



NEMS ENVIRONMENTAL MANAGEMENT PROGRAM

PROGRAM NAME:	Water Conservation		
SIGNIFICANT ENVIRONMENTAL ASPECT(S): Natural resource and raw material consumption - Water	DOCUMENT NUMBER:	TBD	
	DATE REVISED:	09/20/07	
	REVISION NUMBER:	1	
	SUNSET DATE:	11/16/07	
	PROGRAM LEAD:	Mr. Greg Leifer, Energy Engineer	

SECTION 1 – PROGRAM DESCRIPTION

At the Bethesda Campus, the Office of Research Facilities Development and Operations (ORF) conducts the primary activities for water policy management and development activities. The Division of Property Management is responsible for the design, construction, renovation, repair and operation of the physical facilities on the Bethesda Campus. The Division’s Utilities Operations is responsible for audits, feasibility studies, and implementation of conservation measures on NIH facilities. The Division of Environmental Protection (DEP) takes the lead in overall environmental stewardship and sustainability at the NIH. Representatives from each of these divisions have formed a team to address long-standing, critical water (and energy) management issues on the campus.

The team has developed its objectives and targets for the 5-year timeframe based on the requirements of Executive Order 13423 and the Energy Policy Act of 1992. The campus is undergoing considerable facility construction and renovations, and as a consequence maintaining an effective water management program is particularly challenging. The long term purpose of the water management program is to optimize water consumption on campus through a combination of policies, best available technologies, operations and maintenance, and campus-wide water conservation awareness and participation.

The near-term objectives of the water conservation program are to conduct feasibility studies of commonly-employed water conservation measures and, wherever appropriate implement them. The team will lead the effort in developing a campus-wide water conservation plan that will include addressing the longer-term goals of increasing awareness and designing water conservation measures into building design and renovation.

SECTION 2 – GOALS AND OBJECTIVES

FIVE-YEAR GOAL: Reduce water consumption <i>Justification: There is significant potential to improve water use efficiency on campus while reducing overall operation costs. This goal is also a requirement of Executive Order 13423.</i>	Performance Indicator(s): Amount of water consumed	Resource requirements: No additional resources required
A. Objective: Audit 10% of facilities for water conservation and retrofit as appropriate.	Performance Indicator(s): audit completed	Responsibility: Greg Leifer Timeframe: December 2007

SECTION 3 – PROGRAM DESCRIPTION, SIGNIFICANCE, IMPACTS AND REQUIREMENTS

REASON(S) FOR SIGNIFICANCE:	a. This aspect represents a significant cost to NIH
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	<ul style="list-style-type: none"> b. This aspect has the potential to impact the environment through natural resource consumption c. This aspect is important to NIH's relationship to the local community and the public at large d. This aspect is governed by Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management
POTENTIAL ENVIRONMENTAL/ ORGANIZATIONAL IMPACTS:	<ul style="list-style-type: none"> a. Financial costs b. Resource depletion c. Public image/community relations
LEGAL AND OTHER REQUIREMENTS:	<ul style="list-style-type: none"> a. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management b. Energy Policy Act (EPACT) c. CWA-COMAR 26.17.06 d. WSSC - Memorandum of Understanding

SECTION 4 – OPERATIONAL CONTROLS

ACTIVITY(IES) THAT GIVES RISE TO ASPECT	CONTROL(S)	RESPONSIBLE PERSON	MONITORING	RECORDS	ACTION TAKEN IF CONTROL FAILS
Operation of the Utilities Distribution System	<ul style="list-style-type: none"> ▪ Automatic testing equipment for entire distribution system ▪ Water conservation equipment^a 	Utilities Operations Branch	<ul style="list-style-type: none"> ▪ Testing of traps ▪ Annual energy/ water audits 	<ul style="list-style-type: none"> ▪ Log ▪ Annual energy/ water audit report 	TBD
Operations of Central Utility Plant	<ul style="list-style-type: none"> ▪ Clean and inspect boiler water and fire tubes ▪ Water conservation equipment 	Utilities Operations Branch/Central Utility Plant	<ul style="list-style-type: none"> ▪ Test of cycles of concentration ▪ Check of boiler efficiency ▪ Annual energy/ water audits 	<ul style="list-style-type: none"> ▪ Annual energy/ water audit report 	TBD
Operations & maintenance of HVAC systems	<ul style="list-style-type: none"> ▪ Monitor condensate pumps ▪ Water conservation equipment 	Facility Operations Branch	<ul style="list-style-type: none"> ▪ Visual inspection ▪ Annual energy/ water audits 	<ul style="list-style-type: none"> ▪ Annual energy/ water audit report 	TBD

^a A list of water conservation equipment and information on the energy audits conducted annually is provided in Terry Leland's email (dated May 31, 2006), which is provided in Attachment 1 (starting on page 5 of this document)

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Operation of laboratory equipment (including DI system and sterilization equipment)	<ul style="list-style-type: none"> TBD 	TBD	TBD	TBD	TBD
Operation of restrooms and janitorial facilities/equipment	<ul style="list-style-type: none"> Program to replace urinals with no-flush Low-flush toilets Water conservation equipment 	Facility Operations Branch	<ul style="list-style-type: none"> Annual energy/ water audits 	<ul style="list-style-type: none"> Annual energy/ water audit report 	TBD
Animal care and feeding (including cage washing)	<ul style="list-style-type: none"> TBD 	TBD	TBD	TBD	TBD
Use of food service equipment (including dish washing, refrigeration, etc.)	<ul style="list-style-type: none"> TBD 	TBD	TBD	TBD	TBD

SECTION 5 – RELEVANT DOCUMENT(S)

DOCUMENT NAME	LOCATION	RESPONSIBLE PERSON
NIH Annual Energy Report	Building 13, 2S11	Ms. Terry Leland

SECTION 6 – COMPETENCY OF RESPONSIBLE PERSONS

NAME/TITLE	BASIS FOR COMPETENCE
Energy Engineer	15 years experience working in energy field, including utility operations

SECTION 7 – AUTHORIZATION

NAME:	
SIGNATURE:	
DATE:	

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