

16. Public Health and Hazardous Materials

This section covers three aspects of public health consisting of the safety of Forest facilities and recreation sites, quality of drinking water and water at swimming beaches, and hazardous material storage.

A. Forest Facilities and Recreation Sites

To help prevent accidents, injuries, and illnesses to Forest Service employees, cooperators, contractors, volunteers, and the visiting public, the Chippewa NF institutes a set of procedures to ensure safe and healthful workplaces and recreational facilities. Those practices include routine safety inspections and maintenance of forest facilities.

Key Points

- Forest administrative facilities have been monitored and maintained to standard.
- Forest employees should be educated on proper burning. Painted and treated lumber should not be disposed of in burn piles.
- Illegal dumping is a significant and expensive problem on the Forest. Continued cleaning, public education, and law enforcement efforts are needed to reduce dumping.

Monitoring Question

Are Forest facilities and recreation sites safe for employee and public use and enjoyment?

Results

Safety and Occupational Health Program Specialist Inspections

The Forest conducts annual safety inspections of the Supervisor's Office, the Ranger District offices in Blackduck, Deer River, and Walker, the Norway Beach recreational facility, the Cutfoot Sioux Visitor Information Center, and the Marcell warehouses. A Safety and Occupational Health Program Evaluation Checklist serves as an evaluation of the Forest's facility inspection program, hazard abatement, documentation, and follow through to the closure/correction of an issue. All potential violations of the Occupational Safety and Health Act of 1970 are noted. Over the past several years the Forest has received ratings averaging between 3.2 and 4 on the "Safety Inspection Criteria" checklist. The Forest's administrative facility safety inspection and maintenance program is fully compliant based on the ratings received.

Recreation Facility Inspections

Additional safety inspections are completed in the spring prior to opening the facilities to the public. Hazard trees are removed; signage is posted to inform users of the risks of Lyme disease and swimmer's itch and to inform recreation area users to seek shelter in case of severe weather.

Norway Beach Wastewater Plant

The Norway Beach Recreation Area Wastewater Treatment Facility consists of three aerated

stabilization ponds with discharge being sprayed onto a constructed peat bed. The area is surrounded by a six foot high chain link fence with front and back gates and posted to keep the public from entering.

All maintenance and repair work is documented in a log book and kept available for reference. Daily operations are logged including influent, discharges, and precipitation. Information about each piece of equipment such as manuals and warranties are filed for reference.

Discharge Monitoring Reports (DMRs) are turned in to the Minnesota Pollution Control Agency (MPCA) monthly. These forms are used to record all significant information about the treatment process.

To ensure safety and environmental compliance, a State permit must be maintained to operate the wastewater treatment facility and a member of the Forest recreation staff must maintain State certification as a Class D Wastewater Operator.

Environmental Compliance Contract

An environmental compliance consultant reviewed the Forest HAZMAT Plan and each District's Occupant Emergency Safety Plan. The contractor recommended some minor updates, but overall determined that the existing plans are accurate and up to date.

As part of the Environmental Compliance contract, contaminated ash piles were cleaned up at two campground facilities, Norway Beach and Stony Point. Evidence of treated wood in the burn piles prompted sampling and testing of the ash. The Stony Point ash was found to exceed the MPCA Soil Reference Values (SRVs) for arsenic. The Norway Beach ash did not exceed any SRVs. The ash at both locations was removed out of precaution for the safety of the facility users.

Illegal Dumping Agreement

From 2007, when the illegal dump cleanup agreement with the Leech Lake Band of Ojibwe was initiated, through 2010 over 100 illegal dumpsites were inventoried and evaluated by the LLBO. In that same time period over 40 of the highest priority sites were cleaned. The Forest and LLBO goal is to clean an additional 30 sites before the agreement expires at the end of 2011. Our Environmental Compliance Contract consultant has been contracted to clean an additional 8 sites on the south shore of Cass Lake during 2011.

Many of the sites that were cleaned as part of the agreement have already experienced repeat dumping. It is recognized by the Forest and LLBO that there is a need to work with the public to prevent dumping in the future. The parties of the agreement have attended LIC meetings, Earth Day fairs, and health fairs to promote the stoppage of illegal dumping. The LLBO and Forest have been placing "No Dumping" signs at commonly used illegal dump sites. The parties have also been working to improve public knowledge of the proper disposal of waste by improving signage at transfer stations and by developing an informational flyer with the location and hours of transfer stations throughout the Forest.

Vault Toilet Replacement

Health, cleanliness, and environmental protection have been improved on the forest during this review period through the replacement of several toilet facilities. Aging wood toilet buildings with suspect below ground vaults have been upgraded to precast concrete or composite plastic buildings and vaults.

One such facility was replaced on the south side of Star Island in FY 05 via force account. Three more were upgraded on the Walker Ranger District in FY 06 and 8 additional toilets were replaced on the Forest in FY 10 through an ARRA Project. A total of 71 of these facilities exist on the Forest.

New Issues

Norway Beach Wastewater Plant

The integrity of the liner in the third pond of the series at this facility is suspect and may be in need of replacement.

Star Island – Windigo Lake Portage Sanitary Conditions

The beach area on the north side of Star Island on Cass Lake near the portage to Windigo Lake is heavily used by boaters and swimmers during peak summer weekends. There is no toilet facility near this location and sanitary conditions become very poor at times posing public health and water quality concerns.

Recommendations

- **Norway Beach Wastewater Plant**

The electrical wiring at the Norway Beach Wastewater Treatment Facility is over 50 years old. It was noted during recent inspections that the plant is not equipped with ground fault circuit interrupter (GFCI) outlets. The electrical system at the plant should be updated as funding becomes available.

Investigate the potential issue with the liner in the third pond. Plan staff time and funding for a liner replacement project if needed.

- **Environmental Compliance Contract**

All burning at Forest sites should be limited to vegetative cuttings and unpreserved / unpainted wood. Any ash removed from campgrounds should be kept in a separate location from the vegetative burn piles, preferably in a covered dumpster for ease in future characterization and disposal.

The soils at the Stony Point burn site were found to be contaminated following the ash removal. It is recommended that approximately six inches of additional soil be excavated in this area for disposal. An additional soil sample should be analyzed for arsenic to confirm that the balance of arsenic-impacted soils have been removed to below the MPCA Tier 1 SRV.

- **Illegal Dumping Agreement**

Illegal dumping on the Forest is a significant and expensive problem. Continued efforts are needed to develop effective methods of educating the public against dumping. Monitoring and law enforcement efforts focused on illegal dumping should be increased as possible. Illegal dump inventorying and cleanup of priority sites should also be continued.

- **Star Island – Windigo Lake Portage Sanitary Conditions**

The Forest should continue to pursue funding and support for installing a toilet facility at this location.

B. Drinking Water and Swimming Beaches

Forest provided drinking water sources continue to meet standards of quality protective of human health. Sampling of water on swimming beaches ensures safe water in swimming areas.

Key points:

- Forest provided drinking water sources continue to meet standards.
- Drinking water analysis performed by a contractor has reduced expense to the forest.
- Forest staff need to know how to access well information from the Minnesota Dept. of Health.
- In January of 2009 the decision was made to no longer sample and analyze Chippewa NF swimming areas.

Monitoring Question

Does water in Forest-provided drinking water sources and swimming beaches meet standards of quality protective of human health and aesthetics?

Results

Drinking Water

Forest-provided drinking water sources continue to meet standards of quality protective of human health and in accordance to FSM7420, State regulations and the federal Safe Drinking Water Act.

Monitoring plans have been developed for each of the designated water sources on the Forest. Individual wells are monitored on an annual or monthly basis, by FS employees, depending on requirements in the monitoring plan for each well. Samples are tested for total coliform bacteria, *E. Coli* bacteria, and nitrates. If any sample exceeds the limits for Forest and State Safe Drinking Water standards, corrective action is taken. When corrective action is taken, the wells are closed and are not re-opened until sampling shows that they are in compliance with EPA regulations. The Minnesota Department of Health also requires that sanitary surveys be conducted every 3 years on non-community transient wells and non-community non-transient/forest service wells, and every 5 years on non-public wells for all scheduled water systems.

Through Feb. 2009, CNF operated and maintained an environmental laboratory at our Cass Lake, MN headquarters. Analysis is now being performed by a contractor which has reduced the workload and expense to the forest by eliminating the burden and cost to maintain a certified environmental laboratory. Results of the water analysis indicate the quality of the forest provided drinking water sources remain in compliance of all applicable regulations.

Natural Swimming Waters (Beaches)

The objective of sampling for bacteriological water quality is to insure safe water for designated primary contact recreation (swimming) areas (FSM 2532.02). There are no State or EPA requirements to monitor swimming areas.

Designated Swimming Areas were being sampled by Forest Service personnel monthly during the operating season. Based on existing records this testing took place from at least as early as 1975 and continued through 2008. In January of 2009 the decision was made to no longer sample and analyze Chippewa NF swimming areas. No known illnesses to the public have been reported.

Known Abandoned Wells

Currently we do not have an active monitoring program method in place. As abandoned or unused wells are identified, they are put on a list to grout (seal) as money becomes available. Presently, as field personnel identify known abandoned wells, wells are sealed. Typically most known unused or abandoned wells are sealed within a year of being reported.

Implications

Drinking Water

No implications to the current procedures and protocols. Monitored results were consistent with expectations. FSM7420 is very clear and the objectives are achievable. Forest-provided drinking water sources meet standards of quality protective of human health.

Natural Swimming Waters (Beaches)

The past monitoring of our designated swimming areas indicates no change in water quality. However, if there is an occurrence that would change the water quality, it may go unchecked for a longer period of time without an active sampling program in place. The past history of our swimming area water quality show the chances of a major change in safe water conditions unlikely.

Known Abandoned Wells

In 2004-2005 a County Well Index update was completed jointly by the Forest Service, MN Geological Survey and the MN Dept. of Health (MDH). Information on all known public and private wells was gathered and updated in a database maintained by MDH. This included information on abandoned wells. There is no active on Forest tracking system in place for abandoned well information. Forest staff working with well abandonment need to stay up to date on reporting methods and requirements of the MDH.

Recommendations

- **Drinking Water**

Recommendation is to continue contracting the analysis and maintain a Point of Contact on the Forest to monitor results as they occur and advise the field per FSM direction.

- **Natural Swimming Waters (Beaches)**

Recommendation is to consider the possibility of testing swimming area water quality once a year to catch any disturbance issues to water quality. However, do not proceed without a Forest Supplement detailing the method used and the follow up procedures if the analysis shows the water quality does not meet EPA water quality criteria for bathing (Full Body Contact).

- **Known Abandoned Wells**

Establish an active working relationship with local MDH staff in order to properly report and track these activities. Forest Staff need to develop the skills needed to access and use this information from the MDH database.

C. Hazardous Material Storage

Many common activities essential to the management of natural resources on Forest Service land require the use of hazardous materials. The proper storage, transport, and handling of hazardous materials are important to protect Forest Service employees from injury or mishap when using chemicals to perform their official duties.

Key Points:

- Forest Plan Standards and Guidelines are being met.
- Hazardous material storage conditions on the forest are consistent with laws and regulations.
- A new HAZMAT storage building is needed at the Deer River Ranger District office.

Monitoring Question

Does hazardous material storage on NF meet standards of quality protective of human health?

Results

The storage and transport of hazardous materials on Forest Service land is regulated by a variety of laws, directions, and policy including FSM 2160 “Hazardous Materials Management Manual”, FSH 6709.11 “Health and Safety Code Handbook”, FSH 2109.14 “Pesticide Use Management and Coordination Handbook”, 29 Code of Federal Regulations (CFR), 40 CFR, National Fire Protection Association (NFPA), Uniform Fire Code (UFC), and others. The Forest Plan requires the appropriate storage, transportation, and use of hazardous materials in order to maintain compliance with these guidelines.

Annual safety audits are conducted on each of the districts and at the SO to assure compliance with applicable regulations. The information collected as part of these safety audits is recorded to monitor accomplishments and identify opportunities for improvement.

A regional Environmental Compliance Contract was conducted in FY 2010 and is in progress in FY 2011. The contract included the inspection of hazardous materials storage areas at each of the forest administrative facilities and major recreation areas. The inspections were conducted by a state of Minnesota Certified Hazardous Materials Manager (CHMM) who evaluated the Forest practices regarding the safe use and storage of hazardous materials. The CHMM also completed the FY10 Region 9 Environmental Checklists for each district office and the SO. The R9 Environmental Checklists are completed annually to document the types of hazardous and regulated wastes generated at each facility and the method used to legally dispose of those waste materials.

The inspection concluded that the Forest is a “de minimus” user of hazardous materials, meaning the majority of chemicals on forest are household chemicals stocked in small quantities. The Forest is storing its hazardous materials safely through the proper use of HAZMAT storage cabinets at administrative facilities.

Funding was available for the disposal of controlled and hazardous waste stored at approved waste accumulation points at the SO, Blackduck RD, Deer River RD, and Marcell. The waste items included paint, pesticides, batteries, ballasts, fluorescent bulbs, oil, fuel thickener, and other miscellaneous items.

Funding has been obligated to cleanup several boneyards in the summer of FY11. The boneyards contracted for cleanup are located at the SO, Blackduck RD, Deer River RD, Stony Point, Cut Foot Sioux Visitor’s Center, Marcell, Swede Hill, and Norway Beach. Items to be disposed include old tires, scrap metal, treated timbers, metal tanks, etc.

New Issues

The Deer River Ranger District office has limited space for hazardous materials storage. A new storage facility is needed as funding permits.

Recommendations

- Initial objectives referenced above were met, but will require ongoing efforts and resources to maintain compliance with FS regulations.
- The Deer River Ranger District office is in need of a new HAZMAT storage building. As funds become available the recommended facility or a similar structure should be provided to meet Deer River’s HAZMAT storage needs.
- HAZMAT training is expected to be developed in the form of videos and should be circulated to Forest staff when it becomes available.

A more detailed report on public health and hazardous materials is in the project file and available upon request.