



NORTH CAROLINA DIVISION OF  
POLLUTION PREVENTION AND  
ENVIRONMENTAL ASSISTANCE



# FOCUS

Providing pollution  
prevention  
assistance to North  
Carolina industries  
since 1984

## Every Drop Counts ... North Carolina's Water Conservation Efforts

Since 1998, many localities in North Carolina have experienced varying stages of drought. A drought is a period of abnormally dry weather that persists long enough to produce a serious hydrologic imbalance (such as crop damage, water supply shortage, etc.). The severity of the drought depends upon the degree of moisture deficiency, the duration and the size of the affected area. With prolonged periods of dry and extremely hot weather, North Carolina in 2002 witnessed some of the state's worst drought effects in recent history. With surface and subsurface water supplies significantly below normal, many livestock and agricultural operations, industrial manufacturing facilities, commercial businesses (especially food service providers), and homeowners felt the impacts of this year's extreme drought conditions.

During the summer, Ryan Boyles, associate state climatologist noted, "Drought conditions are spotty by nature, but overall, this is quickly becoming the worst drought in recorded North Carolina history. In some areas, we haven't seen conditions like this in more than 100 years."

As of July 2002, well levels were dropping and some wells were drying up. Other indicators of the drought's severity included:

- 80 percent of monitored streams in the state were at less than 10 percent of the normal flow;
- some areas recorded rainfall 40-60 inches below normal;
- several water supply reservoirs had less than 100 days of water left; and
- the amount of water evaporating from some lakes was greater than the amount flowing into the lake.

Water conservation is key to preserving existing water supplies and to ensuring sufficient quantities are available for manufacturers to operate adequately, commercial businesses to satisfactorily serve customers, and residents to have enough water for household activities. Short and long-term planning for water users serves to evaluate current activities for conservation opportunities and to implement potential strategies that allow these entities to maintain existing functions in times of drought. This issue of FOCUS: Waste Minimization provides information on conserving water, whether you're a chemical manufacturer or a full-service restaurant. Low or no-cost tips are provided to help

### Drought Facts - Did You Know...

- By checking lakebeds and tree rings, researchers have found that droughts appear in regular cycles.
- In the recorded history of droughts, the seven year dust bowl drought of the 1930s was considered a "short" drought.
- Droughts usually start in the east and move to the west.
- The present drought started in the east in 1999.

Source: <http://droughtoutlook.com/>

managers and operators use less water to meet required/voluntary restrictions while not sacrificing customer satisfaction. Additionally, North Carolina's own effort to reduce the amounts of non-essential water use by government agencies is detailed.

The N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA), a non-regulatory state technical assistance agency, is available at no cost to help businesses, industry, government agencies and institutions find ways to reduce water usage and prepare water conservation plans. Contact DPPEA at (919) 715-6500 or (800) 763-0136 for further assistance. For more information on the drought, visit <http://drought.ncwater.org>.

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## Governor Takes Action for Drought Response

On July 12, 2002, Gov. Mike Easley took steps to address the continuing drought and protect North Carolina's water supply for all necessary individual and industrial uses.

"Today I order all state agencies to stop non-essential water use, and reduce essential water use through aggressive conservation," said Easley. "I also renew my request that cities and towns voluntarily reduce water usage by at least 20 percent, and urge every business and every citizen to help themselves and each other by focusing on the drought and cutting short-term water consumption wherever possible."

The Governor's Executive Order No. 26, Water System Protection, directs all state government agencies to discontinue "non-essential" water use until further notice. "Non-essential" water uses for the purposes of this action are defined as those that:

- Do not have any health or safety impacts;
- Are not required by regulation; and
- Are not needed to meet the core functions of the agency.

Based on the definition provided above, each facility must determine its specific non-essential uses. Examples of non-essential water uses include:

- Irrigation of lawns and ornamental plants;
- Washing cars, off-road equipment, and other vehicles unless necessary for operator safety;
- Washing of all building exteriors, outside structures, streets, sidewalks and parking lots;
- Operation of all inside and outside decorative pools and fountains;
- Dust suppression with water sources other than treated wastewater;
- Operating hoses without hand-operated nozzles;
- Using hoses for clean up (i.e. do not use hose as a broom) unless required by health code;

Even for essential purposes, agencies were called upon to immediately develop and begin implementing

long-term, financially-feasible conservation measures such as installing low flow showerheads and toilets at state institutions.

The Executive Order requested that all other state-sponsored institutions (e.g. universities, community colleges, and public schools) also comply with the directive. The order established a

### ADDITIONAL WATER EFFICIENCY REQUIREMENTS FOR GOVERNMENT ENTITIES

House Bill 1215 was signed into law on Oct. 23, 2002. This law seeks to improve water conservation and reuse efforts by state and local governments by requiring:

- Local governments to report on existing and future water conservation and reuse programs and technical assistance needs in their water supply plans;
- State agencies to reduce water consumption by 10 percent or greater over baseline water usage;
- The Emergency Management Commission to develop rules to govern water conservation and reuse by state and local governments, public and private water supplies, business and industrial water users, and agricultural water users;
- The Department of Environment and Natural Resources to evaluate and establish incentives for existing and new water conservation programs; and
- The Utilities Commission to study methods for funding and promoting green power.

To see the full bill please go to <http://www.ncga.state.nc.us/> and type "h1215" under "Bill Look-up" search box. Information on techniques to conserve and reduce water are available at <http://www.sustainablenc.org/water.htm> and <http://www.p2pays.org/water/>.

Water System Protection Team chaired by the secretaries of Crime Control and Public Safety, and Environment and Natural Resources. The team includes representatives of the state Departments of Agriculture and Commerce and works closely with the League of Municipalities, the Association of County Commissioners, and other local leaders.

The team's principal duties include: providing guidelines to assist state agencies and state-sponsored institutions in complying with the governor's directive to suspend non-essential water uses; monitoring compliance; assisting drought-stricken communities in enhancing conservation efforts and assessing water supply capacity, and; providing technical assistance, expedited permits, and other support.

"By stopping non-essential water use, state government will set an example and should be able to set aside - and save for others - substantial amounts of a precious and indispensable resource," Easley said.

A variety of measures have been implemented, such as the suspension of lawn irrigation activities and

routine washing of state vehicles. These have helped to reduce water usage in state government. Recent rains have also eased drought conditions in many areas of the state. However, drought conditions could return to much of the state by next summer without adequate rainfall.

Many more conservation measures may be considered. For more information on establishing a conservation program please visit <http://www.sustainablenc.org/water.htm> or call the Division of Pollution Prevention and Environmental Assistance at (919) 715-6500.

## Water Wise

### CONSIDERATIONS FOR LONG-TERM WATER CONSERVATION

Although significant amounts of rain replenished North Carolina surface waters in the fall of 2002, the state may face significant water shortages for several years to come. It is still very important to assume the drought has not departed and to maintain an emphasis on water conservation. This summer, many facilities sought alternate water sources by drilling new wells; however, this practice does not provide a long-term solution. Water conservation is the only viable answer to reduced water resources.

To reduce water consumption whether in an office or commercial/industrial setting, consider the following:

- 1 Foremost, employees must understand how their job affects water use in their work environment.
- 2 Solicit ideas from those most involved with the daily operations and activities of the organization. Make conserving water part of their job by having them identify where water is used, whether in bathrooms or manufacturing operations.
- 3 Once the areas of consumption have been determined, engage the employees to help implement conservation measures.

An exemplary model of how much water conservation can be achieved comes from the **General Electric** facility in Mebane. This large plant converted a paint line to counter-flow rinses and improved the flow rates by monitoring conductivity of the discharge waters. Water intake and discharges were reduced by more than 90 percent with a substantial return on investment. Additional opportunities exist to improve water efficiency in many North Carolina facilities. The following suggestions are not instant fixes

### WATER CONSERVATION RESOURCES:

By mid-summer 2002, as North Carolina's drought worsened, DPPEA organized divisional resources to provide solutions for commercial and industrial users that would not compromise environmental compliance, product quality or customer satisfaction. To meet the needs of the many users across the state, DPPEA established a water conservation Web site at <http://www.p2pays.org/water/>. This site includes fact sheets, success stories and information on current drought conditions. It covers specific industry processes as well as water management of domestic waste, food preparation, heating and cooling, and landscaping. In addition to online assistance, DPPEA's staff conducts no cost, non-regulatory:

- On-site assessments that focus directly on identifying cost-saving options to reduce water and energy use. Assessors prepare reports with specific water efficiency recommendations, technical resources, vendor information, case studies and educational program suggestions.
- On-site industrial water conservation training/presentations, as well as "Train the Trainer" courses that provide team members with the necessary skills and tools to design and implement a water conservation program.

but require planning and long-term consideration for implementation and maintenance.

- Individual facilities should very carefully evaluate their usages of water, develop action plans to reduce their usages, and implement these plans. Refer to Water Efficiency Auditing Methodology and Tools at <http://www.p2pays.org/ref/04/03108.pdf> for step-by-step guidance on determining water use at your facility (including developing a water balance, identifying leaks and associated losses). This reference document provides guidance on targeting areas for conservation and setting achievable reduction goals.
- Carefully reevaluate the water being sent to the POTW. Can it be cleaned-up at little cost and reused in another operation of the facility?
- Consider monitoring the quality of contact water discharged from a process. Could flow rates be reduced if the discharge rate were controlled based on water analyses, instead of just running a certain number of gallons per minute?
- Consider cooling non-contact water and reusing it. Cooling "towers" come in all sizes, including very small ones (four feet in diameter and four feet tall) that can cool more than 100 gallons per minute.
- Consider analyzing discharge water and making these numbers available to local and/or state staff who may be able to find a nearby use for it. For example, a plant uses RO (reverse osmosis) to make DI (deionized) water, and has been sewer the non-DI side. This water is of good quality and could be used in many plants in place of fresh water.

### DIVISION OF POLLUTION PREVENTION & ENVIRONMENTAL ASSISTANCE

- Presentations for business, municipal and regional meetings, forums and round-table discussions dealing with drought conditions and water conservation issues.

Waste Reduction Partners (WRP) in Asheville is a team of highly experienced volunteer engineers, architects and scientists that provides western North Carolina businesses with water, waste and energy reduction assessments and technical assistance. Through its assistance to the Regional Water Authority of Asheville, Buncombe and Henderson during the 1998-99 drought, WRP estimates it saved more than 90 million gallons per year of water following more than 40 drought technical assistance visits to industries, hotels, multifamily residences and other commercial owners. Contact Terry Albrecht at (828) 251-6622 for further information.

Water efficiency programs reduce water demand, provide water and wastewater treatment savings, lessen environmental impacts, and sustain water quality. Business and industry looking to conserve water and save money without hindering production processes should contact DPPEA at (919) 715-6500 or (800) 763-0136.

# INSTANT WATER SAVERS:

## Consider these quick tips to save \$\$ now!

### Repair Leaks

- Ensure water meters are working properly to accurately measure water use and detect leaks.
- Inspect all toilets. A leaking toilet can waste up to 50 gallons of water per day.
- Inspect all faucets, spigots and showerheads. A dripping faucet/showerhead can waste up to 1,000 gallons of water per week.
- Check all water pipes for leaks and repair immediately. A 1/32" hole in a pipe wastes 6,300 gallons each week.

### Dry Clean-up

- Use brooms, squeegees and wet/dry vacs to clean surfaces before washing with water; do not use hoses as brooms.
- Reduce the frequency of cleaning with water by using dry methods; all hoses should have high pressure/low volume shut-off nozzles.
- Sweep and scrape parking lots/sidewalks/window surfaces rather than washing with water.
- Switch from wet/steam carpet cleaning to dry powder cleaning.

A Raleigh-area restaurant saves 4,000 gallons of water daily by hosing down the kitchen floors only on alternating nights. Floors are mopped every other night.

### Building Management

- Reduce water pressure to building and associated fixtures (sinks, toilets, showers, laundry and dishwashing machines). For every one-psi drop in pressure the facility can reduce flow rates from a ¼ inch orifice by 0.12 gpm.
- Turn off any unnecessary flows and equipment when not in use.
- Shut off water-cooled air conditioning units when not needed; replace old units with air-cooled models.
- Check existing flow rates on high-use process equipment and adjust accordingly.

- Reduce frequency of external equipment and flooring cleaning.
- Eliminate use of heat exchanger on make-up water for direct contact heat exchanger to reduce loss of steam from system. Cooler make-up water entering water heater condenses steam.
- Refer to <http://www.p2pays.org/ref/23/22004.pdf> for additional information on water conservation for office buildings.

A major chain restaurant in North Carolina discontinued use of its water softening system and saved approximately 1,500 gallons of water per day.

### Cooling Towers and Boilers

- Adjust boiler and cooling tower blowdown rates to maintain total dissolved solids at manufacturer's recommended levels.
- Increase maximum conductivity or TDS level for blow down in cooling towers and boilers.
- Improve efforts of leak detection and repair on cooling towers, air washers and boilers.
- Check and repair float valves on all sumps in cooling towers and air washers.

### Landscaping

- Water only when needed. Look for signs of wilt before watering, and water only in morning or evening to avoid evaporation.
- Install automatic rain shut-off devices on sprinkler systems and consider using drip irrigation.
- Avoid runoff! Ensure sprinklers are directed to landscape areas and not parking lots and sidewalks.
- Put in drought tolerant plants and grasses.
- Refer to Landscaping/Irrigation checklist at <http://www.p2pays.org/ref/23/22010.pdf> for more detailed information.

*FOCUS: Waste Minimization* is published by the divisions of Pollution Prevention and Environmental Assistance, Waste Management, Air Quality and Water Quality of the N.C. Department of Environment and Natural Resources (DENR). It is intended to provide North Carolina industries and other interested parties with current information concerning proper waste management and waste reduction. The information contained in this publication is believed to be accurate and reliable. However, the application of this information is at the reader's own risk. Mention of products and services in the publication does not constitute an endorsement by the state of North Carolina. The information contained in this publication may be cited freely.

If you have comments, waste minimization case summaries, resource information or questions for the next issue of the *FOCUS* newsletter, call Norma Murphy at (919) 715-6513, fax (919) 715-6794, e-mail [Norma.Murphy@ncmail.net](mailto:Norma.Murphy@ncmail.net), or write the N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA), 1639 MAIL SERVICE CENTER, RALEIGH NC 27699-1639.

State of North Carolina: Michael F. Easley, Governor; William G. Ross Jr., DENR Secretary; Gary Hunt, DPPEA Director.



Visit  
DPPEA  
online:

[www.p2pays.org](http://www.p2pays.org)

## **Commercial/Industrial Water Conservation Champions**

The following success stories occurred in summer 2002 when many municipal water suppliers required industrial/ commercial users to cut consumption by anywhere from 20-40 percent. To comply, many businesses and corporations had to make major modifications. The following describes how a chemical manufacturer and food service provider made operational changes to meet the water use restrictions while maintaining product quality/customer satisfaction. Many conservation initiatives were low-cost, simple and sustainable.

**Facility:** Chem-Tex Laboratories  
**Location:** Concord, N.C. (Cabarrus County)  
**Industry:** Chemicals and Allied Products (SIC Code 2800)  
**Pollution Prevention Application:** Water Conservation  
**Water Reduction:** 20,000 gallons per day/60 percent reduction  
**Annual Savings:** \$35,000 - 40,000 annually  
**Contact:** David Bilbro, vice president, (704) 795-9322

Chem-Tex Laboratories, a producer of specialty chemicals in Concord, N.C., requested the assistance of the N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA) to assess various alternatives for reducing water usages following the institution of mandatory water use restrictions by the City of Concord. The plant uses about 26,000 gallons per day (gpd) of city water, a major portion of which is used as noncontact cooling water. The plant has eight water-jacketed reactors varying from about 165 gallon to about 5,500 gallon capacities. A portion of the reactors are equipped with solenoid valves in the cooling water lines but most of the cooling has been done with the lines wide-open. The plant is also equipped with a 10-ton chiller that cools two storage tanks.

Chem-Tex is installing two new tanks, pumps and a small cooling tower to cool and reuse the water formerly seweraged after cooling the reactions. The plant also plans to recycle the water used to clean out the reactors. Plant management decided water conservation was the best long-term approach. It took a surprisingly small cooling tower and tank system costing less than \$15,000 to produce these savings. Thus a good financial return on the invested capital is expected.

### **WATER CONSERVED**

Chem-Tex's water conservation program will reduce the use of water by about 60 percent (by about 20,000 gpd), and also reduce the plant's waste water effluent to the Concord Waste Water Treatment Plant by about 85 percent. The savings should be between \$35,000 and \$40,000 per year.

**Facility:** K&W Cafeteria  
**Location:** Statesville, N.C. (Iredell County)  
**Industry:** Food Service (SIC Code 5812)  
**Pollution Prevention Application:** Water Conservation  
**Water Reduction:** 9,000 gallons per day/75 percent reduction  
**Annual Savings:** Not Calculated  
**Contact:** Dave Mullens, (704) 871-0191

K&W Cafeterias has been in operation since the 1940s. Named after its founding owners, the original K&W Restaurant seated 110 people. This first establishment has grown into a corporation with 34 cafeterias in the Carolinas and Virginias that employ more than 2,500 people. Each location serves up to 2,000 cafeteria-style meals each day.

### **WATER CONSERVATION**

In August 2002, the Statesville K&W Cafeteria was required by town officials to reduce its daily water consumption of 12,000 gallons by 40 percent. To meet the new restrictions, the site operators initially surveyed water-using activities and devices.

### **WATER REDUCTION ACTIVITIES**

This K&W Cafeteria took a very commonsense approach to reducing daily water consumption. After identifying areas of use, employees were made aware of the newly mandated reductions and how the requirements affected their jobs. With staff support and understanding, the cafeteria made the following changes which did not impact customer satisfaction or sanitation.

- Minimum amounts of water are added to the steam table to provide the desired heated temperature for keeping food warm. Previously, excess water was used, the overflow discharged, and the unit was cleaned twice per day. Currently, this unit runs on the same water and is cleaned once daily which saves pproximately 60 gallons.
- Fruits and vegetables are delivered precleaned which reduces the amount of initial washing. Vegetables are combined for single cleaning where before they were washed individually. These fresh foods are washed in ponded water and not under running tap water.
- Ice machine optic sensors were set to minimum fill levels to provide the lowest possible daily requirement.
- Frozen foods are no longer thawed under running water but instead are defrosted in the refrigerator. This requires more planning and time to ensure foods are ready for preparation.
- Floors are now mopped and not hosed using the rinse water from the number three basin of the four compartment (pot) sink that is transferred into a lined 35-gallon trashcan.
- Dry cleanup and mopping/scrubbing have replaced pressure washing with hoses. Mopping is conducted with water collected from the next to final stage of rinsing from the pot sink.
- All water pipes, toilets and faucets were inspected for leaks and repaired as necessary.
- Aerators were installed on hand wash and cooking sink faucets.

### **WATER REDUCED**

The Statesville location has accomplished a water reduction of 9,000 gallons per day - a 75 percent reduction. This tremendous achievement has been the result of employee and management involvement, dedication and efficiency.

## Air Quality News

### Improving Air Quality in North Carolina

“Air Quality Code Red Today” is a phrase that we hear too often in North Carolina. It may be surprising that our beautiful state has air quality problems; but growth encouraged by a high quality of life has threatened that asset by increasing air pollution from vehicles, power plants and other sources. The N.C. Division of Air Quality (NCDAQ) is working with industry, government agencies and citizens to ensure our state remains a vibrant and beautiful place to live. Every individual, organization and business can participate in improving our air quality.

#### Ozone sources, health effects and regulatory consequences

Ozone pollution is often called “ground-level ozone” to distinguish it from the stratospheric “ozone layer,” the concentration of naturally occurring ozone that protects life on earth from the sun’s ultraviolet radiation. Ozone is a strong oxidant and powerful lung irritant. Ozone is of special concern for children because they are often active outdoors during the warm-weather months when ozone concentrations are highest. Children make up 40 percent of documented asthma cases but just 25 percent of the population.

North Carolina’s three largest urban areas – Charlotte, the Triad and the Triangle – have previously been designated non-attainment for the “1-hour” ozone standard, 0.12 parts per million (ppm). Most areas are now meeting this standard. However, several recent 1-hour exceedances in the Charlotte area show a continued need for improvement.

In 1997, the EPA promulgated a new “8-hour” ozone standard of 0.085 ppm averaged over 8 hours. This standard is stricter and more protective of public health than the 1-hour standard. The most recent three years of data show 22 of 33 monitored counties are in violation of the new standard. DAQ anticipates several areas of the state will be designated non-attainment for the 8-hour ozone standard, likely in 2004.

#### How are we doing?

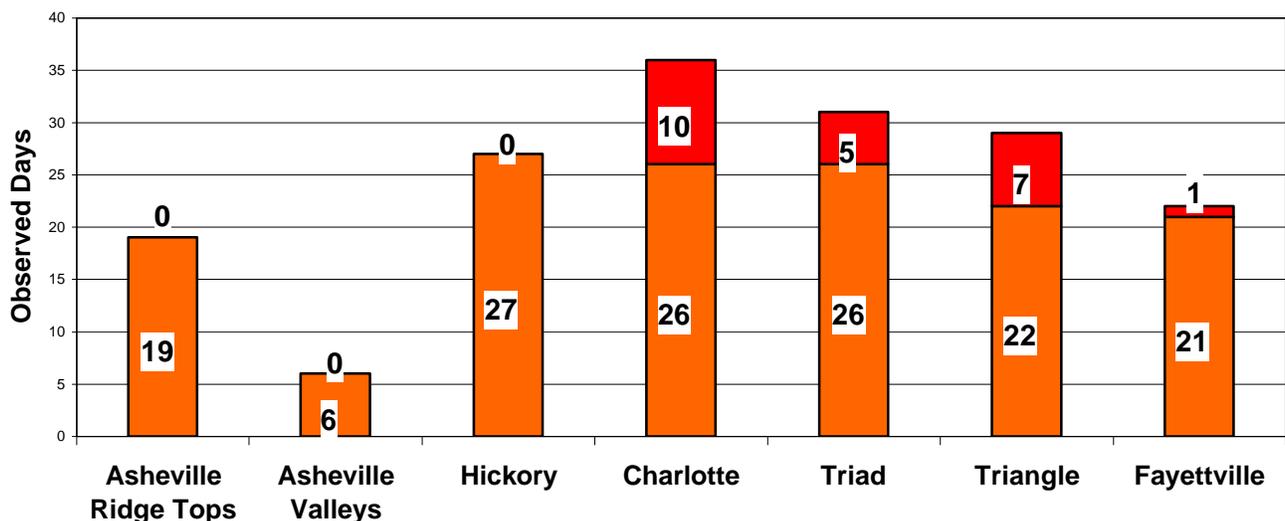
North Carolina experienced many more 8-hour ozone exceedances during the hot and dry summer of 2002 than in the previous two years. Figure 1 shows the number of code orange and red exceedance days in 2002 in each of NCDAQ’s ozone forecast regions. Gov. Easley will submit recommendations for non-attainment area boundaries to the EPA by April 15, 2003. NCDAQ will seek public and stakeholder input for these recommendations, and will hold public meetings in early 2003. If you are interested in participating, please contact Vickie Woods at (919) 733-1115. Final area designations are expected in 2004, and NCDAQ must submit a SIP for these areas to the EPA by 2007.

#### What’s being done to reduce emissions?

Two major state initiatives to reduce ozone-forming emissions are the Clean Smokestacks Act and the expanded vehicle emissions inspection program. Signed into law on June 20, 2002, the Clean Smokestacks bill requires large power plants to reduce nitrogen oxide (NOx) emissions by 78 percent (from

see AIR QUALITY NEWS, page 8

2002 Code Orange and Red Ozone 8-Hour Zone Exceedance Days



## EPA's Enforcement and Compliance History Now Online

In November 2002, the U.S. Environmental Protection Agency began a 60-day public comment period about its pilot information service - Enforcement and Compliance History Online (<http://www.epa.gov/echo>). ECHO is an innovative e-government tool designed to help citizens, businesses and others instantly access environmental compliance information on facilities in their communities in an easy, comprehensible format. ECHO retrieves EPA and state compliance data under the Clean Air Act (CAA), Clean Water Act (CWA), and Resource Conservation and Recovery Act (RCRA). ECHO also provides helpful links to additional state information.

EPA's 60-day comment period allows site users and other interested parties - particularly those responsible for facilities included within the database - an opportunity to review and comment on ECHO's content, design and data accuracy. In addition, ECHO provides an online error reporting process to ensure continued public participation in data quality.

### Advantages of ECHO:

- For the first time, the public and businesses can have a single point of access to environmental compliance information;
- Citizens can make better and more informed decisions regarding environmental issues impacting their communities;
- ECHO may provide state and local governments an important tool to evaluate environmental compliance problems and determine program priorities;
- Companies can use ECHO as a tool to monitor the federal record of their own compliance; and
- ECHO may provide market incentives for regulated entities to be in, or return to compliance since the public has direct access to company compliance records.

**State Partnership:** EPA partnered with the Environmental Council of the States (ECOS) to develop ECHO content and ensure its accuracy. A joint EPA/State Enforcement and Compliance Public Access Workgroup developed the template for the type, sources and amount of data to be included within ECHO. Continued cooperation and information sharing between EPA and ECOS is anticipated to ensure the future success and utility of ECHO.

**What Does the Data Contain?** The data covers a two-year period and includes information drawn from the following EPA databases:

- Air Facility System (AFS): Information on compliance with air permits for various stationary sources of air pollution, such as electric power plants, steel mills and factories, and information about the air pollutants they produce;

- Permit Compliance System (PCS): PCS tracks National Pollutant Discharge Elimination System (NPDES) permit issuance, permit limits, self-monitoring data and enforcement and inspection activity for facilities regulated under the Clean Water Act.;
- Resource Conservation and Recovery Act Information System (RCRAInfo): Tracks hazardous waste generators and handlers;
- Integrated Compliance Information System (ICIS): Supports the information needs of the National Enforcement and Compliance Program. ICIS includes detailed data about federal enforcement actions taken under all major environmental regulations;
- Facility Registry System (FRS): A centrally-managed EPA database that integrates facility name and location information from the above databases to create a single source of comprehensive information about facilities subject to environmental regulations or of environmental interest; and
- U.S. Census Data: Demographic information surrounding a facility based on the 2000 Block Group data.

More about ECHO and details regarding the 60-day comment period are published in the Federal Register at <http://www.epa.gov/fedrgstr/index.html>.

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N.C.'s Industrial Waste Exchange

*Have Your Waste  
Ready!*

*for more information, call:*  
Tom Rhodes, (919) 715-6516



## CALENDAR OF EVENTS

EVENT	DATE	LOCATION	CONTACT
<b>Manufactured Housing Waste Reduction Workshop</b>	March 12	Sanford Central Community College	Tom Rhodes DPPEA (919) 715-6516
<b>Carolinas Recycling Association Conference and Trade Show</b>	March 18-21	Greenville, S.C.	cra@cra-recycle.org (919) 545-9050
<b>Sixth Annual Learning Together Workshop on Environmental Innovation and EMS</b>	June 2-3	San Antonio, Texas	www.mswg.com

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1998 levels) by 2009. Sulfur dioxide (SO<sub>2</sub>) levels (a component of particulate matter and acid rain) will decrease by 49 percent by 2009, and 74 percent by 2013.

Until this year, vehicle emission inspection was required in only nine North Carolina counties, and the inspection technique did not measure NO<sub>x</sub>. Beginning this year, the emissions inspection program is expanding to 48 counties. For more information, visit <http://daq.state.nc.us/motor/inspect/>.

NCDAQ is also encouraging voluntary initiatives. Several local governments are considering entering into Early Action Compacts with the EPA, whereby non-attainment designation would be postponed if a detailed plan to reduce ozone-forming emissions is developed by 2004 and implemented by late 2005. Many areas are examining innovative measures to reduce ozone pollution: conversion of government and transit fleets to alternative fuels; land use policies to promote denser, mixed-use development; and community energy conservation programs.

The NCDAQ's Air Awareness Program reaches out to educate citizens, students, teachers and businesses about the causes and effects of ground-level ozone and the voluntary actions that can improve air quality. Regional air quality coalitions in Asheville, Hickory, Charlotte, the Triad and the Triangle include 500 members. If you are interested in adding your organization to the coalition partnership, contact Milli Hayman at (919) 715-6267 or [Milli.Hayman@ncmail.net](mailto:Milli.Hayman@ncmail.net).

North Carolina's air quality problems are complex but they are not intractable. Each individual, business, agency and organization has a part to play both in air pollution and in improving air quality. NCDAQ continues to work to ensure healthful air and good quality of life for North Carolinians and we invite you to partner with us in this important effort. For more information on NCDAQ and its programs, visit the NCDAQ Web site at <http://daq.state.nc.us/> or call NCDAQ at (919) 733-3340.

### Things Individuals Can Do To Improve Air Quality

- Drive less. Carpool, vanpool or take transit. Bring your lunch or walk instead of driving to lunch, especially on Code Orange or Red Ozone Action Days. Telecommute. Combine errands.
- Avoid idling your vehicle unnecessarily. Park and walk in to drive-through locations.
- Keep your engine tuned and tires inflated. You'll save money and emissions.
- Conserve energy.
- Postpone lawn mowing and vehicle refueling until after 6 p.m., especially on hot days.
- Use electric or hand-powered lawn equipment, and use landscaped or natural areas to reduce lawn size and mowing time.

### Things Businesses Can Do To Improve Air Quality

- Post local transit information prominently. Make reduced-cost transit passes available. Take advantage of federal tax laws providing incentives for businesses offering employee transit benefits. See <http://www.fta.dot.gov/library/policy/cc/cc.html>.
- Educate your employees about air quality and distribute the air quality forecast if available in your area. Join the regional Air Quality Coalition. E-mail [Air.Awareness@ncmail.net](mailto:Air.Awareness@ncmail.net) for more info.
- Get an energy audit for your business. You may be surprised at how much money you can save. The State Energy Office can provide technical assistance; find it on the Web at <http://www.energync.net/>.
- Offer telecommuting to your employees.
- If you have a fleet, consider converting to natural gas, propane, or other cleaner fuels. Keep your fleet well-maintained. If you have a delivery truck fleet, implement policies to limit idling.