,2,4 –Trichlorobenzene (ppb) | 06-23-10 | N | N/D | N/D | | 70 | 70 | Discharge from textile-finishing factories |
| 1,1,1 – Trichloroethane (ppb) | 06-23-10 | N | N/D | N/D | | 200 | 200 | Discharge from metal degreasing sites and other factories |
| 1,1,2 –Trichloroethane (ppb) | 06-23-10 | N | N/D | N/D | | 3 | 5 | Discharge from industrial chemical factories |
| Trichloroethylene (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 5 | Discharge from metal degreasing sites and other factories |
| Toluene (ppm) | 06-23-10 | N | N/D | N/D | | 1 | 1 | Discharge from petroleum factories |
| Vinyl Chloride (ppb) | 06-23-10 | N | N/D | N/D | | 0 | 2 | Leaching from PVC piping; discharge from plastics factories |
| Xylenes (Total) (ppm) | 06-23-10 | N | N/D | N/D | | 10 | 10 | Discharge from petroleum factories; discharge from chemical factories |

## Asbestos Contaminant

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low | Range High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| Total Asbestos (MFL) | 12-18-03 | N | ND | ND | | 7 | 7 | Decay of asbestos cement water mains; erosion of natural deposits |

## Lead and Copper Contaminants

| Contaminant (units) | Sample Date | Your Water | # of sites found above the AL | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| Copper (ppm) ($90^{th}$ percentile) | June 2010 | <0.050 | 2 | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (ppb) ($90^{th}$ percentile) | June 2010 | 16 | 5 | 0 | AL=15 | Corrosion of household plumbing systems, erosion of natural deposits |
| Copper (ppm) (90th percentile) | December 2010 | <0.050 | 0 | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (ppb) (90th percentile) | December 2010 | <3 | 3 | 0 | AL=15 | Corrosion of household plumbing systems, erosion of natural deposits |

## Radioactive Contaminants

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| Alpha emitters (pCi/L) | 12-13-05 | N | ND | 0 | 15 | Erosion of natural deposits |
| Beta/photon emitters (pCi/L) | 12-12-05 | N | ND | 0 | 50 * | Decay of natural and man-made deposits |
| Combined radium (pCi/L) | N/A | N/A | N/A | 0 | 5 | Erosion of natural deposits |
| Uranium (pCi/L) | N/A | N/A | N/A | 0 | 20.1 | Erosion of natural deposits |

* Note: The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

| **Alternative Compliance Criteria (ACC)** | | | **Alt. 2** | | **Treated Water TOC < 2.0 mg/L** | | |
|---|---|---|---|---|---|---|---|
| Contaminant (units) | TT Violation Y/N | Your Water (RAA Removal Ratio) | Range Monthly Removal Ratio Low - High | MCLG | MCL | Likely Source of Contamination | Compliance Method (Step 1 or ACC#__) |
| Total Organic Carbon (removal ratio) (TOC)-TREATED | N | 100% | 100% | N/A | TT | Naturally present in the environment | ACC 2 |

## Disinfectants and Disinfection Byproducts Contaminants

| Contaminant (units) | MCL/MRDL Violation Y/N | Your Water (AVG) | Range Low High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| TTHM (ppb) [Total Trihalomethanes] | N | 0.045857 | 0.021 0.09 | N/A | 80 | By-product of drinking water chlorination |
| HAA5 (ppb) [Total Haloacetic Acids] | N | 0.036286 | 0.006 0.058 | N/A | 60 | By-product of drinking water disinfection |

*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.*

A FACT SHEET FOR

# Best Management Practices for Fats, Oils, and Grease


*Residual fats, oils, and grease (FOG) are by-products that food service establishments must constantly manage. Typically, FOG enter a facility's plumbing system from ware washing, floor cleaning, and equipment sanitation. Sanitary sewer systems are neither designed nor equipped to handle the FOG that accumulates on the interior of the municipal sewer collection system pipes. Over 30% of North Carolina's 1999 sanitary sewer overflows were the result of pipe blockages from FOG accumulation from residential, institutional and commercial sources. The best way to manage FOG is to keep the material out of the plumbing systems. The following are suggestions for proper FOG management.*

## Dry Clean-Up

Practice dry cleanup. Remove food waste with "dry" methods such as scraping, wiping, or sweeping before using "wet" methods that use water. Wet methods typically wash the water and waste materials into the drains where it eventually collects on the interior walls of the drainage pipes. Do not pour grease, fats or oils from cooking down the drain and do not use the sinks to dispose of food scraps. Likewise it is important to educate kitchen staff not to remove drain screens as this may allow paper or plastic cups, straws, and other utensils to enter the plumbing system during clean up. The success of dry clean up is dependent upon the behavior of the employee and availability of the tools for removal of food waste before washing. To practice dry clean up:

- Use rubber scrapers to remove fats, oils and grease from cookware, utensils, chafing dishes, and serving ware.
- Use food grade paper to soak up oil and grease under fryer baskets.
- Use paper towels to wipe down work areas. Cloth towels will accumulate grease that will eventually end up in your drains from towel washing/rinsing.

## Spill Prevention

Preventing spills reduces the amounts of waste on food preparation and serving areas that will require clean up. A dry workplace is safer for employees in avoiding slip, trips, and falls. For spill prevention:

- Empty containers before they are full to avoid spills.
- Use a cover to transport interceptor contents to rendering barrel.
- Provide employees with the proper tools (ladles, ample containers, etc.) to transport materials without spilling.

## Maintenance

Maintenance is key to avoiding FOG blockages. For whatever method or technology is used to collect, filter and store FOG, ensure that equipment is regularly maintained. All staff should be aware of and trained to perform correct cleaning procedures, particularly for under-sink interceptors that are prone to break down due to improper maintenance. A daily and weekly maintenance schedule is highly recommended.

- Contract with a management company to professionally clean large hood filters. Small hoods can be hand-cleaned with spray detergents and wiped down with cloths for cleaning. Hood filters can be effectively cleaned by routinely spraying with hot water with little or no detergents over the mop sink that should be connected to a grease trap. After hot water rinse (separately trapped), filter panels can go into the dishwasher. For hoods to operate properly in the removal of grease-laden vapors, the ventilation system will also need to be balanced with sufficient make-up air.

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NORTH CAROLINA PRETREATMENT CONSORTIUM

- Skim/filter fryer grease daily and change oil when necessary. Use a test kit provided by your grocery distributor rather than simply a "guess" to determine when to change oil. This extends the life of both the fryer and the oil. Build-up of carbon deposits on the bottom of the fryer act as an insulator that forces the fryer to heat longer, thus causing the oil to break down sooner.
- Collect fryer oil in an oil rendering tank for disposal or transport it to a bulk oil rendering tank instead of discharging it into a grease interceptor or waste drain.
- Cleaning intervals depend upon the type of food establishment involved. Some facilities require monthly or once every two months cleaning. Establishments that operate a large number of fryers or handle a large amount of fried foods such as chicken, along with ethnic food establishments may need at least monthly cleanings. Full-cleaning of grease traps (removing all liquids and solids and scraping the walls) is a worthwhile investment. Remember, sugars, starches and other organics accumulate from the bottom up. If sediment is allowed to accumulate in the trap, it will need to be pumped more frequently.
- Develop a rotation system if multiple fryers are in use. Designate a single fryer for products that are particularly high in deposits, and change that one more often.

## Oil & Grease Collection/Recycling & Food Donations

FOG are commodities that if handled properly can be treated as a valuable resource.

- Begin thinking of oil and grease as a valuable commodity. Some rendering companies will offer services free-of-charge and others will give a rebate on the materials collected. Note that these companies must be properly permitted by the Division of Waste Management, Solid Waste Section at 919.733.0692, in order to remove FOG from a facility. A list of grease collectors can be found in the *Directory of Markets for Recyclable Materials* at www.p2pays.org/DMRM or by calling DPPEA at 1.800.763.0136.
- Use 25-gallon rendering barrels with covers for onsite collection of oil and grease other than from fryers. Educate kitchen staff on the importance of keeping outside barrels covered at all times. During storms, uncovered or partially covered barrels allow storm water to enter the barrel resulting in oil running onto the ground and possibly into storm drains, and can "contaminate" an otherwise useful by-product.
- Use a 3-compartment sink for ware washing. Begin with a hot pre-wash, then a scouring sink with detergent, then a rinse sink.
- Make sure all drain screens are installed.
- Prior to washing and rinsing use a hot water ONLY (no detergent) prerinse that is separately trapped to remove non-emulsified oils and greases from ware washing. Wash and rinse steps should also be trapped.
- Empty grill top scrap baskets or scrap boxes and hoods into the rendering barrel.
- Easy does it! Instruct staff to be conservative about their use of fats, oils and grease in food preparation and serving.
- Ensure that edible food is not flushed down your drains. Edible food waste may be donated to a local food bank. Inedible food waste can be collected by a local garbage feeder who will use food discards for feeding livestock. Food donation is a win-win situation. It helps restaurants reduce disposal costs and it puts the food in the hands of those who can use it. Check the *Directory of Markets for Recyclable Materials* for a list of food waste collectors.

## Grease Traps

- For grease traps to be effective, the units must be properly sized, constructed, and installed in a location to provide an adequate retention time for settling and accumulation of the FOG. If the units are too close to the FOG discharge and do not have enough volume to allow amassing of the FOG, the emulsified oils will pass through the unit without being captured. For information on properly locating, constructing, and sizing grease traps, contact your local county and city representatives and examine EPA guidance documents.
- Ensure all grease-bearing drains discharge to the grease trap. These include mop sinks, woks, wash sinks, prep sinks, utility sinks, pulpers, dishwashers, prerinse sinks, can washes, and floor drains in food preparation areas such as those near a fryer or tilt/steam kettle. No toilet wastes should be plumbed to the grease trap.
- If these suggested best management practices do not adequately reduce FOG levels, the operator may consider installing a second grease trap with flow-through venting. This system should help reduce grease effluent substantially.

## Consumer Tip

Buyer beware! When choosing a method of managing your oil and grease, ensure that it does what the vendor says it will do. Some technologies or "miracle cures" don't eliminate the problem but result in grease accumulations further down the sewer line. "Out of sight" is not "out of mind." Check the vendor's references.

The **Grease Goblin** is the mascot for DPPEA's Oil and Grease Management Program. He serves as a reminder to keep grease out of sinks and drains before it becomes a nuisance.

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# There are three basic ways to conserve water:

## 1) Economize 2) Repair Leaks 3) Install Water Saving Devices

## 1) Economize the following areas of your home:

Bathroom - Flush the toilet only when necessary and don't use it as a trash can. In the tub plug the drain before you run water for baths. Take shallow baths and short showers with pressure at low force. To conserve water in the sink, fill it with water when you wash or shave. Don't let the water run when brush your teeth.

Kitchen - Use your garbage disposal sparingly, better yet—use a garbage can and a compost heap instead. When washing dishes by hand, scrape dishes and soak pots and pans before washing and instead of running water continuously, fill wash an rinse basins with water and use minimum detergent. Furthermore, when using the dishwasher, only do full loads and try to choose water-saving models.

Food Preparation - Use a brush and bowl full of water to clean food. Thaw food in the refrigerator or microwave, not under running water. Cook vegetables with a minimum amount of water and save water for soup stock. Keep a container of cold water in the refrigerator instead of cooling water by running the tap. Also, make only the amount of coffee, tea, etc., you need.

Laundry - Use the load selector to match water level to load size (if there is no load selector do only full loads). Presoak heavily soiled items and always use the minimum amount of detergent.

Household Cleaning - To conserve water when doing household cleaning use a pail or basin instead of running water. Use a sponge mop instead of a string mop (it uses less water for mopping and takes less water to keep clean). For heavy cleaning presoak overnight and wash with an abrasive scrub brush or pad and use plenty of " elbow grease" to minimize water use.

Outside Usage - Use a hose nozzle that can be shut off or adjusted to fine spray. When finished, shut off at the house to avoid leaks. When washing the car, rinse the car once, wash from a bucket of soapy water, and rinse again quickly.
Use a broom or rake instead of water to remove leaves, clippings, and debris from driveways and walkways. When watering lawn and garden, water slowly and throughly during cool, windless, hours. Let grass grow taller in hot weather. Moreover, use mulch in the garden and around shrubs to save moisture. Likewise, plant native and other shrubs that don't need a lot of water.

## 2) Repair Leaks :

Check all faucets and pipes for leaks. Replace washers and repair or replace fixtures when needed. Inspect connections to make sure they are tight. Inspect pipes for pinhole leaks, leaking joints, etc. Repair any leaks! Outside, check hoses and connections and replace any leaking parts or sections. Then, inspect the pool walls and filtration system and inlets and make any necessary repairs.

## 3) Install Water Saving Devices :

If you don't already have water efficient or low – flow fixtures, you can cut your water use with aerators and displacement devices. For example, consider installing an ultra-low flush toilet or at least install a displacement that won't harm plumbing such as a toilet dam or weighted plastic jug full of water. Moreover, in faucets you can install aerators and in the shower head a flow restrictor. Look for water saving features if buying a new washer such as load size selectors and variable water level control.

In short, by saving water you can also:

- Save money – on water and ultitly bills, sewer and septic costs, state and local taxes.
- Save energy – by reducing the amount of hot water you use and by saving electricity to pump water
- Save the environment – by helping ease the burden on water storage, purification, distribution, and treatment facilities.

# TOWN OF BURNSVILLE

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