

## (1) Overview

In the category of Public Health and Hazardous Materials, monitoring consists of:

### **Drinking and Swimming Water Quality.** During FY 2005:

- Monthly bacteriological testing was done, during seasons of use, for drinking water supplied at Forest-operated recreation facilities (including campgrounds, picnic areas, etc.) and administrative facilities. Results and evaluation are reported below under the code of **PWSB**.
- Annual testing of nitrate concentrations was done for drinking water supplied at Forest-operated recreation and administrative facilities. Results and evaluation are reported below under the code of **PWSN**.
- Monthly bacteriological testing was done, during seasons of use, for lake or stream water at Forest-operated designated public swimming sites. Results and evaluation are reported below under the code of **DSSB**.

### **Water Well Abandonment.**

No water wells on National Forest land were known to be closed or abandoned during FY 2005. There's also no known backlog of wells closed in previous years, but not properly abandoned to assure long term protection of groundwater quality.. Thus there was no need for formal monitoring for proper well abandonment during FY 2005.

### **Wastewater Treatment**

During FY 2005 new or upgraded septic tanks were added to the wastewater treatment systems at both the Tofte and Gunflint administrative sites.

### **Management of Hazardous Materials.**

During FY 2005 all hazardous materials that were stored in the Forest's hazmat storage building were taken to a recovery center for re-use, recycling, or proper disposal.

## (2) Monitoring Activities

### **Monitoring Question**

**Does water in Forest-provided drinking water sources and swimming beaches meet standards of quality protective of human health and aesthetics? AND Are Forest facilities and recreation sites safe for employee and public use and enjoyment?**

**Monitoring Driver(s): Objective. O-PH-1.** Public & Non public water & wastewater systems are updated, maintained, & managed to the standards set forth in the appropriate federal guidelines and applicable state standards during this plan period AND **Objective. O-PH-4.** Forest owned facilities and designated recreation sites and/or natural resource amenities are inspected and managed to ensure safe operation.

Applicable Monitoring Activity, Practice, Or Effect Measured	Methods	When Monitored	Location or Project Area
1. POTABLE WATER SUPPLY, Monitoring of Bacteriological Condition (PWSB) 2. POTABLE WATER SUPPLY, Monitoring of Nitrate Concentrations (PWSN) 3. DESIGNATED SWIMMING SITES, Monitoring of Bacteriological Condition 4. WASTEWATER TREATMENT	1. (PWSB): Collect samples from water supply, test sample in certified lab for total coliform and E. Coli using Colilert presence/absence method. 2. (PWSN): Collect samples from water supply, test sample in certified lab for concentration of nitrate+nitrite. 3. (DSSB): Collect sample from representative area of designated swimming beach, test sample in lab for concentration of fecal coliform. The methods indicated for all 3 categories are the ones that were used in FY '05 monitoring. 4. Make environmental measurements and system upgrades as needed to assure efficacy of wastewater treatment systems as Forest-operated facilities	1. (PWSB): One monthly sample when water supply in use.* 2.(PWSN): One yearly sample, usually in late summer or fall. 3. (DSSB): Once monthly during periods when swimming site is officially open.* 4. As upgrades are made and at set intervals during use of each wastewater system *More frequent sampling required if +samples are found)	(1. (PWSB) & 2. (PWSN): All SNF-operated water supplies at Forest developed recreation and administrative sites (approximately 50 water supplies) 3. (DSSB): All SNF-designated swimming beaches (10 beaches). 4. At each wastewater treatment system at Forest-operated facilities

**Monitoring Driver(s): Objective. O-PH-3.** Known abandoned wells will be grouted and unused wells will be capped and maintained to prevent groundwater contamination.

As discussed in the Overview above, because there were no new, or backlog of closed, water wells, there was no need for formal monitoring of well abandonment during FY 2005.

**Monitoring Question**

**Does hazardous material storage on the National Forest meet standards of quality protective of human health?**

**Monitoring Driver(s): Objective. O-PH-2.** Hazardous materials are appropriately stored in approved facilities, and are transported safely if necessary for forest management AND **Objective. O-PH-5.** Where possible, minimize use of hazardous materials. Make more frequent use of non-hazardous substitute materials; and safe use and storage of hazardous materials.

Applicable Monitoring Activity, Practice, Or Effect Measured	Methods	When Monitored	Location or Project Area
Handling, use, and use minimization associated with hazardous materials	Various	At any point in time where materials are transported, used, stored or disposed of.	At any location where materials are transported, used, stored, or disposed of.

(3) Evaluation and Conclusions.

**Desired Conditions/Objectives**

**Monitoring Driver(s): Objective. O-PH-1.** Public & Non public water & wastewater systems are updated, maintained, & managed to the standards set forth in the appropriate federal guidelines and applicable state standards during this plan period AND **Objective. O-PH-4.** Forest owned facilities and designated recreation sites and/or natural resource amenities are inspected and managed to ensure safe operation.

**2005 Accomplishments. PWSB results:** During FY 05 a total of approximately 320 routine monthly samples were collected and tested for total coliform (TC) and E. coli from drinking water supplies at approximately 50 separate Forest-operated public and administrative facilities. Nine of these routine monthly samples, representing 7 recreation facility water supplies, yielded a positive test for the presence of TC. At five of these sites TC was found in only one of the monthly routine samples. At the other 2 sites TC was found in 2 of the monthly routine samples. In each case where TC was found in a routine monthly sample, the water supply was either (1) closed immediately to public use, treated by shock disinfection, resampled, and re-opened to use when TC was found to be absent from the follow-up samples, or (2) closed to public use for the remainder of the recreation season.

**PWSN results:** Approximately 50 SNF-operated water supplies at Forest developed recreation and administrative sites were tested. All sites tested showed nitrate concentration less than 10 parts per million. Thus all water supplies were found to meet the applicable standard for this constituent in drinking water.

**DSSB results:** All SNF-designated swimming beaches (10 beaches) were sampled as required by law or regulation. All beaches tested during FY 05 were found to have fecal coliform at less than 200 colonies per sample. Thus all beaches were found to meet the applicable standard for this constituent as applied to contact water recreation.

**Wastewater Treatment results:** During FY 2005 new or upgraded septic tanks were added to the wastewater treatment systems at both the Tofte and Gunflint administrative sites.

**2005 Accomplishment Contribution Towards Desired Conditions & Objectives**

<b>A. FOREST PLAN DIRECTION/FEIS CONDITION</b>			
<b>Record of Decisio(7/04)</b>	<b>(DECADE 1)</b>		<b>2005 Accomplishments and/or Condition</b>
Existing Condition	FP Desired Condition, Objective, or S&G's	FEIS Projected or Proposed Condition	Actual Accomplishments implemented
ROD p.33 , consistency with Laws and Policies, specifically applicable provisions of the Federal Safe Drinking water and Clean Water Acts and associated USDAFS policy.	Management of Forest recreation and administrative sites provides for the health of employees and the public (e.g. D-PH-1, D-PH-2, D-PH-4, O-PH-1, and O-PH-4)	NA	<p><b>PWSB results:</b> TC &amp; E.Coli. 320 monthly water supply tests were performed, covering 50 separate public facilities. Test results at 43 of these facilities demonstrated full compliance will applicable drinking water standards for bacteriological contaminants. Five of the 50 facilities tested positive for TC in only one monthly test; water supplies at an additional two facilities tested positive for TC in two monthly tests.</p> <p><b>PWSN results:</b> All water supplies met applicable standards.</p> <p><b>DSSB results:</b> All beaches met applicable standards.</p> <p><b>Wastewater Treatment Results:</b> During FY 2005 new or upgraded septic tanks were added to the wastewater treatment systems at both the Tofte and Gunflint administrative sites.</p>

<b>B. ACHIEVEMENT OF FOREST PLAN DIRECTION/FEIS CONDITION</b>			
<b>% Achievement of Decade 1 Direction/Condition</b>		<b>Trend</b>	
Actual accomplishments implemented	Actual Accomplishments & Approved NEPA Decisions	Actual accomplishments implemented	Actual Accomplishments & Approved NEPA Decisions
NA	NA	NA	NA

**Monitoring Driver(s): Objective. O-PH-2.** Hazardous materials are appropriately stored in approved facilities, and are transported safely if necessary for forest management AND **Objective. O-PH-5.** Where possible, minimize use of hazardous materials. Make more frequent use of non-hazardous substitute materials; and safe use and storage of hazardous materials.

**2005 Accomplishment Contribution Towards Desired Conditions & Objectives**

<b>A. FOREST PLAN DIRECTION/FEIS CONDITION</b>				
<b>Record of Decisio(7/04)</b>	<b>(DECADE 1)</b>		<b>2005 Accomplishments and/or Condition</b>	
Existing Condition	FP Desired Condition, Objective, or S&G's	FEIS Projected or Proposed Condition	Actual Accomplishments implemented	Actual Accomplishments & Approved NEPA Decisions
Some hazardous materials are transported, and stored for use in Forest operations.	Hazardous materials are properly stored, safely used & transported. Their use is minimized or increased use is made of non-hazardous substitutes.	NA		

<b>B. ACHIEVEMENT OF FOREST PLAN DIRECTION/FEIS CONDITION</b>			
<b>% Achievement of Decade 1 Direction/Condition</b>		<b>Trend</b>	
Actual accomplishments implemented	Actual Accomplishments & Approved NEPA Decisions	Actual accomplishments implemented	Actual Accomplishments & Approved NEPA Decisions
NA	NA	Reduced risk to Forest resources resulting from transfer to off-Forest recovery facility	NA

**Standards and Guides**

<b>Standard &amp; Guide Descriptor</b>	<b>Standard &amp; Guide Description</b>	<b>Compliance</b>	<b>Remarks</b>
S-PH-2	All spills and contaminated soil sites will be quickly cleaned up in conformance with federal and State guidelines.	<b>YES</b>	No sites in need of cleanup were known to exist in FY 2005
G-PH-1	Nonfederal sewage waste disposal on National Forest lands will generally not be permitted	<b>YES</b>	No such proposals were made in FY 05
S-PH-3	Treatment of hydrocarbons/contaminated soil (soil farming, composting, etc.) will only be permitted on ELTs 10, 13, 14 and 15 on the SNF. Treatment activities will conform to federal and state guidelines.	<b>YES</b>	No such proposals were made in FY 05

#### (4) Necessary Follow-up and Management Recommendations

Monitoring Driver	Follow-up Actions
O-PH-1 & O-PH-4	Because this monitoring is required by law/policy, all three types of water testing will continue to be carried out at the indicated locations, frequencies, etc. in future fiscal years. Procedures used in FY 05 to follow-up on PWSB sampling results yielding positive test results for total coliform meet requirements as spelled out in the Federal and State Safe Drinking Water law and USDA-FS policy. Those procedures will continue to be used in future years.
PWSB Monitoring	Improve quality control in the sample collection process for routine monthly PWSB samples. For example, make sure that employees assigned the job of sample collection are adequately trained to guard against contamination while filling the sample bottles. <u>Supporting rationale</u> : Positive test results for total coliform observed in FY 05 (and in previous years) most likely arise from improper sample collection methods rather actual contamination of the water supply itself.
S-PH-1	Interpret S-PH-1 language. <u>Supporting rationale</u> . Clarify what type of public health threat (address hazardous materials, drinking water, wastewater ect) the standard is intended to mitigate.

#### (5) Collaborative Opportunities To Improve Efficiency And Quality Of Program

Collaborator/Partner	Monitoring Activity	Accomplishment
Mn Dept of Health (MDH)	Drinking Water (PWSB and PWSN)	Active collaboration in '05 and previous years, with MDH providing regular oversight, lab certification, lab analysis for nitrate + nitrite, and sanitation surveys at most wellheads.
MN Pollution Control Agency And US Geological Survey	Potential future collaborators in groundwater sampling and analysis.	None in '05