

## ENVIRONMENTAL MANAGEMENT INITIATIVE

<b>1. Initiative Name:</b> Water Conservation	<b>1.a. Environmental Management Program(s) Supported:</b> Drinking Water Wastewater
<b>2. Initiative Lead:</b> Bill Steinmetz	<b>3. Document Control Code:</b> EMI-2007-Water Conservation
<b>4. Date:</b> December 5, 2007	

**5. Initiative Description:**  
 This initiative involves the establishment of water conservation programs in response to ongoing drought conditions impacting central North Carolina. This extended dry spell has led to the issuance of Stage IV Severe Mandatory Conservation measures to restrict water use in areas served by the City of Durham, which includes the NIEHS. Therefore, the NIEHS is establishing temporary and long-term water conservation initiatives.

### 6. GOALS AND OBJECTIVES

2008/2009 Objective(s):	Performance Indicator(s)	Resource requirements
<ul style="list-style-type: none"> <li>▪ Temporarily reduce water usage in the NIEHS Cafeteria in accordance with City of Durham request to reduce consumption</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduction in dishwasher usage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Current resources</li> </ul>
<ul style="list-style-type: none"> <li>▪ Reduce leaks from laboratory, bathroom, break room, and outdoor water sources</li> </ul>	<ul style="list-style-type: none"> <li>▪ Leaks are identified, a work order is submitted, and repairs are completed</li> </ul>	<ul style="list-style-type: none"> <li>▪ Current resources</li> </ul>
<ul style="list-style-type: none"> <li>▪ Study potential to reduce water usage by the glassware and cage washers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Efficiency evaluation is complete</li> </ul>	<ul style="list-style-type: none"> <li>▪ Current resources</li> </ul>
<ul style="list-style-type: none"> <li>▪ Study ways to reduce excess cooling tower water discharges into the sanitary sewer system due to increased phosphate levels in domestic water supplied by the City of Durham</li> </ul>	<ul style="list-style-type: none"> <li>▪ Alternate operating and water treatment scenarios for the cooling towers are identified</li> </ul>	<ul style="list-style-type: none"> <li>▪ Current resources</li> </ul>
<ul style="list-style-type: none"> <li>▪ Reduce water usage by men's urinal operation</li> </ul>	<ul style="list-style-type: none"> <li>▪ All existing men's urinals are replaced with waterless models</li> </ul>	<ul style="list-style-type: none"> <li>▪ Current resources</li> </ul>

<ul style="list-style-type: none"> <li>▪ Reduce water usage from bathroom sinks</li> </ul>	<ul style="list-style-type: none"> <li>▪ Installation of automatic or flow restricted faucets that can save one gallon per minute of use at all bathroom sink locations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Funding needs unknown</li> </ul>
<ul style="list-style-type: none"> <li>▪ Reduce water consumed by air compressors, vacuum pumps, and circulation pumps</li> </ul>	<ul style="list-style-type: none"> <li>▪ Installation of replacement equipment that uses less water</li> </ul>	<ul style="list-style-type: none"> <li>▪ Funding needs unknown</li> </ul>

**7. Significant Environmental Aspect(s):**

Natural Resource Consumption – Water  
Wastewater Discharges

**8. Reason(s) for Significance:**

- a. Legal and regulatory requirements
- b. Potential environmental impact

**9. Legal and Other Requirements:**

Durham County: The City of Durham Code, Article VI. Water Conservation

**10. Potential Environmental Impacts:**

Water conservation efforts can help slow the reduction of lake levels that supply the City of Durham with drinking water

**11. ACTION PLAN:**

<b>Targets/Milestones to Meet Initiative Objective(s)</b>	<b>Expected Frequency / Completion Date</b>	<b>Responsibility</b>
Begin using disposable paper plates, cups, and utensils in the NIEHS Cafeteria as a temporary measure to reduce water usage from dishwashing	1st Quarter 2008	Employee Services Program Specialist EAAC Committee
Conduct quarterly survey of laboratory, bathroom, break room, and outdoor water sources to identify leaks	Every Calendar Quarter	EMS Team EAAC Committee
Evaluate glassware and cage washing operations with	1 <sup>st</sup> Quarter 2008	NIEHS Engineering Staff / ORF

regard to water usage and conservation potential		
Identify alternative water treatment methods and operating scenarios to reduce discharges by the cooling towers	1 <sup>st</sup> Quarter 2008	NIEHS Engineering Staff / ORF
Replace all existing men's urinals with waterless models	3 <sup>rd</sup> Quarter 2009	NIEHS Engineering Staff / ORF
Install automatic or flow restricted faucets that can save one gallon per minute of use at all bathroom sink locations	3 <sup>rd</sup> Quarter 2009	NIEHS Engineering Staff / ORF
Replace air compressors, vacuum pumps, and circulation pumps with models that are rated to use less water or are designated as waterless	3 <sup>rd</sup> Quarter 2009	NIEHS Engineering Staff / ORF

## 12. OPERATIONAL CONTROLS

Activity	Controls	Responsible Persons	Monitoring	Records	Comments
Domestic water consumption by laboratory research activities, cage and glassware cleaning, utility systems, cleaning operations, and human use	The City of Durham Code, Article VI. Water Conservation  Various equipment manuals	ORF/FOB Project Officers	Water meter readings  Wastewater flow meter continuous monitoring	Water consumption data based on water meter readings  Wastewater flow meter data in gallons per day or month	
Various water conservation efforts	The City of Durham Code, Article VI. Water Conservation  Durham County	OM / Associate Director for Management  Employee Services	Water meter readings	Water consumption data based on water meter readings	

	wastewater permit	Program Specialist ORF/FOB Project Officers HSB / Environmental Compliance Officer EAAC committee	Wastewater flow meter continuous monitoring	Wastewater flow meter data in gallons per day or month	
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**13. RELEVANT DOCUMENT(S)**

<b>Document Name</b>	<b>Location</b>	<b>Document Custodian</b>
The City of Durham Code, Article VI. Water Conservation	Web-based / electronic	Environmental Compliance Officer / HSB
Durham County Wastewater Permit	Hardcopy / electronic	Environmental Compliance Officer / HSB

**14. EMS REVIEW**

<b>Name: William K. Steinmetz</b>	<b>Signature:</b>	<b>Date: 12/05/2007</b>
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