



Public Access Management Plan Update – 2010

Ware River Watershed



December 2009

Massachusetts Department of Conservation and Recreation
Division of Water Supply Protection
Office of Watershed Management

Abstract

The *Public Access Management Plan Update 2010 - Ware River Watershed* explains DCR-Watershed's obligation to manage public access on its drinking water supply lands, the process used in developing the management plan, and its policies. The update process included an intensive public input component which collected survey data from 274 stakeholders from a period of May 2009-September 2009. This management plan contains six sections 1) an introduction to DCR-Watershed, with a revised Master Policy statement ; 2) a brief history of the Ware River Watershed and existing conditions; 3) the methodology used in the update and development of the policies in the plan; 4) Fact Sheets, with maps where appropriate, for 29 individual public access policies; 5) the description of related operational activities; and 6) an Implementation Schedule, including a new annual policy review process. The revisions and updates made to the 2010 plan have clarified existing policies. Eight policies were modified and one policy was added. DCR will begin implementation of the *Public Access Management Plan Update* starting January 2010. DCR will conduct an annual report to evaluate the Plan in general, as well as any policy concerns or conflicts that arose during the year beginning with its first report in 2011. DCR-Watershed intends to conduct another Plan update by 2020, or earlier, if needed.

Citation

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Public Information

Interpretive Services and Quabbin Visitor Center

Visitor information regarding the Quabbin Reservoir or Ware River watersheds is available from the Interpretive Services staff at the Quabbin Visitor Center, seven days a week from 9:00 am - 4:00 pm. The Quabbin Visitor Center is in the DCR Administration Building, off Route 9 in Belchertown, Massachusetts. Additional copies of this plan are available by request from the Quabbin Visitor Center. For more information, contact the Quabbin Visitor Center at **(413) 323-7221**.

Watershed Rangers

DCR Watershed Rangers conduct off-site community education coupled with patrols and surveillance of DCR lands and waters to minimize threats created by public access on water supply watershed lands and waters. For more information, contact the Watershed Rangers at **(413) 323-0191** or **(617) 828-2452** (mobile).

Massachusetts Water Resources Authority (MWRA):

Additional information related to the Water Supply System can be found on the MWRA's website at www.mwra.com.

Public Comments

This Plan and related information can also be found on DCR's website at www.mass.gov/dcr/watersupply/watershed/wareaccess09.htm. The Division welcomes written public input regarding its management decisions and policies. Please submit written comments to the address listed below. If you are interested in being placed on our mailing list for notification of annual meetings, please send us your contact information to the address listed below:

Comments on *Public Access Management Plan Update 2010 - Ware River Watershed*

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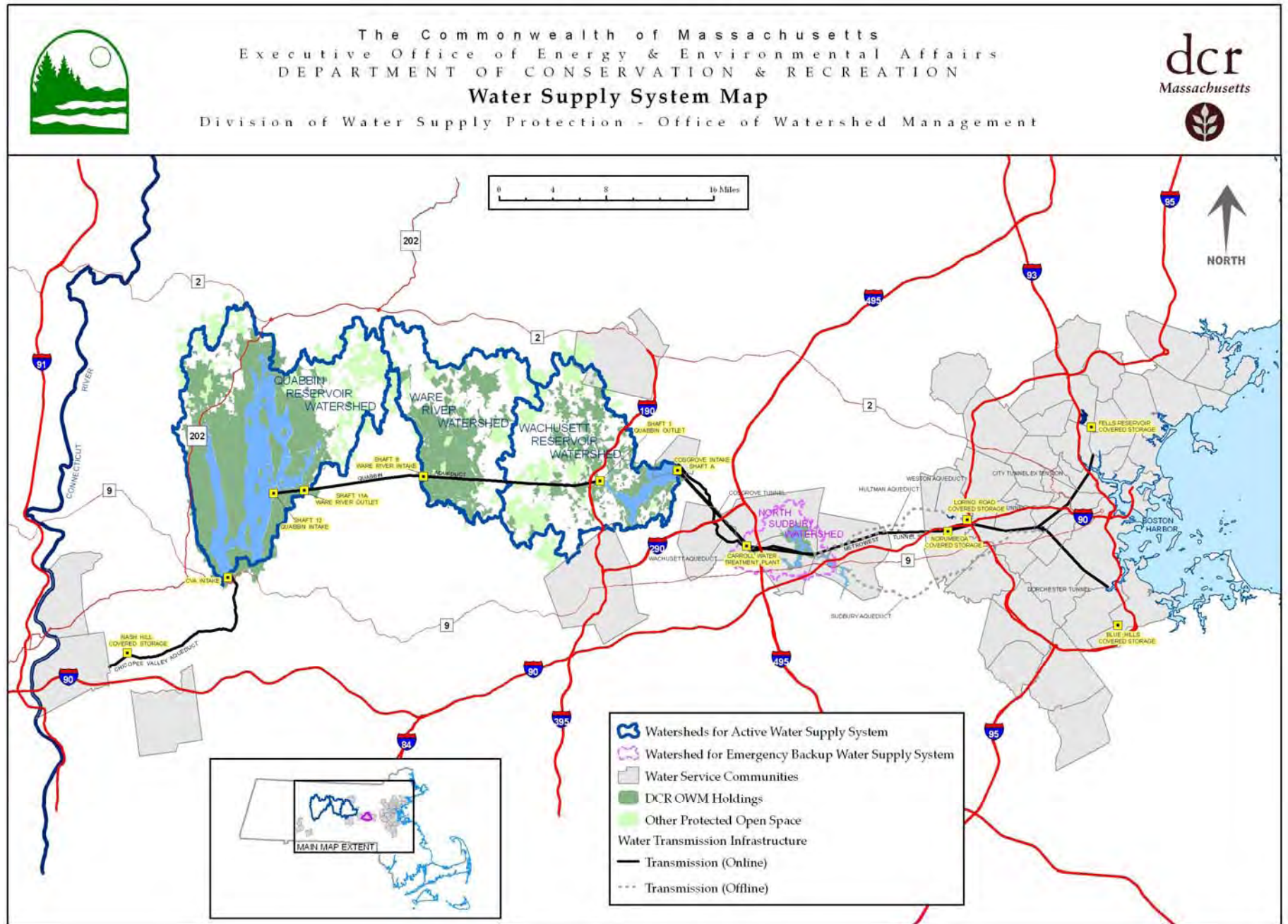
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List of Acronyms Used

ACE	Army Corps of Engineers
AIS	Aquatic Invasive Species
ATV	All Terrain Vehicles
AWWA	American Water Works Association
CDC	Center for Disease Control
Ch 91	Chapter 91 Waterways License or Permit
CMR	Code of Massachusetts Regulations
CVA	Chicopee Valley Aqueduct
DCR	Department of Conservation and Recreation
DCR-Parks	Department of Conservation and Recreation, Division of State Parks and Recreation
DEM	Department of Environmental Management
DEP	Massachusetts Department of Environmental Protection
DPH	Massachusetts Department of Public Health
DFWELE	Department of Fisheries, Wildlife, and Environmental Law Enforcement
EOEEA	Executive Office of Energy and Environmental Affairs
EPA	U.S. Environmental Protection Agency
GIS	Geographic Information Systems
GPS	Global Positioning System
IESWTR	Interim Enhanced Surface Water Treatment Rule (1996 SDWA)
MASSGIS	Massachusetts Geographic Information Systems
MDC	Metropolitan District Commission/Division of Watershed Management
MGD	Million Gallons Per Day
MGL	Massachusetts General Laws
MOA/MOU	Memorandum of Agreement; Memorandum of Understanding
MWRA	Massachusetts Water Resources Authority
ORV	Off-road Motor Vehicle
ORW	Outstanding Resource Water
SWTR	Surface Water Treatment Rule
SDWA	Safe Drinking Water Act
US EPA	US Environmental Protection Agency
USGS	United States Geological Survey
WPR	Watershed Protection Restriction
WPP	Watershed Protection Plan
WRWAC	Ware River Watershed Advisory Committee

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Figure 1. DCR/MWRA Water Supply System



1. Introduction

The Department of Conservation and Recreation, Division of Water Supply Protection, Office of Watershed Management (**DCR-Watershed** or **the Division**) is responsible for the stewardship of over 92,000 acres of critical lands and 45.6 square miles of reservoir surface water within the watersheds of the Quabbin, Wachusett, and Sudbury Reservoirs, and the Ware River (**Figure 1**). These managed lands provide and protect the municipal drinking water supply system for current and future generations. The DCR drinking water supply system consists of four watershed areas, two terminal water reservoirs, and a series of intakes and aqueducts.

Engineers designed the drinking water supply system to collect, store, and transport water from the Quabbin Reservoir's watershed to metropolitan Boston and three communities in central Massachusetts. Due to an ingenious design, the gravity-based intake design system at Shaft #8, diverted water from the Ware River can be transported west to the Quabbin Reservoir or east to the Wachusett Reservoir without the use of pumps through the Quabbin Aqueduct (aka, Quabbin Tunnel). MWRA may divert water seasonally¹ from the Ware River through the Quabbin Aqueduct and to the Quabbin Reservoir. The system is a remarkable example of sacrifice by former landowners in the lost valleys, efficient design of a two-way gravity powered, underground aqueduct, and long-term vision. This commitment to create and protect a vital public resource – clean, adequate, drinking water supply, for the people in the Commonwealth – requires equal commitment in its stewardship.

The Ware River watershed is one of three active watershed areas of the DCR/MWRA water supply system. It is located between the Quabbin Reservoir watershed and Wachusett Reservoir watershed. Designated DCR owned lands in each watershed are available to the public for limited, low-impact recreational uses such as hiking, fishing, and hunting, when compatible with water supply protection and when conducted in accordance with DCR's relevant public access policies. Recreation is allowed in areas specifically designated for recreational access. Areas not available for recreation are closed to public access and are typically marked by "No Trespassing" or other posted signs. Recreational users are expected to respect the rights of private property owners whose property abuts DCR-Watershed lands. Specifically, entry on or exit from DCR-Watershed system land shall be made through gates or other designated areas. Recreational users shall not trespass on private lands in order to access DCR-Watershed lands. DCR strives to responsibly provide controlled public access to DCR-Watershed lands. The *2008 DCR Watershed System Watershed Protection Plan* assessed the potential risk of water supply contamination from recreation/public access on water supply lands in the Ware River watershed as medium importance (DCR, 2008).

¹ Water can be legally diverted from the Ware River between October and June.

The Ware River watershed is approximately 60,000 acres, wholly or partly situated in the eight towns of Rutland, Oakham, Phillipston, Barre, Hubbardston, Templeton, Princeton, and Westminster. Since the 1920s, DCR has acquired water supply lands in the Ware River watershed and now owns 24,694 acres outright and 787 acres in Watershed Protection Restrictions (WPR) on undeveloped land and water in this watershed (**Figure 2**). The Division's watershed management activities, including the protection and maintenance of water supply lands, land acquisition, and payments in-lieu of taxes, are financed by water consumers - the MWRA ratepayers. To date, there have been no waterborne disease outbreaks attributed to this unfiltered, public drinking water supply system.

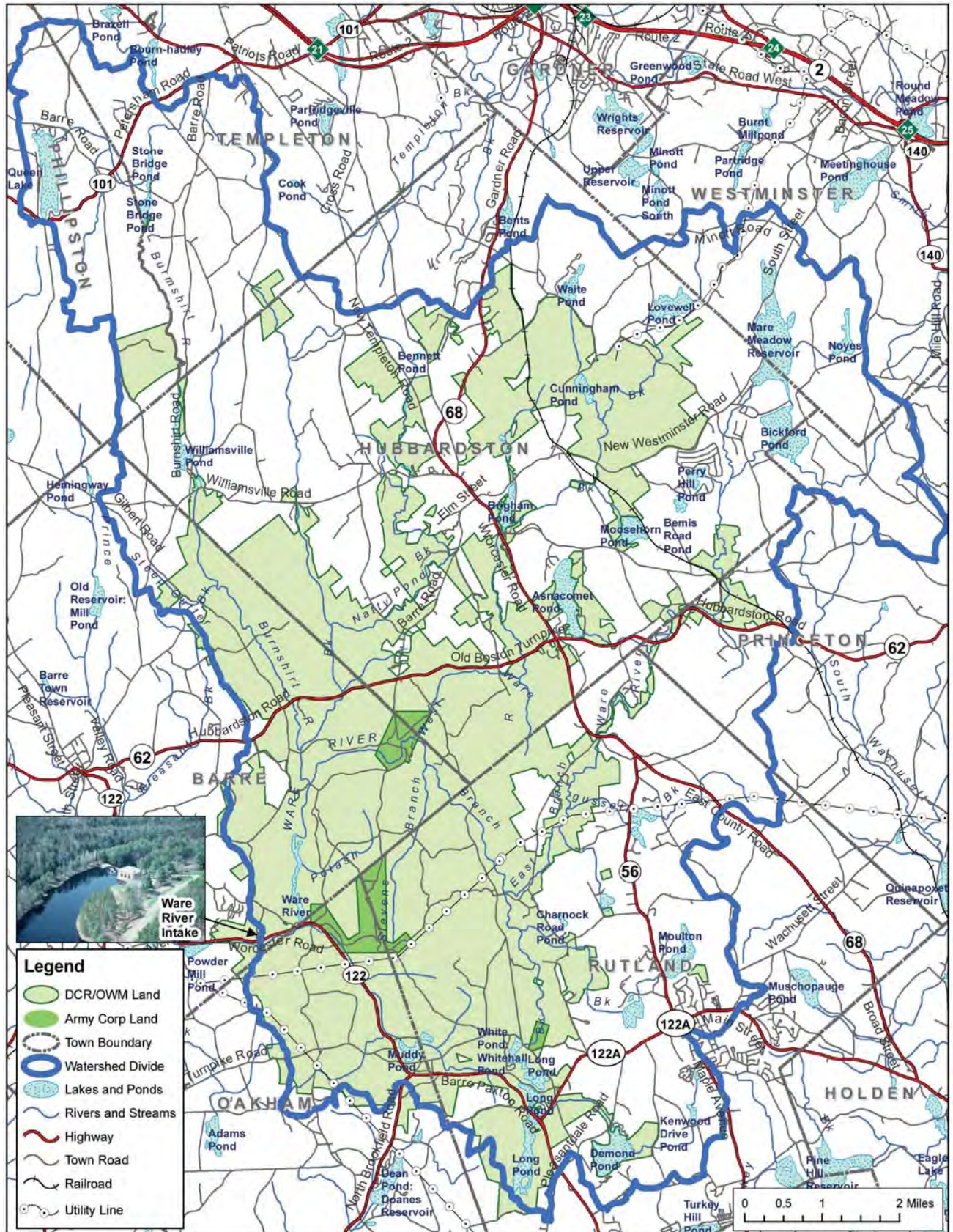
DCR lands in the Ware River watershed were originally purchased to protect water leaving the Ware River watershed and traveling directly to the Wachusett Reservoir. MWRA now transfers water from the Ware River watershed to the Quabbin Reservoir on an intermittent basis. For example, over a seven day period in February 2008, MWRA, in consultation with the US Army Corps of Engineers (ACE) and DCR, diverted approximately 2.061 billion gallons of Ware River water to the Quabbin Reservoir.

Public access onto Division lands is controlled and managed to protect the drinking water supply from contamination. DCR will minimize public health risks posed by recreational use of its lands by limiting access types, access location, and intensity of use. The active management of public access on DCR lands is one element of the Division's comprehensive Watershed Protection Program, as described in the *2008 DCR Watershed System Watershed Protection Plan Update*, available from DCR's website at www.mass.gov/dcr/watersupply/watershed/2008wpp.htm.



Photo 1. Moulton Pond - Rutland, MA

Figure 2. Ware River Watershed with Lands Owned by DCR-Watershed



Regulatory Overview

Public drinking water supplies are highly regulated in the United States to protect public health. Both federal and state laws require water providers to meet rigorous water quality standards for source waters. These standards change over time. The U.S. Environmental Protection Agency (US EPA) administers federal water quality regulations throughout the country. In Massachusetts, the Massachusetts Department of Environmental Protection (DEP) has been given primary responsibility for assuring compliance with state and federal drinking water regulations, and consistently monitors water quality throughout the DCR/MWRA water system to ensure compliance with these regulations

U.S. Safe Drinking Water Act and the 1989 Surface Water Treatment Rule

The U.S. Safe Drinking Water Act and amendments is the primary law used to protect the nation's drinking water supply. Nationally, the Safe Drinking Water Act (SDWA) provides the legal authority for the EPA's promulgation of regulations designed to protect the US drinking water supplies from physical, chemical, and biological (including bacterial) contaminants. The 1986 Congressional reauthorization of the SDWA included the Surface Water Treatment Rule (SWTR) promulgated in 1989. This rule tripled the number of water contaminants to be monitored in both raw and finished water supplies. The SWTR also required mandatory filtration of surface water supplies unless specific criteria for effective watershed management and source water protection were met and maintained. DCR's first Public Access Plan was developed in response to the 1989 Surface Water Treatment Rule criteria for watershed protection.

In Massachusetts, public drinking water supply criteria are described in the State Surface Water Supply Regulations (310 CMR 22.00), a subset of Massachusetts Drinking Water Regulations. The Massachusetts DEP also requires water suppliers that obtain a filtration waiver to develop and implement an effective watershed protection plan. Accordingly, DEP requires a watershed protection plan to identify and mitigate significant sources of pollution within the watershed as well as to demonstrate a high level of control over any activities that could introduce disease organisms to, or otherwise degrade, the water supply.

1996 Safe Drinking Water Act Amendments

The Safe Drinking Water Act Amendments were signed into law on August 6, 1996. Two key features included in the 1996 amendments are: 1) drinking water source protection programs to protect drinking water from pollution; and 2) better public health programs regarding key drinking water standards for, and health studies on, *cryptosporidium spp.*, certain carcinogens, and other water contaminants. Many water professionals consider the 1996 Amendments to represent significant progress in improving public health protection through enhanced protection

of the nation's drinking water supplies. Further, the 1996 Amendments directed all public water suppliers to develop an annual "Consumer Confidence Report" on their system and to distribute the report to each consumer starting in 1999.

DCR 2008 Watershed Protection Plan Updates

In the early 1990s, DCR and MWRA developed two comprehensive Watershed Protection Plans (WPP), one for the Wachusett Reservoir watershed and one for both the Quabbin Reservoir and Ware River watersheds, in response to the 1986 Safe Drinking Water Act Amendments and 1989 Surface Water Treatment Rule (SWTR). The *Wachusett Reservoir Watershed Protection Plan Update* was completed in 1998, integrating the 1996 SDWA amendments. The revision of the Watershed Protection Plan for the Quabbin Reservoir and Ware River watersheds was completed in 2000 and 2003 for Quabbin/Ware and Wachusett respectively. A third Watershed Protection Plan update was completed, on-schedule, in 2008; this document encompasses the entire DCR water supply system. In this current Watershed Protection Plan, DCR considers public access and recreational activities with potential to adversely affect water quality in the watersheds. Contamination sources from public access and recreational activities that are considered and ranked with a level of importance include: improper human and animal fecal waste disposal; trash, debris and other waste accumulations; and trail erosion and resulting sedimentation issues. Public Access/Recreation in the Ware River watershed is identified as a medium priority. Two potential threats to water quality identified in the *2008 DCR Watershed System Watershed Protection Plan Update* that are closely related to public access management, microbial pathogens and invasive species, are discussed in detail below.

Microbial Pathogens

Pathogen prevention is DCR's primary goal. Sanitary waste management of human and domestic animal fecal waste near water bodies that supply public drinking water is an example of pathogen prevention in DCR public access management and control. The access polices in this plan are designed to decrease the potential of water quality contamination by a variety of pollution sources, however microbiological contamination from fecal waste is of the greatest concern. With respect to public access, DCR is most concerned with microbial threats associated with waterborne disease. Sources of microbes include improperly disposed human, domestic animal, or livestock fecal waste near any water body in a public drinking water supply watershed (Craun, 1990; Dubey, 1990; Rose, 1991; LeChevalier, 1993; Mackenzie, 1994; MDC/CEI, 1998). Illnesses caused by *cryptosporidia* and *giardia* are of particular concern nationwide (CDC, 1994 and 1999). Public health risks of waterborne disease are dependent on the level and types of microorganisms found in the watershed, the level of drinking water treatment, and susceptibility of the most exposed individuals (Rose, 1994). The presence of improperly disposed fecal waste and other types of pollution are also a concern to visitors accessing DCR

lands. Recent surveys report that general public perception of water quality and their enjoyment of an area is most negatively affected by the presence of sewage contamination in or near the water or on the banks of the water.

Invasive Species

The current DCR Watershed Protection Plan includes discussion of both Aquatic and Terrestrial Invasive Species. DCR has ongoing monitoring for Aquatic Invasive Species (AIS) and has worked with MWRA to establish identification, inspection, and control programs for AIS at Quabbin, Wachusett, and Sudbury reservoirs. AIS represent a significant threat to the integrity of the water supply.

Heightened concerns about AIS, due to documentation of Zebra Mussel in western Massachusetts, have prompted DCR to increase attention and resources to evaluate this water quality and ecological threat. A comprehensive assessment of the potential and existing risk to the DCR/MWRA water supply system posed by AIS will be conducted. The methodology for this assessment will follow that of DCR's overall watershed protection program: identify the pollutant threat; assess presence or potential for the pollutant in the watersheds; develop and implement control strategies; and evaluate results. A detailed work plan has been developed with tasks organized into three major groupings: 1) Develop Aquatic Invasive Species Assessment and Management Plan; 2) Conduct Control Point Risk Analyses; and 3) Zebra Mussel Tank Study.

The *AIS Assessment and Management Plan* will provide both general and specific actions to identify, prevent, and control impacts of aquatic invasive species in the four water supply watersheds for metropolitan Boston. Primary goals of the plan are preventing new introductions of aquatic invasive species, limiting the spread of established aquatic invasive species into non-infested waters, and controlling existing populations to prevent future impacts to water quality. Assessment and eventual control methods are often difficult and expensive. DCR will consult with MWRA, Massachusetts Department of Fish and Game, and watershed stakeholders in order to develop appropriate level of resources to dedicate to control measures. These decisions will need to be made in the context of on-going watershed management programs to deal with all other existing and potential water quality threats in the watersheds.

Public Access Management Plan Background

The goal of the *Public Access Management Plan Update 2010 - Ware River Watershed* is to protect the source waters of a public drinking water supply from the risk of contamination – microbial, biological, chemical, and physical – because prevention of source water contamination is the very first barrier in DCR's Watershed Protection Program (DCR, 2008).

Since the mid-1980s, the Division has used a watershed-based, Public Access Management Plan as a tool to achieve this goal in each watershed of the system. The Plan looks at the most current information available related to our understanding of the effects of recreational activities on drinking water supply watersheds in order to develop best management practices and policies that protect the public drinking water supply.

The federal Safe Drinking Water Act and Amendments, state drinking water regulations, and DCR's Watershed Protection regulations require that public access on drinking water supply lands must be managed to minimize the risk of waterborne disease. These water supply lands are purchased and maintained through funding provided by Massachusetts Water Resources Authority ratepayers. The primary function of these water supply lands is to protect and provide high quality drinking water for current and future generations. DCR's Public Access Plans detail the Division's management philosophy and explains which programs and activities are used to limit and control access to these lands and waters.

In 1992, the Massachusetts Department of Environmental Protection (DEP) issued DCR a waiver from filtration of drinking water distributed through the Chicopee Valley Aqueduct (CVA). DEP granted the waiver according to existing state and federal drinking water protection regulations. This waiver was based, in part, on DCR's 1988 Access Plan which provided a framework for the control of public access. During DEP's 1999 inspection, under the current Consent Order from filtration for the Quabbin Reservoir's Chicopee Valley Aqueduct (waiver), DEP conducted a sanitary survey of the Quabbin Reservoir Watershed system, which includes the Ware River watershed. Of particular interest and concern to the Department was the allowance of increased activities on water supply lands that may have a detrimental impact on water quality. In addition, State regulations require DCR to produce a management plan to control recreational use of watershed lands under the care and control of DCR. DCR's top priority was to provide adequate protection for its surface water supplies from microbiological contamination. After nearly two years of research, public outreach, and regulatory review, DCR revised the 1988 plan and replaced it in 2000 with the *DCR Public Access Management Plan Update – Ware River Watershed*. The Division's responsibilities include the following:

- Maintenance and operation of the source facilities (including dams) safely and efficiently.
- Preservation and enhancement of the water quality of the supply sources, using education, enforcement, and cooperation to meet State and Federal water quality standards, and protect public health.
- Watershed management activities associated with surface water protection.
- Regulatory compliance with specific directives of the Legislature, such as the protection of the water supply sources, consideration of recreation opportunities, and enforcing rules and regulations for DCR lands and water resources.

- Public outreach and education to involve watershed towns, residents, and the public to increase stewardship of the water resources under the Division’s care and control.
(DCR, 1998)

DCR staff concentrates on the management, operation, and maintenance of the DCR/MWRA water supply system watersheds, reservoirs, dams, and dikes. Division staff includes professional engineers, analysts, attorneys, certified planners, Watershed Rangers, certified foresters, naturalists, bacteriologists, geographic information specialists, wildlife biologists, landscape architects, and a diverse support staff with a variety of skills and training. Division staff carry out a variety of specific watershed protection programs, provide public outreach and environmental education to watershed communities and visitors, and administer and enforce specific watershed protection regulations (350 CMR 11.00).



Photo 2. DCR Staff Monitoring Water Quality

Master Policy

Public Access Philosophy

DCR-Watershed controls over 25,000 acres in the Ware River Watershed – part of a public drinking water supply system for over 40% of the state. In managing this resource, DCR's primary goal is to insure a safe and adequate water supply while protecting natural and cultural resources of the Commonwealth. DCR's public access philosophy is to balance reasonable public access, legally mandated activities, and long-term resource protection. To evaluate new or expanded activity requests, DCR considers the following: potential water quality impacts, user benefits and potential conflicts, DCR land management activities, long-term ecosystem health, and biological diversity.

Annual Plan and Policy Evaluation

Starting in December 2010, DCR staff will prepare annual reports to evaluate the Plan in general, as well as any policy concerns or conflicts that arose during the year. This review will be coordinated through the Ware River Watershed Advisory Committee during their regularly scheduled meetings. These meetings will provide an opportunity to discuss, evaluate, and, if necessary, adopt any minor policy changes (proposed by DCR or by user groups), and will include a public input component. This annual process will inform the larger Plan and Policy update process that is conducted every ten years.

10-Year Plan Update Process

DCR updates its Public Access Management Plan every 10 years. Approximately one year before the 10-year Update deadline, DCR staff review and provide field input to an internal working group on issues or needs related to public access policies. Following this general issue identification, DCR staff begins data collection in consultation with the Ware River Watershed Advisory Committee. In addition, DCR consults with federal and state agencies operating within the watershed (e.g., Army Corps of Engineers, DCR-Parks, Fish and Wildlife) to address inter-agency concerns or policy conflicts, and to enhance coordination. Typically, survey data is collected regarding abutters', recreational users', and other stakeholders' views on existing recreation policies. A literature review is conducted simultaneously to inform and update recreation policy decision making and formulation. A draft Plan Update is submitted for review to MA DEP. Following DEP review, the draft Plan and associated maps are presented at public meetings or public workshop(s), and posted on the agency's website. All public input is considered and final modifications are often made based on the applicable input. The completed Public Access Management Plan Update is posted on the agency's website, and hard copies or electronic copies are distributed to staff and stakeholders.

Need for a Plan Update

Since 2000, recreational demands on and the management of DCR's lands in the Ware River Watershed have been affected by several externalities: 1) merging of state agencies (e.g., Metropolitan District Commission and Department of Environmental Management into DCR); 2) the economic downturn, which appears to have increased local recreational demands; 3) newly identified Invasive Species threats (e.g., Asian Longhorned Beetle and zebra mussels; 4) inter-agency changes in Wildlife Management Area size and constraints; and 5) a new MOU between DCR and MWRA. The newly updated plan addresses these influences in its modified recreation policies. DCR staff have observed and reported an increase in both the types and intensity of recreational activities conducted within its water supply lands of the Ware River. In a thorough review, DCR Watershed staff identified four specific needs for an updated Public Access Plan:

- To address new recreational activities based on staff field observations (e.g., geocaching).
- To collect, evaluate, and incorporate public input to clarify existing public access policies.
- To conduct more interagency coordination in order to minimize policy conflicts and user confusion.
- To apply new scientific and regulatory information to update DCR's public access policies (e.g., Invasive Species).

Policy and Plan Changes

Table 1 compares recreation policies and changes made over the years 1988, 2000, and 2010. In 2010, 29 policies were included in the Plan. Of the 29 policies, eight policies were modified, one policy was added, and the remaining policies were unchanged, but reformatted. Based on public input, more attention was given to improve interagency coordination. In addition, the 2010 Plan includes a historical context of the sacrifices made by the former residents in the Ware River Watershed towns for the water supply system.

Implementation Strategies in the 2010 Plan

DCR staff will implement the policies cited in this Plan beginning in January 2010. In general, the Plan's Implementation Strategies will include the following seven action steps listed below. A more detailed implementation strategy is located in **Section 6** of this Plan.

- Implementing the current policies as designed and described.
- Maintaining and improving structural access controls, as needed.
- Monitoring with referral, when necessary, and resulting corrective actions.

- Maintaining and refining a tracking system and electronic database to document threats, corrective actions taken, and current status.
- Providing educational programs and opportunities to promote watershed protection.
- Partnering with the Ware River Watershed Advisory Committee (WRWAC), State Police, state agencies, and others.
- Providing an annual report to evaluate the Plan in general and any policy concerns or conflicts that arose during the past year beginning in 2011.

Table 1. Summary of Policy Changes – 1988-2010

Access Activity	1988 DCR Policy	2000 DCR Policy	2010 DCR Policy	2010 Comments
Driving	Allowed	Clarified	Modified	Incorporated ACE closure info; no additional roads opened or closed.
Snowmobiling	Restricted	Modified	Modified	Changed Quiet Zone to Restricted Area; added grooming policy; changed designated trails to designated area.
Operating ATV's	Prohibited	No Change	No Change	No change
Bicycling	Not addressed	Added	Modified	All roads open.
Wildlife Viewing/Nature Study	Not addressed	Added	No Change	Changed name.
Hiking/Walking/Snowshoeing	Allowed	No Change	No Change	Added cross-country skiing; changed "Restricted zone" boundaries; group access permits requirement noted.
Cross-country Skiing	Not addressed	Added	Modified	Combined with hiking/walking/snowshoeing.
Hunting and Trapping	Allowed	Modified	Modified	WMA mapping corrected.
Ice Fishing/Ice Skating	Allowed on Reservation	Modified	Clarified	AIS concerns; clean-up required; motorized vehicles off DCR ramps prohibited.
Shore Fishing	Not addressed	Added	Clarified	Unauthorized cutting prohibited; clean-up required.
Fires and Cooking	Prohibited	No Change	No Change	No change.
Dogs and Domestic Animals Walking	Allowed	Modified	Change	Activity name changed to include domestic animals. Dogs under owner's control.

Access Activity	1988 DCR Policy	2000 DCR Policy	2010 DCR Policy	2010 Comments
Horseback Riding	Allowed on designated trails	Modified	Modified designated trails	Traded two trails in response to ACE request and horse group request.
Boating (motorized)	Allowed with limited horsepower	Modified	Modified	AIS Prevention Program requirements added.
Boating (non-motorized) - canoes and kayaks	Allowed	No Change	Change	AIS Prevention Program requirements added; canoe and kayak access clarified.
Night Access	N/A	N/A	Added	Night access for authorized activities is allowed on DCR lands in the Ware River Watershed.
Swimming/Wading	Restricted with two exceptions	No Change	No Change	No change
Operating Personal Water Crafts	Prohibited	No Change	No Change	No Change
Overnight Camping	Not addressed	Added	No Change	No Change
Organized Sports	Not addressed	Added	No Change	No Change
Programs/Assemblies	Not addressed	Added	No Change	Clarified access permit process.
Fishing Derbies	Not addressed	Added	No Change	No Change
Trail Clearing	Not addressed	Added	No Change	No Change
Possessing Alcohol	Prohibited	No Change	No Change	No Change
Collecting/Metal Detecting	Prohibited	No Change	No Change	No Change
Target Shooting	Prohibited	No Change	No Change	No Change
Geocaching	Not addressed	Not addressed	Added	Added Geocaching.

2. Ware River Watershed - Historical Background

Often overlooked, the Ware River watershed is an important piece of the drinking water supply for Greater Boston and the Chicopee Valley. Located between the Quabbin and Wachusett Reservoirs, this is the land and water which drain to the MWRA diversion facility on the Ware River in Barre and travels to the Quabbin Reservoir through an underground tunnel, the Quabbin Aqueduct. While the Aqueduct was originally designed to transport water to either the Quabbin Reservoir or to the Wachusett Reservoir, it has been used almost exclusively one-way, to the Quabbin Reservoir, since the mid 1930s.

As part of the Ware River Diversion Project, approximately 23,000 acres of land were taken by the State of Massachusetts and cleared, in conjunction with the Swift River Valley, to protect the watershed area of the Ware River Diversion Facility. Three towns, as well as Rutland State Prison, were cleared of all farms, factories and homes: 1) West Rutland village, 2) Coldbrook Springs (site of mineral springs² attracting visitors for its “Rare Medicinal Virtues” in Oakham), and 3) White Valley. A total of 350 people lost their homes and businesses to the state to protect the water quality at the Ware River Intake (Maria Beiter-Tucker, Personal communication).



Community Store, Coldbrook Springs, Oakham

View of Rutland State Prison, Rutland.



White Valley village school, Barre

Photo 3. Historic Coldbrook Springs, Rutland, and Barre

The Ware River has two forks, the longest of which (the east branch) begins near Hubbardston, Massachusetts. The River joins the Quaboag River and ends in the town of Three Rivers, Massachusetts where it joins the Chicopee River on its way to the Connecticut River. The Brigham Pond Dam, to form a pond of the same name, first impounds the east branch of the Ware River near Hubbardston, Massachusetts. The watershed north of Hubbardston feeds tributaries of the Ware and Millers Rivers; the Millers River running generally west, and the Ware River running generally south. This river is part of the Massachusetts Water Resource Authority (MWRA) drinking water system serving the greater Boston area.

² It is reported that the MDC filled the springs with gravel to prevent their use.



Photo 4. Rutland Worsted Company, West Rutland

The river was named for early fish weirs (locally pronounced). In 1928 the building of a 12.5-mile (20.1 km) long aqueduct connecting the Ware River to the Wachusett Reservoir commenced, a major public works undertaking. The twelve-foot wide massive horseshoe shaped conduit, known as the Wachusett-Colebrook Tunnel, had to be blasted through solid rock at a depth of 200 feet (70 m). The arrival in 1931 of the first water from the Ware River by way of this tunnel probably saved the Wachusett Reservoir from drying up, for a prolonged drought had reduced Wachusett's water supply to less than 20 percent of capacity. In 1933 the Quabbin Aqueduct was completed, ready to transport water from the Quabbin Reservoir then under construction. The Swift River Diversion tunnel was in full use, bypassing water around the dam area. The Ware River starts at an elevation of about 830 ft (253 m) BCB, fed from the numerous small streams within its watershed, before ending at the town of Three Rivers at an elevation of about 290 ft (88.4 m) BCB.

The river flows through many historic mill towns, where its fall towards the sea provided power. One of the largest such towns is Ware, Massachusetts, which shares its name. This river is part of the Chicopee River Watershed. The Ware River remains as a picturesque artifact of those bygone days when the mill towns used water power. However, its power still starts the natural siphon at the Ware River Diversion in South Barre, Massachusetts. Its water also diverts for storage in the Quabbin Reservoir, using this same facility.



Photo 5. West Rutland Village Memorial, 2006

Operation of Diversion Facility

According to Chapter 375 of the Acts of 1926, water may be diverted by MWRA when the Ware River discharge is in excess of 85 million gallons per day. Diversion is allowed after December 1 until June 1 (Special Report, 1931). No diversion is allowed after June 15th through October 15th. Under special circumstances, diversion may occur between October 15th through June 15th.

Practically speaking, these transfers are limited to times with the Quabbin Aqueduct is not being used to transfer water stored in the Quabbin Reservoir to Wachusett Reservoir. While water from the Ware River can physically be diverted either to the Quabbin or the Wachusett Reservoir, the likelihood of a diversion to Wachusett Reservoir is very low. Currently, under normal operating procedures, MWRA diverts Ware River water flows to the Quabbin Reservoir through the Quabbin Aqueduct.

Water from the river is taken (aka “skimmed”) by nine siphon spillways into a well on top of Shaft 8. Four butterfly valves control the transfer of water from the well into the Shaft. The diverted water then drops 260' vertically following a centrifugal path down a shaft lined with helical guides (Foss, 1932). This pathway provides the energy necessary to move the water from Shaft 8 to the outlet at Shaft 11A and into the Quabbin Reservoir. Once it enters Quabbin, Ware River water typically undergoes approximately a four year residence time before complete mixing.



Photo 6. Builders of Quabbin Aqueduct in the Aqueduct

General Historical Timeline

- 1922** Joint report of the MDC and the Department of Public Health is filed. It recommends taking water from the Ware River and creating a massive reservoir in the Swift River Valley (later to be Quabbin Reservoir).
- 1926** *Ware River Act* [Chapter 375 of 1926] passes, appropriating funds for the construction of a 12-mile long aqueduct from Ware River to Wachusett Reservoir. Metropolitan District Water Supply Commission (MDWSC) is set up to run the project. Construction begins on the Wachusett-Coldbrook Tunnel, which is now the eastern section of the Quabbin Tunnel. Surplus flow in the Ware River is diverted to the Wachusett Reservoir during eight high-water months of the year and increased the safe yield by 40 mgd.
- 1927** Ware River Diversion Project begins, with construction of aqueduct to Wachusett Reservoir and land purchases.
- 1929** Construction starts on Metro Water Supply Shaft 8 building and horseshoe dam.
- 1931** Ware River Intake Works completed. First water from Ware River is diverted through the newly completed, 13.6 mile long “Wachusett-Coldbrook” tunnel to the Wachusett Reservoir. Tunnel cost is \$700,000/mile, plus 13 lives. 20,000 acres of land purchased in the Ware River watershed, including the 914 acre Prison Camp and Hospital in West Rutland.
- 1932** Swift River Reservoir renamed Quabbin Reservoir
- 1940** First diversion of Ware River water is put into Quabbin Reservoir.
- 2006** While the disincorporated towns of the Quabbin valley are well known and documented, the villages of the Ware River watershed that were removed in the late 1920s and 1930s have received relatively little attention. Legislation filed by Senator Stephen Brewer establishes historic markers at the former village sites of West Rutland, Colebrook Springs, and White Valley. The second of these three Ware River watershed historical markers, at the former site of the Village of West Rutland by the intersection of Routes 122 and 122A, is dedicated on May 20, 2006 in a ceremony attended by over 100 people, including 20-30 former residents (**Photo 5**). These markers are important tributes to those who sacrificed their homes and land for the protection of the water resources of the Ware River watershed.

Watershed Assessment

The Ware River watershed, the catchment area of Shaft #8 in the MWRA diversion facility (aka, R. H. Longeran Intake) in Barre, Massachusetts along the Ware River, includes approximately 61,740 acres (96 square miles). The watershed encompasses portions of eight towns: Barre, Hubbardston, Oakham, Phillipston, Princeton, Rutland, Templeton, and Westminster, Massachusetts. At a larger scale, the Ware River watershed is within Massachusetts' Chicopee River basin. This watershed contains public and private lands. DCR-Watershed manages over 25,000 acres of land and waters primarily for drinking water quality protection and supply as well as for ecological purposes. The Ware River watershed contributes approximately 7.5% (41 mgd) of the system's safe yield of 300 mgd (MDC, 1998).

Geology

Formed during the last glacial retreat, the Ware River watershed contains many drumlins (a streamlined ridge or hill of glacial till and stratified drift) and has surficial cover of glacial till. In addition, this watershed area contains many wetlands found in broad valleys underlain by thick, stratified glaciofluvial and glaciolacustrine deposits (MDC/Rizzo, 1991; MDC/CDM, 1998). The bedrock geology consists of metamorphic and igneous bedrock units of the Connecticut Valley Belt lithotectonic subdivision. Overall, the bedrock units are massive, resistant to weathering, and impermeable. Consequently, groundwater recharge into bedrock is limited and thus, rates of surface runoff are comparatively high in the Ware River watershed (MDC/Rizzo, 1991).

Soils and Septic Systems

Some soil types in the Ware River watershed have rapid permeability, including loamy sand and gravel typically found in valleys and in glacial outwash along river corridors. Other soil types present in the watershed have moderate to slow permeability, or very slow percolation rates (MDC/CDM, 1998). Well-drained soils, having rapid permeability, are typically not well suited for the disposal of wastewater through septic systems. However, septic system engineers can overcome soil unsuitability through careful design and maintenance of septic systems constructed or repaired according to the 1995 Massachusetts Title 5 regulations. These regulations establish specific criteria for new systems. The regulations also require inspection of existing septic systems at the point of sale. The regulations require the sellers to bring those "failed" septic systems into regulatory compliance. Massachusetts' septic system regulation requires that the soil characteristics be considered in septic system design. This is an important environmental regulation which protects water quality.

Water Quantity

The water level in the Ware River fluctuates seasonally due to natural factors such as precipitation, evaporation, evapo-transportation, wildlife activities (e.g., construction of beaver dams), as well as due to human factors. While the elevation changes on the river primarily depend on natural factors, operational factors, including flood control activities by the Army Corps of Engineers at the Barre Falls Dam, influence the river's elevation and thus play a role in diversion decisions.

Water resource professionals define a safe yield of a water supply system as the annual volume of water that can be safely withdrawn without adverse impact on the system. The entire DCR/MWRA system safe yield is approximately 300 million gallons per day (J. Gregoire, personal communication). At the time of this writing, the present annual average daily demand on the system is approximately 200 million gallons per day (**Table 2**).

Table 2. System Safe Yields

Source Water	Watershed Area* (square miles)	System's Safe Yield (mgd)	Net Average Annual Withdrawal ⁺ (mgd)
Ware River at MWRA Intake	96	41 mgd	3.32 mgd
Quabbin Reservoir	187	158 mgd	115 mgd
Wachusett Reservoir	117	101 mgd	104 mgd
Total	400	300 mgd	222 mgd

Source: MWRA, 2009. mgd = million gallons per day

* Including area of reservoir surface for Quabbin and Wachusett Reservoirs.

⁺ Period 2005-2009. Withdrawals from each of the three sources vary considerably from year to year, and have declined fairly significantly over the recent decade.

Table 2 shows that the Ware River watershed is an important component of the entire system relative to its contribution to the system's safe yield. Both DCR and MWRA consider the Ware River watershed an important component of the overall public water supply system. Thus, the Ware River watershed helps ensure water supply for a future populations in both the metropolitan Boston area and in the Chicopee Valley.

Water Quality Monitoring

Environmental Quality (EQ) staff conducts water-sampling activities at eighteen sites within the Ware River watershed on a bimonthly basis. EQ staff analyze most of the water samples at the DEP certified Quabbin Laboratory. Select water quality parameters measured from samples taken at one sampling site, Shaft #8 (Ware River Intake) are summarized below (**Table 3**). Division staff considers the water quality at Shaft # 8 to represent the average annual water

quality collected off the Ware River watershed above the intake works. DCR's water quality goals are limited just to the water at the Ware River intake, but encompass the entire watershed, even remote locations.

Table 3. Water Quality Measured at Shaft #8 – 1994-1998

Water Quality Parameter	2004	2005	2006	2007	2008
Average Turbidity <i>NTU</i> (min-max)	1.8 (0.7-4.0)	1.9 (0.6-5.5)	1.8 (0.5- 7.1)	1.90 (0.65-4.02)	1.61 (0.53-3.74)
Average pH (min-max)	6.3 (5.9-6.4)	6.3 (5.6-7.0)	6.3 (5.7-7.0)	6.5 (6.0-7.0)	6.4 (5.8-6.8)
Average Temp. °C (min-max)	10.3°C (0-22)	10°C (0-25.5)	10.1°C (0.2-22.7)	10°C (0-22)	12°C (0-25)
Average Fecal coliform <i>colonies/100mL</i> (min-max)	46 (0-TNTC)	31 (0-120)	23 (<1-92)	26 (<1-132)	31 (<1-216)

Sources: (DCR Water Quality Reports 2004-2008) TNTC: Too numerous to count

Land Use and Land Cover

Undeveloped-forested lands are the dominant land cover, approximately seventy-five percent of the Ware River (**Table 4**). Approximately five percent of the watershed area is used for agriculture. Residential land use comprises approximately three percent of the watershed. Agricultural use is only slightly higher than residential use in the Ware River watershed. Commercial/Industrial use, in 1997, represents less than one percent of the land use in the watershed. This large, forested land cover offers attractions to those seeking residential relocation and recreational destinations. Based on analysis of land cover, land use, and field surveys, DCR staff have estimated that existing recreational activity occurs in approximately eighty-nine percent of the Ware River watershed area (i.e., throughout the forestlands, wetlands, agricultural lands, and open water). Compared to the entire system, the Ware River watershed is a good representation of the aggregate land use and land cover.

Table 4. Land Cover and Land Use Percentages

Watershed	Forest Cover	Wetland Cover	Surface Water	Agricultural Use	Commercial/Industrial Use	Other
Ware River	75%	11%	3%	5%	0.2%	4.8%
Wachusett Reservoir	67%	8%	2%	8%	0.6%	5.4%
Quabbin Reservoir	87%	6%	0.3%	3%	0.1%	0.6%
Total	77%	8%	2	5%	0.3%	3.7%

Source: (DCR, MWRA, and CDM, 1997)

As of 1998, DCR owns or directly controls approximately forty-one percent (41%) of the entire DCR-MWRA water supply's watershed system, exclusive of the reservoirs. DCR has extensive land ownership and significant land use control in the Ware River watershed. DCR owns approximately thirty-seven percent (37%) of the Ware River watershed and specifically regulates approximately 18,747 acres in the primary protection zones and 61,660 acres in the secondary protection zones affected by the 1992 Watershed Protection Act (Craig Fitzgerald, personal communication). DCR regulates these areas according to specific and general regulations found in 350 CMR 11.00. According to DCR's Watershed Protection regulations (350 CMR 11.09), DCR along with MA DEP have general environmental protection control and enforcement authority throughout the remainder of the watershed. For a more in-depth description of DCR's land management activities in the Ware River watershed, please refer to the Division's *Watershed Protection Plan Updates*, annual *DCR Environmental Quality Assessments (EQAs)*, *DCR Water Quality Reports*, *DCR Land Management Plans*, and *Quabbin and Wachusett Reservoir Watersheds Aquatic Wildlife Pathogen Control Zones*.

Population trends have shown rapid growth within Ware River watershed communities between the 1980 and 2000 census (**Table 5**). 2008 population projections in these communities suggest steady growth within the watershed into the 21st century. DCR will continue to monitor land use and land cover changes over time.

Table 5. Ware Watershed Town Population 1980-2008

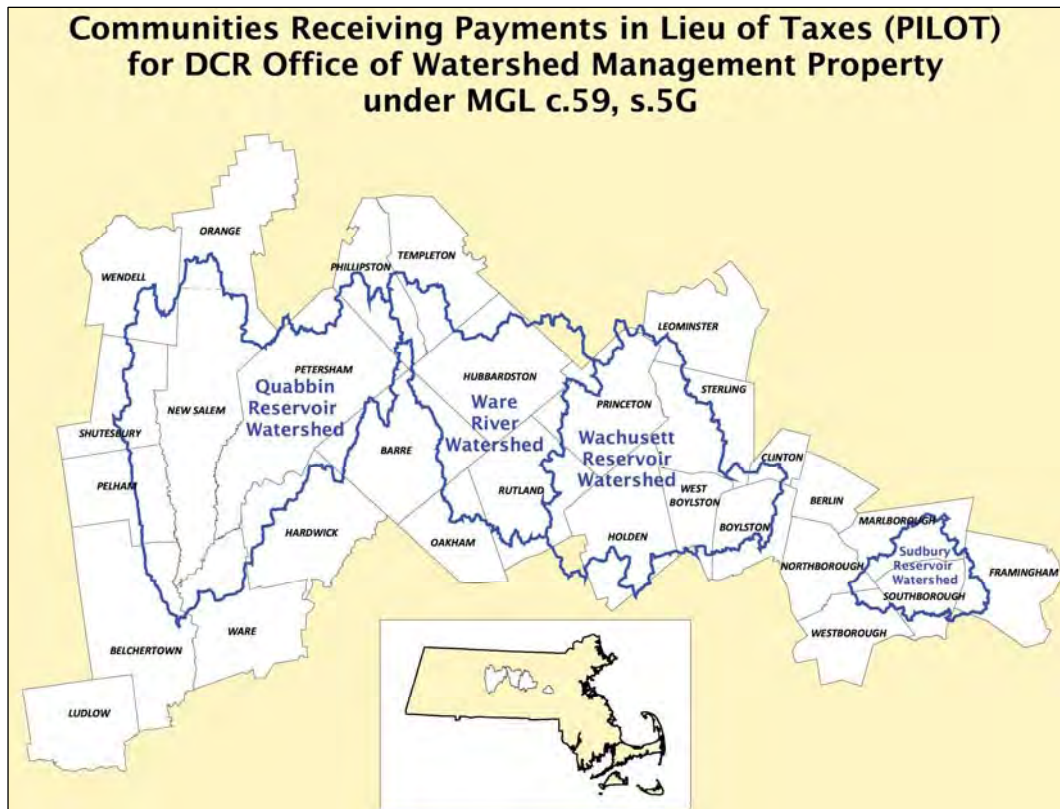
Town	1980 Population	1990 Population	2000 Population	2008 Population (Estimated)
Hubbardston	1,797	2,797	3,909	4,482
Rutland	4,334	4,936	6,353	7,899
Barre	4,102	4,546	5,113	5,431
Westminster	5,139	6,191	6,907	7,391
Oakham	994	1,503	1,673	1,914
Phillipston	953	1,485	1,621	1,787
Templeton	6,070	6,438	6,799	7,831
Princeton	2,425	3,189	3,353	3,475

Source: www.massbenchmarks.org/statedata/data.htm

Payments in Lieu of Taxes Program

The DCR-Watershed Payments in lieu of Taxes (PILOT) program is the method that DCR-Watershed compensates communities which contain the land and water bodies that comprise one of the nation's largest unfiltered water supply systems (**Figure 3**). The Payment in Lieu of Taxes program guarantees regular and stable payment to the 31 communities shown below. More than \$855,000 was paid in Fiscal Year 2009 to Ware River Watershed towns (**Table 6**).

Figure 3. Communities Receiving Payments in Lieu of Taxes



Massachusetts General Laws c.59, §5G mandates that DCR's Division of Water Supply Protection make Payments Lieu of Taxes (PILOT) on the Commonwealth property managed by the Office of Watershed Management. The current law was ratified in 1984 for the Quabbin Reservoir and Ware River Watersheds and was amended in 1987 to include communities in the Wachusett and Sudbury Reservoir Watersheds.

The base information used for determining DCR PILOT, as with all other State Owned Land PILOT, is the valuation performed every four years by the Department of Revenue (DOR); the latest revaluation was completed in 2009 and will be the basis of the FY2010 PILOT. It is strictly DOR's responsibility to set the value for this land

There are, however, several differences between the DCR PILOT and other State Owned Land reimbursements that are made by the Commonwealth under MGL c.58, §§13-17:

1. MWRA ratepayers pay the bill.

Funds for the DCR PILOT payments come from MWRA rate payers who use the reservoir waters; MWRA provides funding to DCR to make PILOT payments to the watershed towns. Unlike other PILOT programs for state-owned lands, which are disbursed through the State’s Local Aid program (“Cherry Sheets”) and are subject to legislative appropriation, the DCR program is paid in full directly to each community. The DCR payment does not appear on the Cherry Sheet.

2. DCR PILOT utilizes the local commercial tax rate.

The PILOT which is distributed through the “Cherry Sheet” is based on a statewide average of residential tax rates calculated by DOR. DCR PILOT is required to utilize each community’s commercial tax rate in calculating the PILOT obligation.

3. The payment can never be less than the previous year.

MGL c. 59, §5G states that DCR PILOT can never be less than the previous year’s payment. This “hold harmless” clause provides the watershed communities the security of level funding even if a drop in valuation or tax rate combines to lower the calculated PILOT. This requirement provided watershed communities close to \$1 million in FY08.

Since 1985, more than \$80 million has been distributed in DCR-Watershed PILOT payments. Fiscal Year 2009 PILOT calculated for all 31 eligible communities in the DCR/MWRA water supply system was \$6.5 million. For a complete listing for each watershed community, go to www.mass.gov/dcr/watersupply/watershed/pilot.htm.

Table 6. Annual Payments in Lieu of Taxes Made by DCR to Ware River Watershed Towns

Town	FY05	FY06	FY07	FY08	FY09
Barre	\$129,668	\$129,668	\$129,668	\$131,178	\$134,451
Hubbardston	\$238,371	\$249,984	\$249,984	\$249,984	\$249,984
Oakham	\$77,760	\$77,760	\$77,760	\$77,760	\$77,760
Phillipston	\$7,067	\$7,067	\$7,067	\$9,538	\$9,555
Princeton	\$38,848	\$38,848	\$38,848	\$40,728	\$44,749
Rutland	\$285,401	\$306,556	\$316,559	\$329,798	\$338,586
Templeton	\$534	\$534	\$534	\$575	\$637
Total Ware River Watershed lands	\$777,648	\$810,417	\$820,419	\$839,562	\$855,722
Total PILOT	\$5,076,573	\$5,919,709	\$5,969,049	\$6,226,338	\$6,506,765
% of total	15%	14%	14%	13%	13%

Source: DCR/DWSP

3. Plan Update Process

DCR Working Group

DCR staff updated the Public Access Plan using an analytic-deliberative process (NRC, 1996). This process integrates field experience, research, and public participation. The goal of this process is to develop a well-synthesized and balanced management plan. The next section contains a brief description of the resources used to update this Plan.

Representatives from each DCR work group in the Quabbin Section make up the DCR Public Access Working Group. This group serves to guide the revision process and content of the Public Access Plan updates. When assessing the water quality effects of public access and recreational activities within a water supply watershed, this DCR work group considers long-term water quality influences along with short term, human dimensions (i.e., political, economic, and social considerations). When developing its Public Access policies, the Division tries to strike a balance between public health protection and controlled amounts of low intensity, public access within the water supply lands. Controlled public access can assist water supply protection by increasing public awareness for the water supply watershed, alerting the Division to problems on the watershed, and discouraging unauthorized access on lands or waters. The Division's Public Access Working Group uses adaptive management techniques to revise, reassess, and deliberate its recreational policies within a 5-10 year cycle, depending on circumstances. Given a mandate to provide pure water for current and future generations, the Division will remain cautious in allowing new or expanded activities. This guiding principal is articulated in the revised DCR Master Policy Statement.

Watershed Rangers

The need for a watershed specific, ranger program was first identified in the *1991 Watershed Protection Plan* for the Quabbin and Ware River watersheds. The plan rated the potential threat to the water supply from recreational use of DCR lands as moderate to high. The Plan recommended implementing a Uniformed Ranger Program to help monitor and educate users to address this threat. In 1992, the need for additional surveillance of Quabbin Reservoir and Ware River watersheds was heightened with the merger of the former MDC Police and MA State Police and a reduction in field presence. The DCR Public Access plan for DCR lands in the Wachusett Reservoir's watershed, completed in 1993, recommended hiring Watershed Rangers for surveillance of public access and education of visitors. As a result, six DCR watershed rangers came on staff in the Quabbin/Ware River Section between 1997 and 1999.

The purpose of the Watershed Ranger Program is to change visitor behavior in order to reduce the risk to the water supply. This is done through patrol and surveillance of DCR lands, as well as with community education. Patrols serve to show a positive, visible DCR presence, to deter

violation of rules, and to intervene when violations are observed. The DCR Watershed Rangers regularly patrol in the Ware River watershed according to a series of patrol schemes (Figure 4).

Current Public Access Issues on DCR Lands in the Ware River Watershed

Visitor impacts or threats to the water supply vary within each of the DCR watersheds. Some violations occur even though the perpetrator(s) has full knowledge of DCR-Watershed rules and regulations. However, random surveys of visitors to DCR lands and waters in the Ware River watershed indicate that many people are unaware or misinformed of certain rules and regulations. DCR staff have documented that a uniformed ranger presence serves as a deterrent to violators who are aware of rules and as a way to educate those who are misinformed about the rules. The following list outlines the types of problems identified by the Watershed Rangers that are currently being monitored and addressed by Watershed Ranger staff in the Ware River watershed:

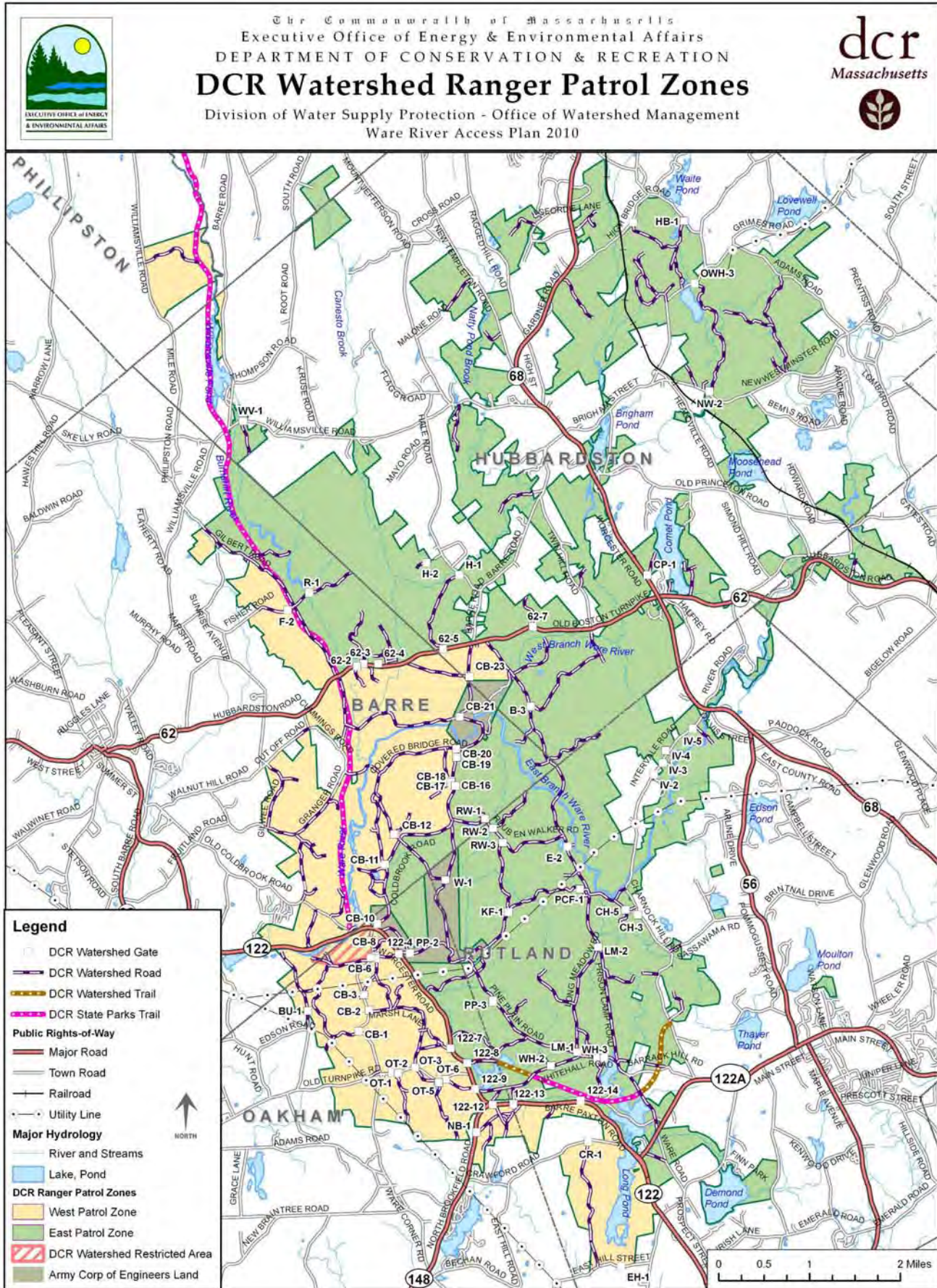
- Illegal ATV access
- Snowmobiles in unauthorized areas
- Horses in unauthorized areas
- Trash and debris dumping
- Camping and campfires
- Vandalism to DCR property
- Motor vehicle usage in unauthorized areas
- Trespassing on private property abutting DCR lands.

The Watershed Ranger Program is not meant to replace the traditional law enforcement function of the Environmental Police Officers (EPOs) and police agencies. While the Rangers will contact the police when law enforcement is necessary, their main function is proactive, discouraging illegal activity through a focused patrol and surveillance presence.

In-house Research

The Public Access Management Plan is developed internally, as opposed to being developed by an outside consultant. In-house resources used in this update process include DCR staff's historical knowledge and individual expertise (discussed previously in the internal working group and Watershed Ranger sections) collected through internal meetings and draft plan development. All elements of this plan were produced by DCR staff, including tasks such as collecting and analyze water quality data, developing maps, synthesizing the current literature, and publishing the document. In addition, this plan required a public survey component, which was conducted by DCR staff.

Figure 4. Watershed Ranger Patrol Zones in the Ware River Watershed



Water Quality Monitoring

DCR continually monitors water quality throughout all the watersheds for events that may influence the water quality for a short duration. In addition, Division staff monitors land uses and land cover for activities which may slowly or cumulatively affect water quality for a longer duration. For example, the Division conducted in-house research regarding human sanitation practices within remote areas open to the public (Hopkinson, 1993). In response to the research findings, DCR has implemented a limited program of portable sanitary facilities in closely monitored areas. In 1995, the Division conducted a recreational access compliance survey within the Quabbin Reservoir watershed. The purpose of the study was to determine the level of user awareness of DCR violation reports and enforcement actions, regulatory work case status, and field visit reports from watershed monitoring activities. These databases can be used to detect the location of the greatest recreational impacts and pressures within all three watersheds of the DCR system.

Map Making

DCR staff creates the majority of the maps used in this Plan and posted on its website. These maps are drafted internally and distributed to stakeholders for input. Map making is a critical component of public access management. Clear, simple maps are requisite in managing access, minimizing user conflicts, and enforcing rules and regulations. Over time, access maps change to reflect the best available information. While maps are presented in the plan as static, map modifications are generally anticipated and are posted on the agency's website when necessary.

Literature Review with Annotated Bibliography

With the development of each Quabbin Reservoir and Ware River Public Access Plan, Division staff and consultants have conducted a series of literature reviews regarding water quality protection and public access (MDC 1988, 1999; DCR, 2009). The references cited in this Plan represent a small percentage of references reviewed by staff during the update process. In this plan, an annotated bibliography has been included in the Appendix.

Since the mid 1980s, DCR has reviewed the scientific literature related to drinking water supply protection and recreational activities on water supply sources, within the buffer areas of these sources, and within the watershed contributing to these sources, to inform its approach to public access management in the public drinking water supply watersheds of the Quabbin Reservoir, Ware River and Wachusett Reservoir Watersheds. The literature related to the effects of recreational activity on drinking water supplies over the past thirty years has documented the increased recreational interests and conflicts, increased water supply contamination issues within a changing landscape of human values, and population pressures on drinking water supplies and their watersheds.

In the 1980s the literature had just touched on the threat of microbial contaminants such as *giardia* and *cryptosporidium* to public drinking water supplies. The literature of the 1990s confirmed these threats and added the myriad potential threats from global climate change to the potential list of threats. Scientific literature and public awareness are currently looking carefully at the threats to water quality from the use and disposal of personal care products and pharmaceuticals as well as aquatic invasive species.

Two comprehensive literature reviews were completed in 2009. A national perspective is provided by the review made by EPA, whereas the Australian Waters Services gives an international perspective. The main points of both these reviews can be summarized as follows:

- Start with the best possible source water quality in order to best protect public health.
- Pollution prevention is the most critical step in source water protection.
- Protect the source water from actual or potential microbial, chemical, and other physical contamination.
- Store an adequate quantity of water of sufficient quality to reduce risk.
- Control recreational activities, which are actual and potential sources of microbial, biological, physical, and chemical contaminants in water.
- Control and limit to human access is a keystone to pollution prevention that will minimize public health risks.
- Focus enforcement on the small group of violators.

In addition, the USDA Forest Service study concluded that many conflicts exist not only between recreational uses but also between use of water for recreation and for other purposes, yet there is a limited understanding on how to resolve them.

Ware River Watershed Advisory Committee (WRWAC)

The Massachusetts legislature passed an act in 1995 creating the Ware River Watershed Advisory Committee (WRWAC; MGL Ch. 92, Section 104). This Act relieved the Quabbin Watershed Advisory Committee (QWAC) of its advisory duties within the Ware River Watershed. The purpose of the WRWAC is to “advise the division on its policies and regulations regarding recreational activities, land use and environmental, wildlife and habitat matters within the Ware River waters.” This legislation, introduced by a local citizen and sponsored by a local Senator, directs the specific composition of the new committee. The legislation states that the WRWAC will be composed of:

...one person from three names nominated by each of the following organizations: the Massachusetts Council of Sportsmen, the Worcester County League of Sportsmen, Trout Unlimited, a rod and gun club located in the town of

Barre, Hubbardston, Oakham or Rutland, a designee of the board of selectmen of each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the historical societies in each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the Massachusetts Wildlife Federation, a representative of the Massachusetts Audubon Society, a representative of the Sierra Club, and a representative of the Upper Ware river watershed association and one member from the general public... (MGL Ch. 92, §104)

The mandated advisory committee for the Ware River watershed complemented the Division's 1995 decision to develop separate Public Access Plans for the Quabbin Reservoir watershed and the Ware River watershed. In 1997, DCR's predecessor helped establish the Ware River Watershed Advisory Committee (WRWAC) by accepting nominations and offering in-house services to set-up the committee. In its first year, the WRWAC met fifteen times to discuss public access issues on DCR lands. In October 1999, the WRWAC submitted a list of ten specific recommendations regarding the Divisions' draft DCR *Public Access Management Plan Update – Ware River Watershed 2000*. Most of the Advisory Committee's recommendations were incorporated into the final Plan. Since then, the Advisory Committee has met regularly throughout the year for a decade.

In 2009, the Advisory Committee was once again tapped to advise the Division regarding its Public Access management plan and policies. The group contributed to a user and abutter survey project, helped organize input from organized recreational user groups (e.g., snowmobile and horseback riding groups), as well as input from concerned citizens and land abutters to DCR lands. The Advisory Committee received a draft of the Plan update in September 2009 and submitted recommendations that same month (**Appendix B**).

Public Input

Since the inception of the Division's first Public Access Plan in 1988, staff have specifically focused on incorporating public input into policy development. Staff firmly believes that public opinion improves its management decisions related to public access management and, ultimately, watershed protection.

Over the past decade, the Division's stakeholders have become increasingly more aware of the relationship between safe drinking water and public health protection. Recent media coverage has served to introduce the many potential threats to public drinking water sources as well as the public health consequences of these threats: the cost, quality and environmental impacts of tap water compared to bottled water; newly identified contamination by personal care products and pharmaceuticals; and aquatic invasive species. Public involvement and participation was an important resource used in this plan update. DCR staff recognizes several types of stakeholders affected by the *Public Access Management Plan Update 2010 - Ware River Watershed*. The

Division staff considered the following five types of stakeholders:

- People who live inside the watershed area who use the Division lands for recreation.
- People who live inside the watershed with non-recreation based concerns, such as the local tax base and community services, historical issues related to current land use practices, and the preservation of historic/prehistoric resources.
- People who live outside the watershed area who use Division lands for recreation.
- Representatives of other state and federal agencies who offer recreational access in the watershed.
- Ratepayers, water supplier (e.g., MWRA), and other water consumers.

Survey and Interview Projects

From May-June, 2009, DCR-Watershed conducted two surveys and an informal interview process to collect public input for the *Public Access Management Plan Update 2010 - Ware River Watershed*. The two surveys and interview were utilized to gather information on people's understanding and acceptance of current DCR-Watershed public access policies in the Ware River Watershed. In addition, the surveys and field interviews were also used by DCR as an opportunity to provide participants with facts about DCR-Watershed.

The purpose of the public input process is to actively collect input from a variety of stakeholders to help guide the update of the Ware River Watershed Public Access Management Plan and related policies. Specifically, the project was designed to identify: 1) recreational user conflicts; 2) inaccurate or outdated policies; and 3) recreational activities not addressed in the past plan (e.g., geocaching).

The primary goal of the surveys and on-site interview are to collect public input from three groups: stakeholders (Advisory Committees, sister agencies), abutters (private land owners with property adjacent to DCR-Watershed lands), and recreational users (formal and informal organized groups). In addition, the Division used this project as an opportunity to distribute information about DCR-Watershed and its functions. To achieve the Division's goal, staff piloted two new public input methods: an on-line survey through www.surveymonkey.com and on-site interviews.

Survey development was conducted by an internal working group with feedback from the Advisory Committee. This first survey, SPR survey, was distributed to DCR stakeholders (e.g., advisory committees, legislators), 2009 Long Pond permit holders, and to recreational users with an attached self-addressed stamped envelope. This first survey was edited and improved by graduate students studying the field of recreation management and survey design. The second survey was sent to DCR-Watershed abutters. Informal interviews were conducted at three primary locations within the Ware River Watershed: 1) Long Pond in Rutland, MA; 2) Comet

Pond, Hubbardston, MA; and 3) Rail trail parking lot off of Route 122 in Rutland, MA. An interview sheet was developed and used to conduct these interviews. Interview data and comments were analyzed and organized in a separate www.surveymonkey.com survey.

Survey and Interview Results

With two different surveys and personal interviews, the data analysis was challenging within the Survey Monkey framework and with the available administrative/technical resources. While the varying distribution methods make it difficult to calculate an accurate response rate, and while data from the two survey versions cannot be scientifically compared due to varying question formats, it can be said that DCR-Watershed succeeded in obtaining substantial public input from a variety of respondents. While it would have been ideal to use only one survey version, and to have that same version in an online format, the revised paper abutter survey successfully gathered public input in accordance with the initial goals. Overall, the response rate between June-July was approximately 17%. However, the survey deadline was extended from September 1 to September 15th for some stakeholder groups to distribute to their constituents at the time of the report deadline.

While there was a typically small sample size, respondents were generally knowledgeable about DCR-Watershed facts (e.g., organizational, financial, functional aspects), and satisfied with current DCR-Watershed policies for public access on its lands in the Ware River Watershed. While all the Ware River watershed attributes are highly valued by respondents, wildlife, public drinking water supply, and healthy forest were the top three most important values. More outreach for education and input is needed to other stakeholders, abutters, and recreational users in areas such as DCR-Watershed's specific functions, such as their use of forest management revenues and payments in lieu of taxes (PILOT) program. Finally, some areas identified to improve the survey process in the future include: improve collaboration with DCR's Information Technology group to increase communication and collaboration on on-line surveys; increase outreach to include other stakeholder groups and non-recreational users; update abutter mailing list to improve survey response rate; increase knowledge about surveymonkey.com question formatting and analysis; simplify on-line survey web link to appear more user friendly and to encourage use; advertise the survey availability and location on local TV and radio broadcast stations, and in local newspapers, magazines, and periodicals; collect email addresses for future mailings to improve economic efficiency; create one survey version, with an identical online survey before survey mailing begin to make results comparable and statistically significant; and conduct on-site interviews during weekend days to reach more recreational users (DCR, 2009).

In addition to input from the Ware River Watershed Advisory Committee, DCR-Watershed received written public input during the update process (**Appendix B**). These specific requests were discussed in great detail by the internal working group.

4. Public Access Policies and Fact Sheets

This section contains 29 activity-based policy Fact Sheets with accompanying maps, where appropriate. Each fact sheet describes the current policy for a specific recreational activity on DCR-Watershed lands in the Ware River watershed. The order of the fact sheets corresponds with the order of activities found in the Public Access Policy Summary (**Table 7**). Individual fact sheets are also available at the Quabbin Visitor Center in Belchertown, from the DCR's Watershed Rangers, or on the agency's website at: www.mass.gov/dcr/watersupply/watershed/wareaccess09.htm.

General Public Access Policy - Ware River Watershed

DCR has sole authority to restrict activities that may cause a threat to water quality protection. According to DCR's general rules and regulations, 350 CMR 11.09, public access and recreation activities are prohibited outright, or may be restricted by time, season, and/or location. DCR allows general public access on DCR owned lands in the Ware River Watershed System according to location, time, season, and allowed activities. Public access is prohibited within the restricted area around the MWRA Ware River Intake Building. General access rules include:

- Users shall respect the rights of owners of neighboring properties and shall not trespass on private lands.
- Dogs shall be under the control of their handlers at all times.
- Users shall wear blaze or safety orange during hunting season.
- Groups greater than 25, including leader, shall use a permit.
- Users shall follow signage.
- Public access on water supply lands for commercial activities is strictly prohibited.
- Littering, polluting, dumping, bathing, swimming, and washing are prohibited.

DCR controls public access on its lands and waters in the Ware River watershed using both its general public access policy and activity specific policies. DCR-Watershed prohibits some recreational activities (e.g., ATVs). All other authorized low-impact recreational activities are generally limited and/or controlled by location, season, or under specific environmental conditions (e.g., snow depth for snowmobile access). Because of the many variables related to the access policies, DCR-Watershed has summarized its access policies on Division owned land in the Ware River Watershed. However, a more complete policy explanation for most recreational activities explanation is found in the Fact Sheets.

General public access for low impact recreational activities on Water Supply lands is allowed through gates or barways in designated areas only. Any activity which injures or defaces the property of the Commonwealth is strictly prohibited. Night access is allowed on DCR-Watershed lands in the Ware River Watershed. All users shall respect the rights of private

property owners abutting DCR-Watershed lands while using Water Supply lands. Users shall not trespass on private lands to access DCR-Watershed lands. These policies are based on 350 CMR 11.00, Watershed Protection Regulations. All users should wear blaze or safety orange during the various hunting seasons, especially horseback riders and hikers. Groups greater than 25, including the leader, are required to obtain a group access permit two weeks prior to access. For more information, please contact the Quabbin Visitor Center at (413) 323-7221 or the DCR Watershed Rangers at (413) 323-0191 or (617) 828-2452 (mobile).

Public Access Policy Summary - Ware River Watershed 2010

DCR updated its policies for public access and recreation activities allowed with restrictions within the Ware River watershed for 2010. **Table 7** contains a summary of each policy. The recreational policies are arranged by recreational activity type. Each activity policy is classified by three DCR management areas in the Ware River Watershed: 1.) Ware River Reservation, 2.) Ware River Off-Reservation lands, and 3.) Ware River Intake Zone (***Restricted Area***). The two symbols used in **Table 7** are: 1) a circle with a slash that symbolizes that the activity is prohibited, and 2) a square, which indicates that it is allowed in that management area. If necessary, a footnote describes any special conditions related to the activities. All authorized activities must comply with the general access policy as well as the specific, if applicable, policy.

Ware River Public Access Policy Fact Sheets

Each Fact Sheet has a standard format, but may vary in size. The first section is a brief Policy Statement. Next, DCR's General Access Policy restrictions are described. A discussion section contains important public and staff input. A list called "Mechanisms for Control" follows the discussion. The Fact Sheet concludes with a listing of contact information for additional information. If necessary, a map or figure is included at the end.

Table 7. Public Access Policy Summary 2010, Ware River Watershed

Activity	Ware River Reservation	Ware River Off-Reservation	Ware River Intake Zone (Restricted Area)
VEHICLE ACCESS			
<i>Motorized</i>			
Driving – vehicles registered for public roadways	<input type="checkbox"/> 1	<input type="checkbox"/> 1	⊘
Snowmobiling – designated area only	<input type="checkbox"/> 2	<input type="checkbox"/>	⊘
Operating ORVs – ATVs, dirt bikes, etc.	⊘ 3	⊘ 3	⊘3
<i>Non-Motorized</i>			
Bicycling – DCR roads only	<input type="checkbox"/> 4	<input type="checkbox"/> 4	⊘
FOOT ACCESS			
Wildlife Viewing/Nature Study	<input type="checkbox"/> 15	<input type="checkbox"/> 15	⊘
Hiking/Walking/Snowshoeing/ Cross-country Skiing	<input type="checkbox"/> 15	<input type="checkbox"/> 15	⊘
Hunting and Trapping	<input type="checkbox"/> 5	<input type="checkbox"/> 5	⊘
Ice Fishing and Ice Skating	<input type="checkbox"/> 6	<input type="checkbox"/> 6	⊘
Shore Fishing	<input type="checkbox"/> 6	<input type="checkbox"/> 6	⊘
Fires and Cooking – includes gas grills	⊘	⊘	⊘
Dogs and Domestic Animals – includes hunting with dogs	<input type="checkbox"/> 7	<input type="checkbox"/> 7	⊘
Horseback Riding – designated routes	<input type="checkbox"/> 8	<input type="checkbox"/> 8	⊘
WATER ACCESS			
Boating (motorized)	⊘ 9	<input type="checkbox"/> 10	⊘
Boating (non-motorized) – canoes and kayaks	<input type="checkbox"/> 11	<input type="checkbox"/> 11	⊘
Swimming/Wading	<input type="checkbox"/> 12	<input type="checkbox"/> 12	⊘
Operating Personal Water Crafts – jet skis	⊘	⊘	⊘
OTHER ACTIVITIES			
Night Access	<input type="checkbox"/>	<input type="checkbox"/>	⊘
Overnight Camping	⊘	<input type="checkbox"/> 13	⊘
Organized Sports	<input type="checkbox"/> 14	<input type="checkbox"/> 14	⊘
Programs/Assemblies	<input type="checkbox"/> 15	<input type="checkbox"/> 15	⊘
Fishing Derbies	<input type="checkbox"/> 14	<input type="checkbox"/> 11	⊘
Geocaching	<input type="checkbox"/> 16	<input type="checkbox"/> 16	⊘
Trail Clearing/Trail Marking/Advertising	⊘	⊘	⊘
Possessing Alcoholic Beverages	⊘	⊘	⊘
Collecting/Metal Detecting	⊘	⊘	⊘
Target Shooting	⊘	⊘	⊘
Other	CHECK WITH DCR VISITOR CENTER		
Legend: ⊘ Prohibited; <input type="checkbox"/> Allowed with general restrictions (below); <input type="checkbox"/># Allowed with specific restrictions			

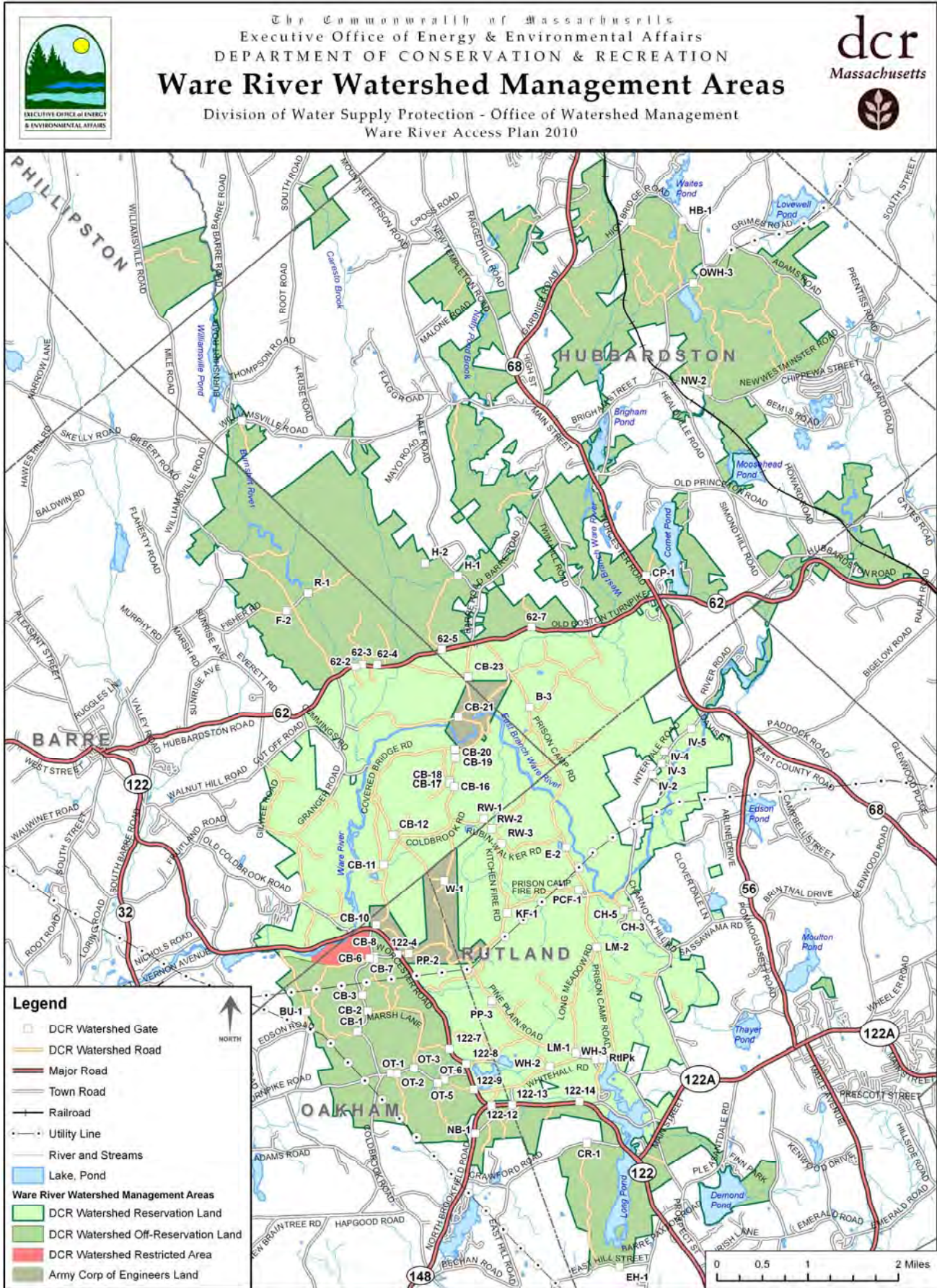
General public access on DCR lands is allowed through gates and bar-ways in designated areas only. Any activity which injures or defaces the property of the Commonwealth is strictly prohibited. Night access is allowed on DCR lands in the Ware River Watershed. These policies are based on Watershed Protection regulations, 350 CMR 11.00.

Ware River Reservation: all DCR-controlled lands and waters within Rts. 122, 122A, 56, 68, and 62.

Ware River Off-Reservation: DCR-owned lands within the Ware River Watershed located outside of Rts. 122, 122A, 56, 68, and 62.

Specific Restrictions for Public Access on DCR Lands in the Ware River Watershed	
<input type="checkbox"/> 1	Registered motorized vehicles are those registered for operation on public ways. Their access is restricted to certain maintained DCR roads at open gates. Motorized vehicles are prohibited on DCR roads beyond closed gates or bar-ways and within the Intake Zone.
<input type="checkbox"/> 2	Snowmobiles are allowed with specific restrictions on DCR designated snowmobile areas only. Restrictions include season, snow depth, and mph. DCR Designated Snowmobile Access Map is available from the Quabbin Visitor Center, Ware River Field Office, or on the DCR website listed below.
<input type="checkbox"/> 3	The operation of ORVs is prohibited on DCR-Watershed lands and roads.
<input type="checkbox"/> 4	Bicycling is allowed on DCR-Watershed roads. Off-road bicycling and off-road trail riding is prohibited. Bicycling is prohibited during mud season when DCR roads are closed by gates or signs. DCR Bicycle Access Map is available from the Quabbin Visitor Center, Ware River Field Office, or on the DCR website listed below.
<input type="checkbox"/> 5	Hunting is allowed with a valid Massachusetts hunting license according to State regulations. State regulations prohibit hunting on Sundays. Hunting within WMA has specific restrictions; see www.mass.gov/dfwele/dfw/regulations/regulations_wma.htm .
<input type="checkbox"/> 6	Fishing access is allowed with a valid Massachusetts fishing license according to State regulations.
<input type="checkbox"/> 7	DCR requests visitors to pickup and properly dispose of any fecal waste within 100' of a tributary or surface waters.
<input type="checkbox"/> 8	Horseback riding access is allowed on DCR Designated Horseback Riding Routes only in the Ware River Watershed and according to specific restrictions (e.g., no riding during mud season, permit required for group rides of 15 or more, no watering of horses in tributaries, etc.); see Fact Sheet for additional information. DCR Designated Horseback Riding Roads and Trails Map is available from the Quabbin Visitor Center, Ware River Field Office, or DCR website listed below.
<input type="checkbox"/> 9	Motorboat use within waters of the Ware River Reservation (e.g., Whitehall Pond) is prohibited.
<input type="checkbox"/> 10	Motorboat access from DCR lands in the Ware River Off-Reservation is allowed according to the AIS Management Plan and with these restrictions: <ul style="list-style-type: none"> ➤ Motorboat access facilities (ramps) are provided only on DCR lands at the following locations – Brigham Pond, Demond Pond, Comet Pond, and Long Pond. ➤ Boat motor size off DCR ramps is limited to 20 hp(2 stroke) and 25 hp (4 stroke). ➤ DCR annually issues a limited number of DCR Long Pond Access Permits for boats with motors greater that 20 hp. This permit allows the holder to use a 20+ hp motor on Long Pond from Memorial Day to the last day in September between 10 AM and 6 PM.
<input type="checkbox"/> 11	Non-motorized boating access is allowed from DCR lands in the Ware River Reservation and Off-reservation according to the AIS Management Plan.
<input type="checkbox"/> 12	Limited swimming access is allowed within a designated area of Rutland State Park and Comet Pond Beach – DCR-Park managed facilities – according to posted restrictions and designated season.
<input type="checkbox"/> 13	Camping includes the use of tents, trailers, lean-tos, and motor homes. Camping access is prohibited within the Ware River Reservation. Limited camping on DCR Off-Reservation is allowed only with written permission from the Regional Director. Contact the Quabbin Visitor Center for more information at (413) 323-7221.
<input type="checkbox"/> 14	These activities are allowed only by written permission by the Quabbin Section Regional Director.
<input type="checkbox"/> 15	Groups up to 25 individuals are asked to notify DCR prior to access on DCR lands. Groups exceeding more than 25 individuals or 15 horseback riders with horses (in the Ware River Watershed only) are required to submit a DCR Group Access Permit application at least two weeks prior to access date. Contact Quabbin Visitor Center, Ware River Field Office, or DCR's website for an access permit application.
<input type="checkbox"/> 16	Geocache placement requires prior DCR-Watershed permission using self-verification process with registration described on Fact Sheet.
Contact information: <ul style="list-style-type: none"> ➤ Quabbin Visitor Center – Visit the Center at the Winsor Dam in Belchertown open 9-4:30 daily; (413) 323-7221. ➤ DCR Watershed Rangers – Contact the Watershed Rangers at (413) 323-0191 or mobile (617) 828-2452. ➤ Massachusetts State Police – Report violations/emergencies to the State Police at 911 ➤ DCR-Watershed website – www.mass.gov/dcr/watersupply/watershed/water.htm. 	

Figure 5. Ware River Watershed Management Areas



Driving

DCR allows driving with registered motorized vehicles on the Division's maintained roads. Maintained roads are those roads that pass through DCR's open gates and open bar-ways and within DCR water supply lands in the Ware River watershed (**Figure 6**). Vehicle access is prohibited if the road is posted closed, blocked, or if the road passes through a closed/locked gate or bar-way. DCR prohibits registered motorized vehicles from driving on maintained roads through gates or bar-ways which are either locked or closed, except under certain situations with a DCR access permit (e.g., for watershed maintenance). Army Corps of Engineers may request that Division roads be periodically closed for flood control purposes. In this case, roads will be posted closed temporarily.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

DCR recognizes that many local residents and visitors enjoy driving for sightseeing purposes. DCR allows limited vehicular access on the Division's maintained roads passing through open gates and bar-ways in the Ware River watershed. However, DCR prohibits driving off of maintained roads or on roads behind closed or locked gates and bar-ways.

Mechanisms for Control

- Monitor authorized use for intensity and impacts.
- Increase enforcement of unauthorized vehicular use.
- Evaluate and modify DCR's access permit system.

For More Information

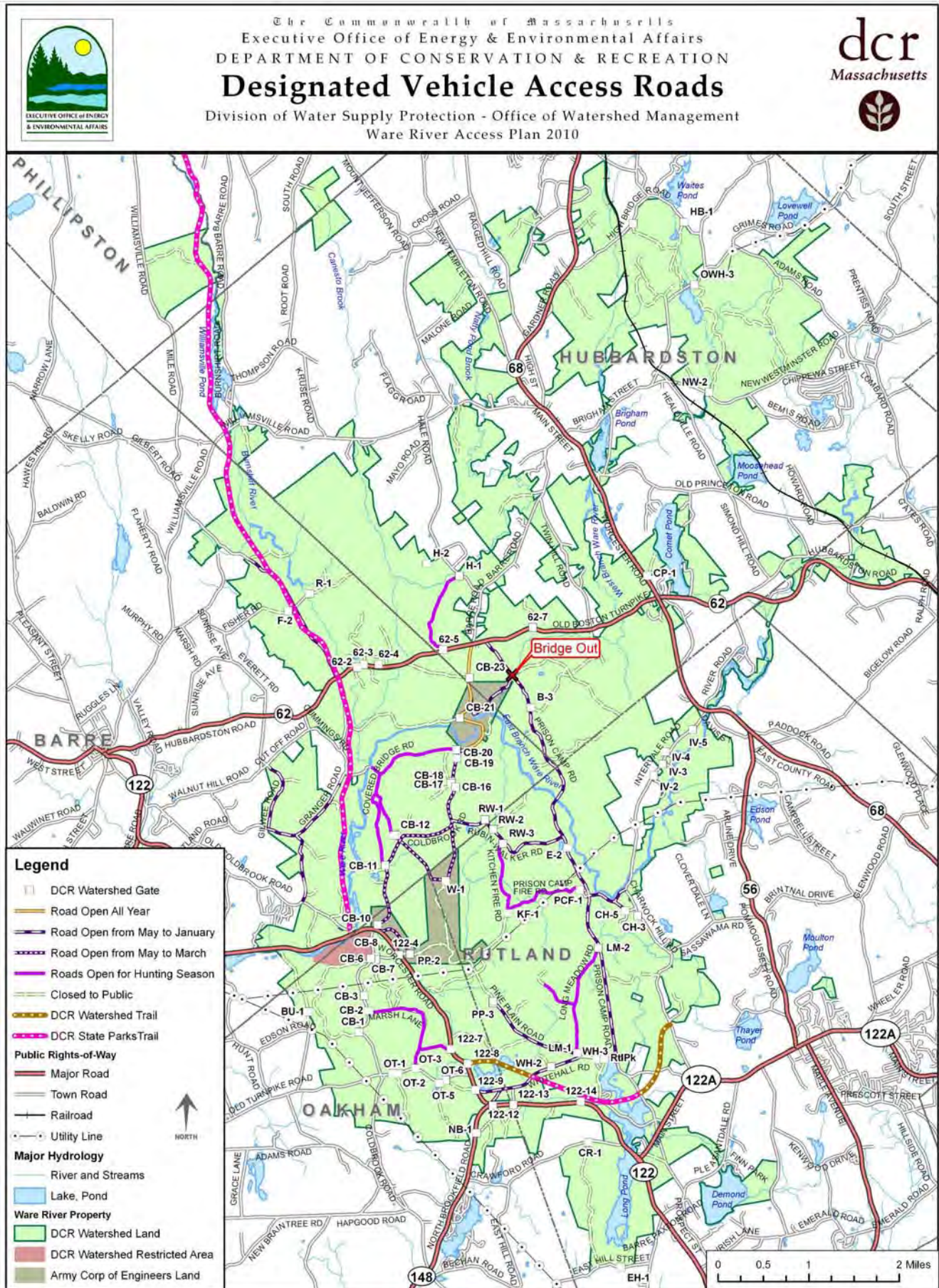
Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Figure 6. DCR Designated Vehicle Access Routes



Snowmobiling

DCR allows limited snowmobile access within the *Snowmobile Access Zone*. DCR strictly prohibits snowmobile use in the *Restricted Zone*. Within the *Snowmobile Access Zone*, grooming is only allowed on existing roadways (**Figure 6**) with DCR's prior, written permission and according to the grooming requirements detailed below. DCR has mapped the newly designated snowmobile access zone in green (**Figures 7 and 8**). Existing snowmobile access restrictions are as follows: a minimum of 6" of snow coverage on a designated trail is required for access; access is allowed only after December 31; and access speed is restricted to safe speeds on all DCR roads.

Grooming Requirements

- Prior permission required before any grooming.
- Route map, on existing DCR roads, required.
- Watershed Ranger escort required for all grooming.
- Equipment in good working order; carrying spill kit in plastic five gallon buckets.
- Immediate reporting of any oil or gas spills or accidents required.
- Fueling and maintenance off DCR lands and 400' from water resource required.
- Grooming only allowed on designed roads in designated areas with prior DCR written permission.
- DCR plowed roads excluded from allowed routes.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

DCR limits public access for snowmobiling on Division owned lands within the Ware River Off-Reservation and the Ware River Reservation according to the Watershed Protection regulations (350 CMR 11.00). The Division does not promote snowmobile access. Based on past practices, DCR has reviewed trail locations and use and has designated a controlled Access Area in which snowmobile use is allowed. In addition, DCR has modified the boundaries of the areas where access is not allowed. This will improve rules enforcement, and rules adherence. DCR's snowmobiling policy is based in part on input from historical use, public input from local recreation groups, land abutters, advisory committees, as well as the general public. Some input supports snowmobile access as an opportunity for outdoor recreation for local residents. Other input prefers natural settings free from the intrusion of motorized vehicles and the noise of the engines.

Opinions regarding snowmobile use also vary: some people see no conflict on trails, while others do. A local snowmobile club has stated its desire for through-trails to connect with other trail systems throughout the state, including DCR-Park's Ware River Rail Trail, which currently allows snowmobile access and maintenance under an existing MOU with DCR-Parks. DCR believes that snowmobile access can introduce several water quality threats: habitat destruction (e.g., wetlands), fuel contamination from accidents or equipment failure, illegal dumping in remote locations,

trespassing on private lands abutting DCR-Watershed lands, introduction of human fecal wastes, as well as increasing air pollution. Accordingly, DCR has coupled its assessment of threats with public input to develop the above Snowmobile Access policy.

Because DCR staff has documented frequent snowmobile traffic on non-designated trails on DCR lands in the Ware River watershed, DCR has designated areas in which snowmobile access is allowed and areas in which snowmobile access is prohibited (**Table 8**). These area designations coupled with increased monitoring and enforcement with fines by other law enforcement personnel are aimed at increasing rules adherence and ultimately water quality protection.

DCR designated areas for snowmobile access is in accordance with the Massachusetts Watershed Protection Regulation, 350 CMR 11.09 2(a)(12), which states: "... Recreational vehicles are prohibited on all Watershed System property except the use of snowmobiles in areas designated by the Commission or its designee..." All applicable local or state and local regulations and restrictions not detailed here but related to snowmobiling also apply (e.g., 323 CMR 3.00 *Use of Recreation Vehicles and Snow Vehicles*; 304 CMR 12.29 *Snow Vehicle Operation*).

Mechanisms for Control

- Utilize new signage in Restricted Zone, general signage, and specific signage (blue triangle).
- Collaborate with local law enforcement personnel in prohibited zones.
- Increase public outreach and education (e.g., snowmobile clubs).
- Monitor for illegal trail clearing, expansion, or widening near private property boundaries.

Table 8. Comparison of Snowmobile Access, 1988-2010

	1988	2000	2010
DCR-Watershed	16.4 miles	22.0 miles	7,911 acres
ACE	0.8 miles	0.9 miles	85 acres
DCR-Parks	22.5 miles	22.5 miles	12.5 miles
Total Mileage	39.7 miles	45.4 miles	N/A

Source: DCR/DWSP Quabbin/Ware Section, P. Lamothe; 2009.
 NA = Not Available

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Figure 7. DCR Designated Snowmobile Access Map A

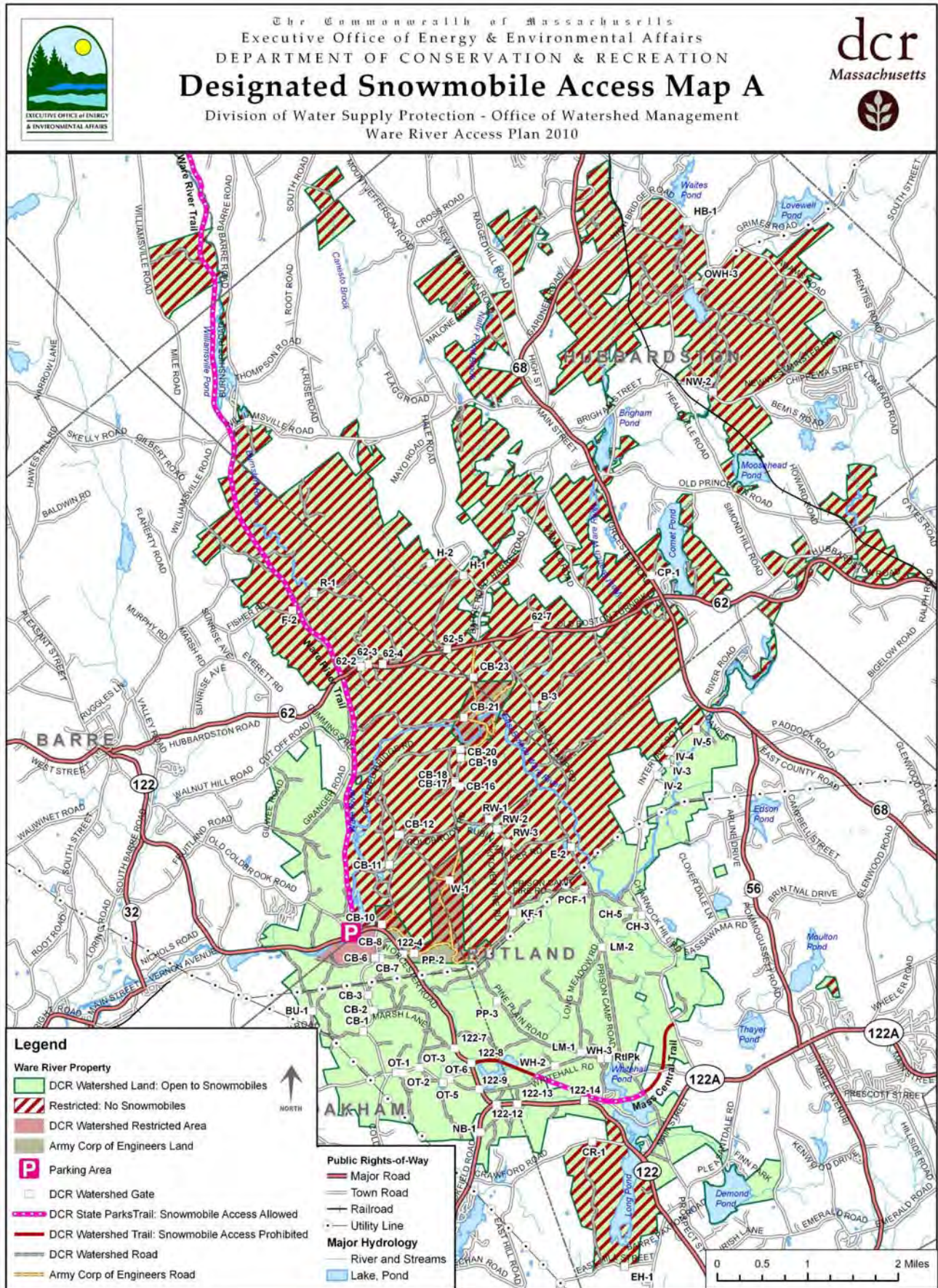
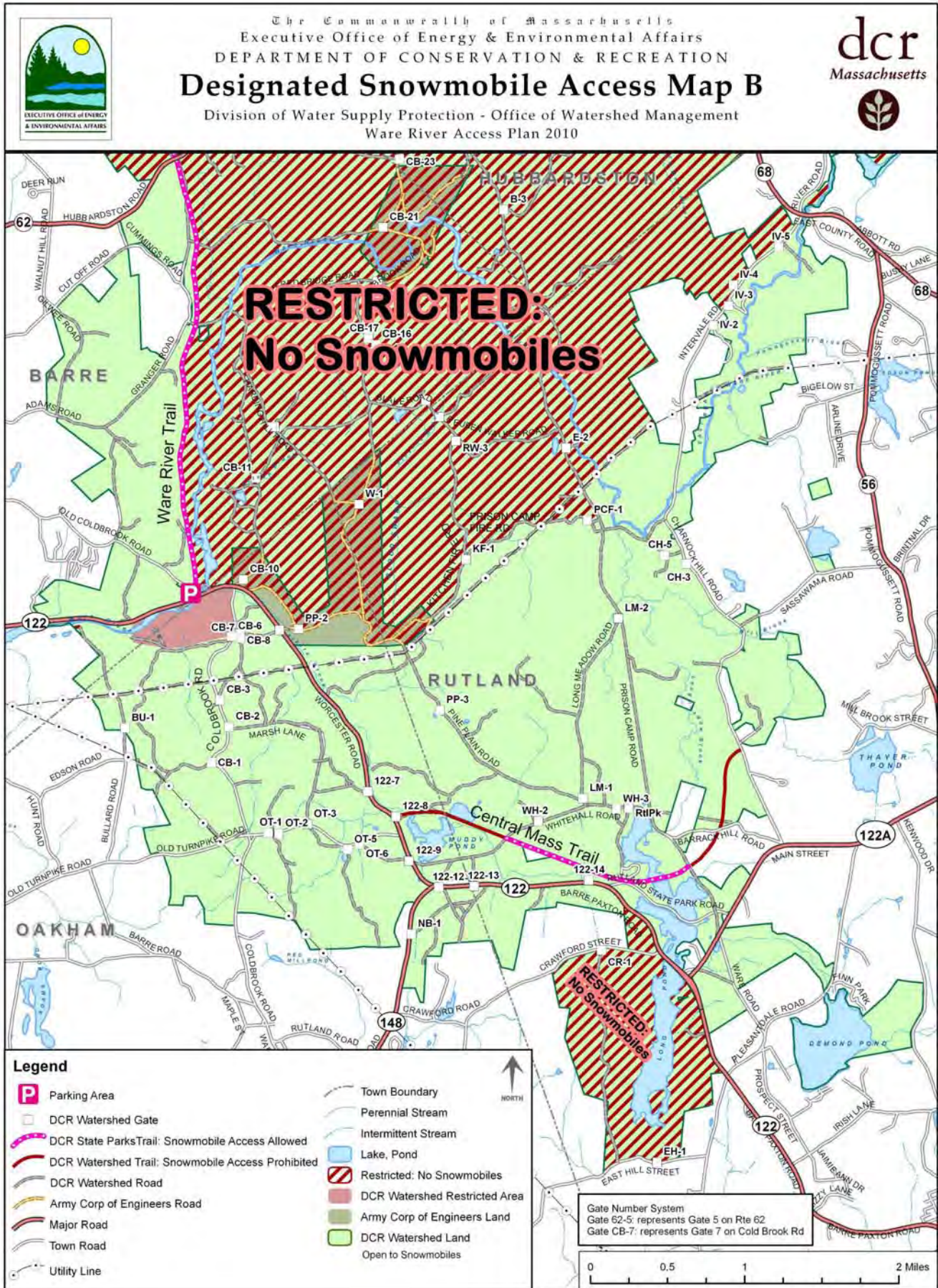


Figure 8. DCR Designated Snowmobile Access Map B



Operating Off-Road Vehicles

DCR-Watershed prohibits the operation of Off-Road Vehicles (ORVs; e.g., ATVs, dirt bikes, etc.) on roads, on trails, or off trails, throughout Division lands in the Ware River watershed.

Discussion

Off-Road Vehicles (e.g., ATVs and dirt bikes, etc.) are allowed on private property, but prohibited from operating on public roads in Massachusetts. ATVs and dirt bike riders are increasingly attracted to DCR lands, especially to power line right-of ways. However, ATV and dirt bikes are specifically prohibited in these areas. The operation of ATVs and dirt bikes is prohibited on all DCR lands. Staff has documented unauthorized ATV and dirt bike areas and trails created by these types of vehicles on Division lands in the Ware River watershed. In addition to illegal access, unauthorized trail creation and unbridged stream crossings have been documented on DCR-Watershed lands. These activities cause erosion, which has increased sediment and nutrient input to the tributaries. Off-road driving and accidents can introduce fuels and other hazardous materials onto water supply lands or waters. These hazardous materials can end up directly in the public water supply of the Ware River, or indirectly through its tributaries. Off-road driving also increases the likelihood of illegal dumping and the possibility of fecal waste disposal in inappropriate conditions in the more remote locations where normal recreation controls (e.g., portable toilets) are difficult to implement.

DCR's Watershed Protection regulations prohibit off-road motorized driving. The 1994 Massachusetts Watershed Protection Regulation (350 CMR 11.09 2(a)(12)) states: "No Person shall drive a motorized vehicle within the Watershed System except upon roads authorized for such use by the Commission or its designee. Recreational vehicles are prohibited on all Watershed System property except the use of snowmobiles in areas designated by the Commission or its designee..."

Mechanisms for Control

- Coordinate enforcement activities between Watershed Rangers, Environmental Police Officers, and MA State Police.
- Increase weekend surveillance and public education efforts by Division staff.
- Improve and maintain DCR signs notifying the public of restrictions and prohibited activities, including violation reporting and emergency contact numbers.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Bicycling

DCR-Watershed allows bicycle access on open DCR roads and on rail trails within DCR water supply lands in the Ware River watershed (**Figure 9**). DCR prohibits off-road bicycling, bicycling on any footpaths (i.e., single track riding), bicycling on forestry operation's skid roads, and bicycling on unauthorized roads or trails. In addition, DCR restricts bicycling during "mud-season" (April-May) when DCR closes roads with locked gates or bar-ways, during watershed management operations, and during other situations which are posted.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Recreational bicycle use has increased over the past 10 years in the Ware River Watershed. This is due in part to conversion of the Central Mass Railroad Right-of-Way to the Central Mass Rail Trail by Wachusett Greenways. To prevent the proliferation of individual trails (i.e., single-track) on watershed lands, the Division will control and guide bicycling by allowing bike riding only on maintained roadways. Since 1994, DCR regulates bicycle access on Division owned lands within the Ware River watershed. In 1988, the Division first limited bicycles to designated roads within DCR lands in the Quabbin Reservoir watershed due to the growing popularity of mountain biking. Bicycling was not limited, at that time, in the Ware River watershed. DCR specifically prohibits bicycling on pedestrian footpaths and skid roads designed for temporary watershed management operations. The Division prohibits off-road bicycling on DCR lands in both the Reservation and Off-Reservation areas. DCR restricts bicycling during mud season (when the gates are closed) and within forestry operations. DCR limits and controls bicycling due to the increasing biking capabilities and popularity of mountain biking. Bicycling can cause erosion on trails, and be a safety hazard to watershed maintenance operations, active forest harvesting, and public vehicle operation on many DCR roads. DCR also wants to prevent recreational expansion of this activity on DCR lands in accordance with DCR's Master Policy for Public Access - Ware River Watershed System.

Mechanisms for Control:

- Monitor authorized use for intensity and impacts, especially near the Rail Trails.
- Increase enforcement of unauthorized use, if necessary.

For More Information

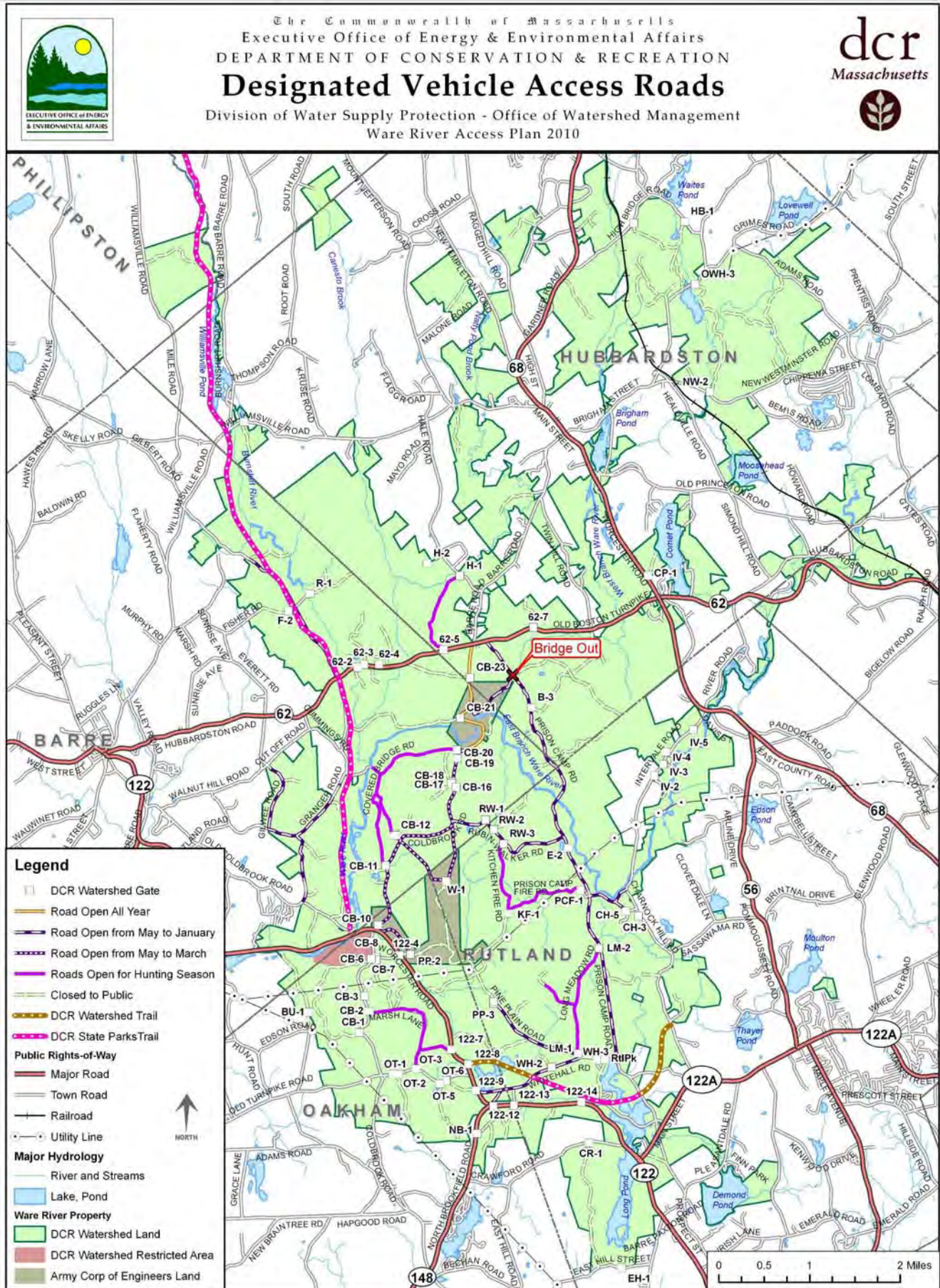
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DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Figure 9. DCR Designated Bicycle Routes



Wildlife Viewing/Nature Study

DCR allows wildlife viewing and nature study DCR water supply lands for non-commercial activities. Groups of 25 individuals or greater, including leader, are required to obtain a group access permit prior to visit. Bird watching and nature study activities are prohibited in the Restricted Area of the Ware River Intake.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Wildlife viewing (e.g., bird watching) and nature study, like hiking, is currently allowed on water supply lands with restrictions, given the diffuse nature of the activity. This activity is restricted since, as with all other human activities, there is potential for adverse human impacts cause by improperly disposed trash and fecal waste, which could affect water quality. This activity is prohibited in the Restricted Area around the Ware River Intake.

Mechanisms for Control

- Monitor and evaluate group access impacts related to wildlife viewing and nature study through Watershed Ranger reports and access permit assessment.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

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Hiking, Walking, Snowshoeing, and Cross-Country Skiing

DCR allows walking, snowshoeing, and cross-country skiing with general restrictions within DCR's water supply lands in the Ware River watershed. DCR prohibits hiking, walking, and snowshoeing access and activities in the Restricted Area of the Ware River Intake. There are additional specific rules and policies regarding dog walking (please see Domestic Animals Fact Sheet). Camping is prohibited on DCR-Watershed lands.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

DCR prohibits day hiking, walking, snowshoeing, and cross-country skiing access at the Ware River Intake area to protect the drinking water quality from the possible contamination by improperly disposed human fecal waste and trash. Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(1) states: "Entrance on or exit from land of the Watershed System shall be made through gates or other designated areas." DCR's Master Policy for Public Access prohibits new recreational activities that may conflict with public water supply priorities and values. Watershed Protection Regulation, 350 CMR 11.09(2)(a)(14) states: "The use of bicycles, skis and other means of non-motorized transportation within the Watershed System shall be permitted only in areas designated by the Commission or its designee." DCR has established a Quiet Zone as a dedicated area for snowshoeing and cross-country skiing in the Ware River Watershed. DCR's cross-country skiing policy has been clarified regarding the designated cross-country skiing areas.

Mechanisms for Control

- Monitor and evaluate the frequency and intensity of public use of DCR-Watershed lands for hiking, walking, and snowshoeing in the Ware River watershed.
- Increase public education and outreach efforts.
- Monitor for waste and contaminants near parking lots.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Hunting and Trapping

DCR allows hunting and trapping within DCR water supply lands in the Ware River watershed excluding the Restricted Area of the Ware River Intake in accordance with DCR's general public access policy and all other local, state, and federal hunting regulations. Please follow the guidelines below to minimize the potential risk of the spread of disease and possible water contamination:

- No animal baiting is allowed.
- Washing your hands or animals in streams or ponds is prohibited.
- No animal parts may be disposed of within 100' of wetlands, streams, brooks, ponds or other water bodies.
- Use portable toilets.
- Field dressing only allowed at least 100' away from wetlands, streams, brooks, ponds, or other water bodies.
- All other applicable state, local, and federal rules and regulations apply. *Wildlife Management Areas*, located on DCR-Watershed lands have different policies (**Figure 10**).

DCR General Access Policy:

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion:

DCR has historically allowed recreational hunting and trapping activities within areas of the Ware River Watershed System. The Massachusetts Watershed Protection Regulation, 350 CMR 11.09(2)(a)(22), states: "No Person may hunt, shoot or trap animals on or within any Watershed System property except at times and in areas designated by the Commission or its designee." DCR land within the Ware River watershed, excluding the Restricted Area of the Ware River Intake, is the designated area for hunting and trapping. DCR has issued MassWildlife a permit allowing them to manage Wildlife Management Areas in Hubbardston, Rutland, and Barre, MA, on land owned by DCR. Hunting and trapping is permitted in WMA, but with different policies. In 2008, DCR and MassWildlife reduced the size of the designated Wildlife Management Areas. The new boundary areas are seen in **Figure 10**.

Mechanisms for Control:

- Coordinate with the MA State Police and Environmental Police Officers.
- Maintain and increase public education.

For More Information

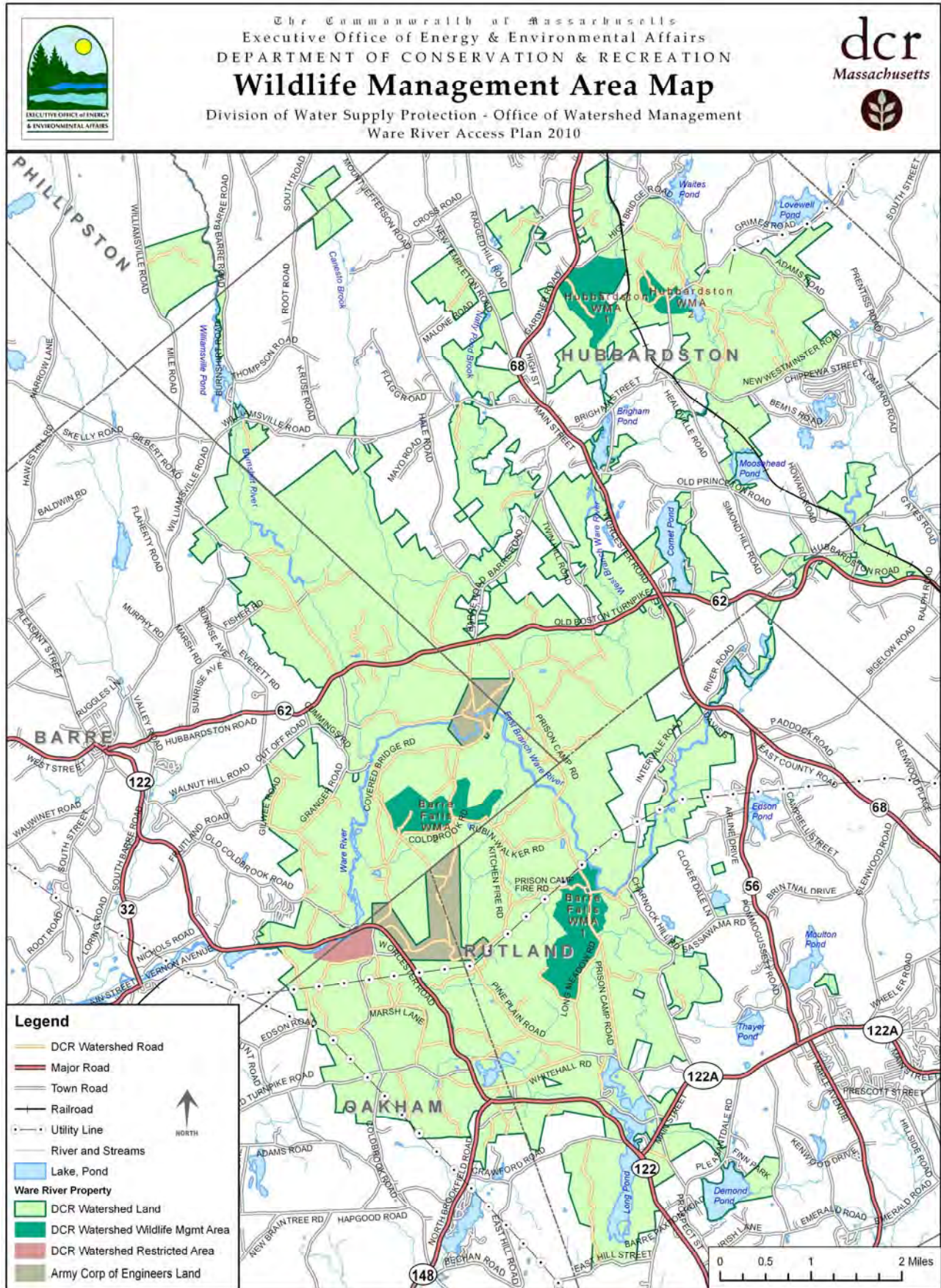
Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Figure 10. Wildlife Management Areas



Ice Fishing and Ice Skating

DCR allows ice fishing and ice skating access from DCR’s water supply lands in the Ware River watershed excluding the Restricted Area of the Ware River Intake. Ice fishing and skating access is allowed according to DCR’s general public access policy. Car access and snowmobile access onto ice from DCR property is strictly prohibited. Clean-up (e.g., fish entrails, shiners, trash, etc.) from ice fishing activities is required to minimize the threat of water quality contamination. In addition, all other applicable state, local, and federal rules and regulations apply to these activities.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor’s Center prior to access.

Discussion

DCR allows limited ice fishing and ice skating activities on Great Ponds within the Ware River watershed according to Ch. 91. The threat of Aquatic Invasive Species (AIS) introduced by Ice Fishing is a concern of DCR-Watershed. Aquatic Invasive Species Prevention Program will be implemented in water bodies of the Ware River Watershed according to current scientific information. The main elements for ice fishing access will include: public education and outreach according to DCR’s AIS Management Plan.

The Watershed Protection Regulation, 350 CMR 11.09(2)(a)(9), states: “the use of bicycles, skis, and other means of non-motorized transportation within the Watershed System shall be permitted only in areas designated by the Commission or its designee.” DCR’s revised policy clarifies the previous policy.

Mechanisms for Control

- Increase winter surveillance and monitoring of these activities.
- Implement AIS Management Plan related to ice fishing.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Shoreline Fishing

DCR allows shoreline fishing from DCR's water supply lands in the Ware River Watershed, except for the Restricted Area of the Ware River Intake. Unauthorized trail cutting to shorelines or along shorelines is strictly prohibited. Clean-up along shoreline is required. In addition, all other applicable local, state, and federal rules and regulations apply to these activities.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

DCR allows shoreline fishing from DCR's water supply lands in the Ware River watershed. The DCR shore fishing policy is a clarification of DCR's former policy. The main elements for shoreline fishing access will include: public education and outreach according to DCR's AIS Management Plan.

Mechanisms for Control

- Monitor shorelines for water quality impacts including illegally disposed trash and other waste.
- Evaluate portable toilet program.
- Implement Aquatic Invasive Species (AIS) Protection Program related to shoreline fishing activities.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Fires and Cooking

DCR prohibits fires and cooking, including the use of gas grills, throughout DCR water supply lands in the Ware River Watershed System.

Discussion

Fires and cooking are prohibited because forest fires in the DCR System have been identified as originating from camping fires. In addition, the prohibition of fires and cooking is required by the Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(6), that states: “Cooking and all fires are prohibited within the Watershed System.”

Mechanisms for Control

- Focus surveillance and enforcement in known areas of regulatory violation.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Dog and Domestic Animal Access

DCR limits dog and other domestic animal access to DCR's water supply lands with specific restrictions. Dogs shall be under the control of their handler at all times, fecal matter shall be buried at least 100 feet from a water source or removed from the area properly, and animals shall be restricted from entering the water. This policy is based both on Watershed Protection Regulations (350 CMR 11.00) and State drinking water regulations (310 CMR 22.20B(3); 310 CMR 22.20B(7)). DCR's general public access policy restrictions also apply to dog walking on DCR lands in the Ware River watershed. All other domesticated animals (excluding horses) are prohibited on Water Supply lands in the Ware River watershed. All dogs are prohibited from the Restricted Area of the Ware River Intake.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

The presence of dogs and other domestic animals within a public drinking water supply watershed, especially near its surface waters, is incompatible with DCR-Watershed's water quality and public health protection goals. Dogs pose a risk to water quality because they have been identified as carriers of *C. parvum*, a protozoan parasite dangerous to human health. As carriers, dogs and cats may contribute diffuse, but substantial quantities of oocysts to runoff into source waters. Further, these microbiological pathogens cause waterborne diseases that can infect humans and can be spread by infecting resident wildlife populations. *Giardia lamblia* is another protozoan pathogen dangerous to human health found in animal feces. *Cryptosporidium* can cause a prolonged fever and diarrhea, and may kill persons with weak immune systems. Because this parasite is resistant to chemical disinfectants, DCR's watershed protection efforts to prevent its introduction at the source of the drinking water supply system are extremely important.

With the promulgation of the IESWTR under the 1996 Safe Drinking Water Act Amendments, US EPA is establishing a maximum contaminant level of zero for *Cryptosporidium* for filtered and unfiltered systems. In addition, EPA is extending the watershed control requirements for unfiltered systems to include the control of cryptosporidium. This new requirement builds on the existing federal regulations for *Giardia lamblia* and viruses. Further, as a condition of primacy, the federal government is requiring the State to describe how it will judge the adequacy of watershed control programs for *Cryptosporidium*, *Giardia lamblia*, and viruses.

Finally, DCR's Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(13), states: "No Person shall bring any animal within any Watershed System property except for horses and dogs in the Ware River Watershed at areas designated by the Commission or its designee."

Mechanisms for Control

- Focus surveillance and enforcement in known areas of regulatory violation.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

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Horseback Riding

DCR prohibits horseback riding within all its water supply lands, except for designated routes on its lands in the Ware River watershed under specific conditions (**Figure 11**). This designated horseback access route map replaces all previous horseback riding access maps published by DCR-Watershed. The following are specific restrictions for horse access on DCR-Watershed land.

All riders including a group of less than fifteen (horse with rider is considered “one”):

- Horse feces within sight of any tributary or surface water (e.g., pond) must be removed or buried.
- Horse wading in, watering in, or disposal of any waste in or adjacent to a tributary or surface water is prohibited.
- Riding is allowed on DCR designated road or trail only.
- Horseback riding is prohibited during “mud season” (March-April) when all DCR roads and trails are closed for access. Please contact DCR if in doubt.
- Horseback riding for commercial purposes on state land is prohibited.

Group of fifteen to fifty horses with riders have specific restriction listed above, in addition:

- Organized rides for groups of fifteen or more require a DCR group access permit issued at least one week prior to the ride (contact Quabbin Visitor Center). A permit application is available from the Quabbin Visitors Center or on the DCR website at www.mass.gov/dcr/watersupply/watershed/documents/warepmt.pdf, or the **Forms** Section at the end of the *Public Access Management Plan Update 2010 - Ware River Watershed*.
- DCR will allow no more than 50 riders at one time with this type of access permit.
- Group permit conditions regarding trail access, manure management, signage, etc. may also apply.

Group of greater than fifty and less than one hundred have restrictions listed in Section I and II, and:

- DCR approved designated route.
- Manure management requirements.
- Information regarding watering stations.

DCR, in the interest of public health protection, may restrict this regulated activity immediately, despite previously issuing a group access permit.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor’s Center prior to access.

Discussion

Unrestricted horseback riding within a public drinking water supply watershed, especially near surface waters, is incompatible with DCR's water quality and public health protection goals. *Cryptosporidium* and *Giardia lamblia*, two protozoa pathogens that can sometimes be found in horse feces, are dangerous to human health when they enter drinking water. *Cryptosporidium* can cause a prolonged fever and diarrhea, and may kill persons with weak immune systems. Because this parasite is resistant to chemical disinfectants, DCR's watershed protection efforts to prevent its introduction at the source of the drinking water supply system are extremely important.

State and Federal surface water protection regulations restrict horse access on public drinking water supply lands and waters to safeguard the quality of the public's drinking water supplies (e.g., 310 CMR 22.20B(2)(b) and IESWTR). DCR's horseback riding access policy is based on recent amendments to Federal and State regulations for drinking water protection, the increasing popularity of recreational horseback riding in Central Massachusetts, the cumulative effects of horse access, and the dynamic nature of scientific research on waterborne diseases. The Division's policy allows opportunities, given past practices and public input, for horseback riding on designated roads and trails in the Ware River watershed, yet is adequate to restrict microbiological contamination to the drinking water supply source waters (**Table 9**).

Federal drinking water regulations are concerned with recreational horseback riding in unfiltered supply watersheds. With the promulgation of the IESWTR under the 1996 Safe Drinking Water Act Amendments, EPA is establishing a MCL of zero for *Cryptosporidium* for all drinking water supply systems. In addition, EPA is extending the watershed control requirements for unfiltered systems to include the control of *Cryptosporidium*. This new requirement builds on the existing federal regulations for *Giardia lamblia* and viruses. Furthermore, as a condition of primacy, the federal government is requiring the State to describe how it will judge the adequacy of watershed control programs for *Cryptosporidium*, *Giardia lamblia*, and viruses.

The variety of water quality effects of horseback riding include:

- Improper disposal of sanitary wastes from horses and their riders and the resulting threat of microbiological contamination.
- Increase in the number of horses and riders on limited trails, as well as the frequency of use.
- Increase in the sediment/nutrient inputs caused by large numbers riding on trails, riding off trails, or riding on closed trails.
- Attraction of wading or watering a horses in nearby, off-trail surface waters or tributaries to the drinking water supply.

Individually and collectively these effects increase the potential for the introduction of waterborne disease pathogens into the municipal public drinking water supply source.

Table 9. Comparison of Horseback Riding Routes, 1988-2010

	1988	2000	2010
DCR-Watershed	22.6 miles	37.8 miles	37.1 miles
DCR-Watershed Rail Trail	NA	NA	1.5 miles
ACE lands	3.6 miles	3.9 miles	3.8 miles
DCR-Parks	22.5 miles	22.5 miles	12.7 miles
Town roads	0.9 miles	NA	NA
Total Mileage	49.6 miles	64.2 miles	55.1 miles

Source: (Lamothe, 2/2010). NA = not available.

Table 9 shows the increasing demand and pressure for increasing miles of horseback riding trail access on drinking water supply lands in the Ware River watershed over the past ten years. The first DCR designated horseback riding trails were created in 1988 through a public process. Local horse owners and DCR staff identified the designated trails based on water quality protection and the then current preferred routes. Since 1988, Division policies have evolved, reflecting new scientific research, Federal regulations, and enhanced watershed protection. DCR's designated roads and trails limit access to appropriate locations by prohibiting horses on trails with unbridged stream crossings and within 200 feet of a tributary or source water. This policy is in accordance with DCR's Master Policy.

Mechanisms for Control:

- Install access barriers where appropriate.
- Manage and evaluate access permit program.
- Patrol DCR designated horseback riding trails and roads.
- Increase water quality monitoring.
- Monitor and report on visitor levels, visitor conduct problems, manure and litter controls, and erosion and impacts on natural vegetation.

For More Information

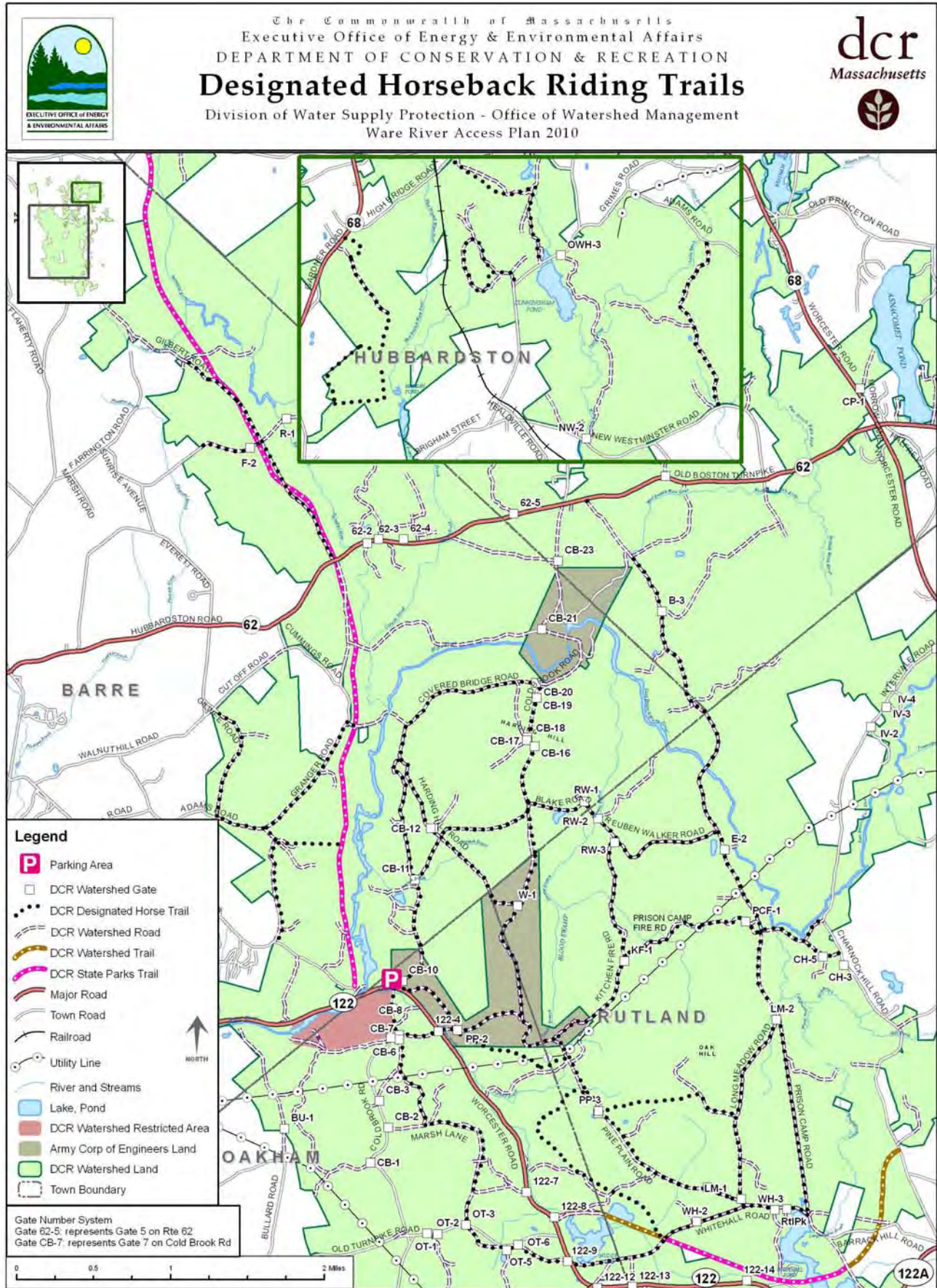
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Figure 11. DCR Designated Horseback Riding Routes



Motorized Boating

Motorized boating is prohibited in waters of the Ware River Reservation. Launching gas or electric motorized boats across DCR lands is allowed with specific and general restrictions in waters located within the Ware River Off-Reservation. Current Aquatic Invasive Species (AIS) Prevention Program requirements must be met for access.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Motorized boating in the Ware River Watershed System is specifically prohibited in designated areas, according to the Watershed Protection Regulations (350 CMR 11.00). Currently, DCR-Watershed limits boat access by limiting motor size on boats launched from DCR owned lands onto Great Ponds in the Ware River Watershed according to the Massachusetts Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(3) states: "Power boats are prohibited within the Waters of the Watershed System except in areas designated by the Commission or its designee." DCR owns boat ramps at the following ponds where power boats are allowed with restrictions: Brigham Pond, Demond Pond, Comet Pond and Long Pond (south basin). This policy is a clarification of DCR's past policy.

Aquatic Invasive Species Prevention Program will be implemented in water bodies of the Ware River Watershed according to current scientific information. The main elements will include: self-certification, boat decontamination by owners, boat ramp monitoring, and public education and outreach according to DCR's AIS Management Plan.

In Massachusetts, public access for motor boating from Division owned lands on ponds within the Ware River Off-Reservoir area is regulated by many parties (e.g., Chapter 91, DCR, local town boards, MA Public Access Board, etc.). DCR does not promote motor boat access since motorized boating on small ponds causes erosion of riparian areas, increased turbidity, contamination of a small water body from leaks, introduction of aquatic invasive species, and noise pollution.

However, DCR does provide, based on past practices, limited boat launch sites and in some cases, ramps, located on its land. All access activities must conform to DCR's general public access policy (above). Motor boat access is allowed on DCR-owned lands on the four ponds listed above, which are detailed in the table below. DCR limits boat motor size to 20 horsepower for two stroke engines, and 25 horsepower for 4 stroke engines, on boats accessing DCR lands, with the exception of Long Pond. DCR issues a limited number of Long Pond access permits for motors greater than 20 horsepower during certain seasons and times. Based on a DCR survey of permit holders, the majority of permit holders have boats 19 feet or less in length with a motor size of 140 hp or less (Read, 1999). In addition, more than fifty-percent of the permit holders use four stroke motors. All other applicable local, state, and federal rules and regulations apply

to this and related activities (e.g., 324 CMR 2.00- Boat Launching Facilities and Land Under the Control of the Public Access Board).

Mechanisms for Control

- Increase monitoring for regulatory and permit compliance.
- Evaluate and revise the Long Pond permit policy in 2010.
- Implement the AIS Management Plan.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Non-motorized Boating (canoes and kayaks)

DCR allows non-motorized boating access (e.g., canoeing, kayaking, etc.) from DCR water supply lands in the Ware River watershed according to DCR's general public access policy except near the Restricted Area of the Ware River Intake. AIS Prevention Program requirements must be met for access.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Public access across DCR owned lands for non-motorized boat access (e.g., canoes and kayaks) has been a traditional activity within the Ware River Watershed. To date, the Division has not observed significant problems related to this activity and therefore will continue to allow non-motorized access from Division lands onto rivers, ponds, and Great Ponds. An Aquatic Invasive Species Prevention Program will be implemented in water bodies of the Ware River Watershed according to current scientific information. The main elements will include: self-certification, boat decontamination by owner, boat ramp monitoring, and public education and outreach detailed in DCR's AIS Management Plan.

Mechanisms for Control

- Monitor the popular put-in sites for water quality threats from recreational use.
- Conduct education regarding the updated rules of DCR, and of other agencies including the State and MA Environmental Police.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Swimming and Wading

DCR prohibits swimming from DCR lands in the Ware River watershed with the two exceptions. Limited swimming is allowed in a designated area and during designated times at the DCR-Parks facilities on Comet Pond and Rutland State Park Beach on Whitehall Pond. Sanitary waste facilities are monitored and maintained at these locations. DCR allows wading in tributaries from DCR lands in the Ware River watershed only with waders or hip boots.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

To prevent fecal contamination in a public drinking water supply no person shall wade or swim in any Tributary or Surface Waters on or within the property of the Commonwealth except at areas designated by the Commission or its designee (350 CMR 1109) 2(a)(8)). Primary contact recreation such as swimming has been identified as direct source of water contamination and waterborne disease outbreaks (Craun, 2005).

Mechanisms for Control

- Increase weekend enforcement
- Respond to seasonal and daily extreme high temperatures with increased surveillance by Watershed Rangers and local enforcement (e.g., Rutland and Barre Police) at Comet Pond and Long Pond.
- Install physical barriers at party spots (e.g., south basin of Long Pond).
- Improve signage ("No Swimming") at Long Pond.
- Remove illegal rope swings.
- Conduct education regarding the updated rules of DCR and of other agencies including the State and MA Environmental Police.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Operating Personal Watercraft

DCR prohibits launching personal watercrafts (e.g., jet skis) on any surface water of the Ware River watershed from DCR lands.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Personal watercraft require full body contact with the water, can cause shoreline erosion from the wave action, suspend sediments causing increased turbidity, and cause noise pollution. No person shall wade or swim in any Tributary or Surface Waters on or within the property of the Commonwealth except at areas designated by the Commission or its designee (350 CMR 11.09) 2(a)(8)).

Mechanisms for Control

- Increase weekend and end of day patrolling and enforcement.
- Respond to seasonal and daily extreme high temperatures with increased surveillance.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Night Access

Night access is allowed on DCR-Watershed lands in the Ware River Watershed

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

In the past, night access for authorized legal activities has been a confusing topic for local and state law enforcement. This policy, gate signage, coordination efforts with ACE and law enforcement, along with increased public education is designed to clarify DCR's night access policy.

Mechanisms for Control

- Collaborate with local law enforcement.
- Coordinate with ACE and special patrols.
- Continue to install signage in high use areas.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Overnight Camping

DCR prohibits overnight camping on DCR's water supply lands in the Ware River Reservation. Camping includes, but is not limited to tenting, trailers, lean-tos, and motor homes. Overnight parking on DCR lands in the Ware River Watershed System is prohibited. DCR allows limited overnight camping, only within Off-Reservation lands, on a case-by-case basis, and only with written permission from the DCR Quabbin/Ware Regional Director for camping at a designated location.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

DCR prohibits overnight camping on water supply lands within the Ware River watershed because of a number of public health and safety concerns. These issues would divert water management resources from water rate payers to conduct intensive recreational management activities on water supply lands. Camping, historically prohibited in the system, increases sanitation problems and fire protection issues. Chapter 737, the Acts of 1972 prohibits camping in the Ware River Reservation. The current Watershed Protection Regulation 350 CMR 11.09 (2)(a)(2) states that: "No Person is allowed within any land of the Watershed System, except from one hour before sunrise to one hour after sunset, unless authorized by a written permit from the Commission or its designee." This policy has been clarified.

Mechanisms for Control

- Continue monitoring and surveillance within the Reservation, and along the banks of the Ware River.
- Post signs requiring DCR notification at any camping sites.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Organized Sports/Field Sports

DCR prohibits organized sports and field sports on DCR-Watershed lands in the Ware River watershed, except by written permit from the DCR Quabbin Regional Director.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Organized sports and field sports introduce increased recreation and concentrated attendance and observers to an area, thus increasing water quality threats such as improper fecal waste disposal and land use alterations, which cause erosion and sedimentation. Organized sports are limited according to DCR's Master Policy for Public Access. DCR's development and maintenance of playgrounds or sports fields are inappropriate with DCR's Master Policy, aimed at limiting or minimizing new recreational activities or increased intensity of existing activities in the public water supply watershed.

Mechanisms for Control

- Monitor on a case by case basis.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Programs and Assemblies

DCR allows assemblies of less than twenty-five individuals. Groups of twenty-five (25) individuals or fewer should notify DCR by contacting the Quabbin Visitor Center at least 48 hours in advance. Access is allowed according to DCR's general public access policy.

DCR requires any assembly of twenty-five individuals or more to obtain a **DCR Group Access Permit (Form B)**. Permit applications are available from the Quabbin Visitors Center or the DCR-Watershed website at www.mass.gov/dcr/watersupply/watershed/documents/warepmt.pdf. Group Access Permit applications must be submitted to DCR at least 1 week prior to access request date.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Mechanisms for Control

- Coordinate with the State Police and Watershed Rangers.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Fishing Derbies

DCR prohibits fishing derbies on DCR’s water supply lands or in the waters in the Ware River Watershed except with written permission from the DCR Quabbin Regional Director.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor’s Center prior to access.

Discussion

DCR prohibits fishing derbies for raising or collecting funds, according to the Division’s Master Policy and Watershed Protection Regulations. DCR’s Master Policy prohibits activities that increase the intensity of public access. The Watershed Protection Regulation, 350 CMR 11.09 (2)(a)(16), states: “Parades, games, fairs, carnivals, fishing derbies, bazaars, gifts or solicitations for raising or collecting funds shall not be permitted within the Watershed System without written approval of the Commission or its designee.”

Mechanisms for Control

- Educate current sponsors of Fishing Derbies about the need for a DCR permit.
- Limit the number of fishing derbies to current level.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Geocaching

Any individual or organization wishing to conduct geocaching, an activity by individuals or organizations who use GPS (Global Positioning Systems), compasses, and maps to hide or find geocaches located within public spaces, on DCR-Watershed lands is required to request permission from DCR Interpretive Services (DCR-IS) using a self-verification form. If approved, the applicant must then register the cache with www.geocaching.com before placing any geocache on DCR lands. Existing geocaches may be reviewed by DCR staff or a volunteer group, and if a geocache falls outside the placement guidelines, it will be removed and the owner notified through www.geocaching.com.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Over the past decade, geocaching has become popular within DCR-Watershed lands. As of October 2009, over 21 registered Geocache sites were located in the Ware River watershed on DCR-Watershed lands. In order to better control and manage this recreational activity, DCR-Watershed staff developed this new policy, which is aligned with the statewide DCR Geocaching Policy currently being developed. Once permission from DCR-IS is obtained, applicant must register the site with www.geocaching.com.

Before locating a geocache on DCR-Watershed property, the following guidelines must be followed and the location and geocache self-certified to conform:

- The geocache must not be located in dams or dikes.
- The geocache must not be located in a restricted or otherwise protected archaeological, historical, cultural (including rock walls), or natural area.
- No significant damage or disturbance to the ground or flora will result from placement of or visits to this geocache.
- The geocache must not be located in an area that might cause potential danger to park visitors, e.g., climbing on cliffs/bluffs or in trees, underwater, in caves or dens, or along heavily traveled roadways.
- The geocache will not create confusing spur trails off the established network of trails.
- The geocache will not be located in any restricted access areas in the Ware River Watershed.
- Geocaches must be transparent containers (e.g., Tupperware or Rubbermaid).

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Geocache Placement Request and Self-Certification Form

To request permission for a Geocache placement on DCR-Watershed lands, this Form, including the self-certification section, must be completed by applicant and sent to: Quabbin Visitor Center, DCR Quabbin, 485 Ware Road, Belchertown, MA 01007. A photograph of the geocache must also be included with the application. If the request is approved by DCR, notice will be sent by email to the applicant. The geocache must then be registered on www.geocaching.com and placed on site.

Owner Information:

Name: _____

Address: _____

Phone: _____ Email _____

Geocache Information:

Coordinates of geocache

Latitude: _____ Longitude: _____

Geocache Name: _____

Self-certification:

- Geocache will be in a waterproof, transparent container.
- Photograph of geocache is attached to application.
- I, the geocache owner, certify that: all of the above information is correct to the best of my knowledge. I have read, understand, and will comply with DCR-Watershed's Geocaching Policy. I will comply with all other DCR property regulations. I agree to remove this geocache within three years of the registration approval date and/or apply for a registration extension by the permit end date or risk having the geocache removed by DCR personnel. In addition, DCR shall assume no responsibility whatsoever for the loss or damage to the geocache or its contents or injury of the owner from any cause and the owner agrees at all times to indemnify, protect, and save harmless DCR and its agents and employees from liability in connection with owner's property and/or operation under this permit.

Geocache Owner Signature: _____ Date: _____

FOR DCR USE ONLY

Approved _____ Denied _____ Hold _____

Permit #: _____

Regional Director Signature: _____

If Denied or Placed on Hold, state reasons below:

Trail Clearing, Marking, and Advertising

DCR prohibits unauthorized trail marking, advertising, or any other placement of signs or symbols on DCR's water supply lands in the Ware River watershed. DCR staff will install or supervise trail marking. DCR prohibits painted signs on DCR property (e.g., trees, roads, etc.). This activity is considered defacing the Commonwealth's resources.

DCR General Access Policy

Public access must only be through DCR gates or other DCR designated entrances. DCR allows public access on DCR owned lands in the Ware River Watershed System at night. Groups greater than 25 are required to obtain an access permit from the Quabbin Visitor's Center prior to access.

Discussion

Unauthorized signs can imply DCR's designation of a trail for recreational access. The placement of unauthorized signs is closely monitored. Any violation of this policy will be strictly enforced (i.e., signs will be removed and associated groups will be investigated). DCR will censor noncompliance parties accordingly. Trail marking, advertising, or any other unauthorized placement of signs on DCR water supply lands in the Ware River Watershed System is prohibited by the Watershed Protection Regulation, 350 CMR 11.09(2)(a), which states: "Commercial signs and advertising are prohibited in the Watershed System."

Division staff has observed an increase in the number of new, unauthorized trails on DCR lands in the Ware River watershed. In addition, many footpaths on Division lands are being widened and straightened, without authorization, for uses other than foot traffic. Trail maintenance is allowed only with written authorization and oversight by DCR staff. Trail clearing on DCR-Watershed lands of the Ware River Watershed is prohibited by the Watershed Protection Regulation, 350 CMR 11.09(2)(a)(5), which states: "All acts which injure the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove, or carry off any property, real or personal, under the care and control of the Commission..." This policy has been combined with related policies.

In addition, the Watershed Protection Regulation, 350 CMR 11.09(2)(a)(5), states: "All acts which injure the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove, or carry off any property, real or personal, under the care and control of the Commission..." This policy has been clarified and updated. Please see DCR's sign policy and standards for instructions regarding the process of placing authorized signs on water supply lands for case-by-case situations.

Mechanisms for Control

- Develop a management system for authorized signs including standards.
- Identify DCR on existing signage at critical areas (e.g., boat launch areas).
- Monitor, remove, and investigate noncompliance signage.
- Block, remediate, and monitor for use any unauthorized trail.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Possessing Alcoholic Beverages

DCR prohibits the possession or drinking of alcoholic beverages while on DCR water supply lands in the Ware River watershed.

Discussion

Division staff continues to report evidence of regulatory violations related to the possession of alcohol within the Ware River Watershed System. Excessive consumption of alcohol leads to a disregard of DCR's rules, regulations, and policies. The Watershed Protection Regulation, 350 CMR 11.09(2)(a) states: "...Possession of and drinking of alcoholic beverages is prohibited within said system." This policy remains unchanged.

Mechanisms for Control

- Coordinate with state and local law enforcement staff.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Collecting and Metal Detecting

DCR prohibits collecting and metal detecting activities within DCR-Watershed lands in the Ware River Watershed System.

Discussion

DCR prohibits collecting and metal detecting activities on Division lands in the Ware River watershed system to protect historic and pre-colonial sites. The Watershed Protection Regulation, 350 CMR 11.09(2)(a)(5) states: “All acts which injure the property of the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove, or carry off any property, real or personal under the care and control of the Commission, including but not limited to, all historic artifacts and natural materials.” In addition, 350 CMR 11.09(2)(a) states: “The possession of all types of metal detectors or similar devices is prohibited on all the watershed system property.” These regulations were updated in 1992 by adding reference to historic artifacts and natural materials, and by adding the prohibition of metal detectors. This policy has been updated to reflect changes in the regulations.

Mechanisms for Control

- Continue support of on-going historical survey work.
- Provide education related to cultural resources.
- Continue appropriate enforcement actions.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

Target Shooting

DCR prohibits target shooting on DCR's water supply lands in the Ware River watershed.

Discussion

DCR prohibits target shooting on DCR's lands in the Ware River Watershed System following the Watershed Protection Regulation, 350 CMR 11.09(2)(a)(21), which states: "...DCR prohibits all forms of target shooting on or within DCR lands in the Watershed System." This regulation was updated in 1994 to prohibit target shooting. DCR's Master Policy for Public Access to preserve the apparent wilderness character in the system supports this policy.

Mechanisms for Control

- Continue enforcement.

For More Information

Quabbin Visitor Center: Contact Interpretive Services staff at (413) 323-7221

DCR-Watershed website: www.mass.gov/dcr/watersupply/watershed/water.htm

DCR-Watershed Ranger Office: Contact Rangers at (413) 323-0191 or (617) 828-2452 (mobile)

Call 911 to report suspicious behavior, rule violations, or emergencies to the State Police

5. Public Access Operations

DCR staff has identified five types of operational and maintenance issues related to public access management in the Ware River watershed: 1) Aquatic Invasive Species (AIS) Control Program; 2) gate and bar-way³ closing schedules; 3) sanitary waste facility locations and maintenance; 4) DCR designated trail signs and standards; and 5) information kiosks. These operational issues are discussed below in detail.

Aquatic Invasive Species Control Program - Ware River Watershed

In response to the increasing spread of invasive non-native aquatic species throughout the state's water bodies, the Department of Conservation and Recreation (DCR) has developed an Aquatic Invasive Species Control Program for the Ware River Watershed. The 2010 Program uses a Boat Ramp Monitor Program with Boat Decontamination/Self-certification procedures. The goals of the program are to prevent pristine water bodies from becoming infested, to reduce further spread of the exotic plants from infested areas, and to educate boaters about non-native species and the steps they can take to protect the lakes and ponds in the Ware River Watershed.

Non-native or exotic species are plants or animals that are indigenous to other parts of the country or world, and when they are introduced to a new area often disrupt the balance of the new ecosystem. Many non-native plants reproduce very rapidly, displacing native species and developing mats at the water's surface that render boating, fishing, swimming, and other recreational activities impossible or dangerous. Once introduced to a new area, they are further spread around to additional water bodies on boat motors, trailers, fishing gear, and in bait buckets. Even one small plant fragment is capable of infesting an entire lake or pond. When a non-native species is established it is very expensive to control and nearly impossible to eradicate. Prevention is the key factor to controlling AIS.

Boat Ramp Monitoring and Signage

Boat ramp monitors will be placed at DCR-Watershed ramps in 2010. Their goals are to 1) inspect boats entering or leaving to make sure that no plant or animal fragments are attached the boat, trailer or gear; 2) check the self-certification described below; and 3) collect information about boating at DCR-Watershed ramps. Boaters will be given an AIS informational brochure, asked to participate in a voluntary boat inspection, and complete a brief survey. In addition, boat ramp monitors and other DCR staff will provide educational materials and post appropriate signage at DCR and, where appropriate, other boat ramps in the Ware River Watershed (**Figure 12**).

³ A barway is typically a wooden structure obstructing passage through a road or trail with an operable gate which is locked.

Figure 12. Aquatic Invasive Signage

STOP AQUATIC HITCHHIKERS!
Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectYourWaters.net

CAUTION! INVASIVE ZEBRA AND QUAGGA MUSSELS HAVE BEEN SPOTTED IN NEARBY WATERBODIES

DO NOT: RELEASE ANYTHING INTO THIS WATER BODY THAT DID NOT COME FROM THIS WATER BODY
EMPTY BAIT BUCKET, BILGE, OR LIVEWELL WATER INTO THIS WATER BODY

DO:

- ▶ Wash the exterior of your boat and trailer and flush the engine, bilge, and live well with tap water. Hot or high pressure rinse (power washer, car wash, etc.) is best. Keep rinse water away from all water bodies and storm drains.
- ▶ Let all equipment dry for at least 72 hours before using it in another water body.

To report a sighting, please contact:
MassDCR Lakes and Ponds Program
(617) 626-4975
www.mass.gov/lakesandponds

CAUTION!

dcr
Massachusetts
COLAP
Watershed Council of
Lake and Pond Associations, Inc.
LAPA-West

Self-Certification and Associated Equipment Decontamination

Prior to being allowed to use a DCR-Watershed boat ramp (even where a boat ramp monitor is posted), the user will be required to complete a self-certification form, not yet available (Figure 13), to be displayed in plain view on the dashboard of their vehicle, certifying either that the boat has not been on “AIS Affected Lakes” outside or inside of Massachusetts (e.g., Laurel Lake) within the last 30 days, or if it has, that the boat has been properly cleaned and disinfected (as described below).

Figure 13. Sample Self-Certification Forms

BOATERS MUST SELF CERTIFY BEFORE LAUNCHING

PLEASE ANSWER THE FOLLOWING QUESTIONS:

A. In the last 30 days, has your boat been used in any of the following waters, all likely affected by zebra or quagga mussels:

1. Laurel Lake, Lee/Lenox, Massachusetts
Yes ___ No ___
2. East/West Twin Lakes, Connecticut
Yes ___ No ___
3. Lake Champlain, Vermont
Yes ___ No ___
4. Lake George, New York
Yes ___ No ___
5. Hudson River, New York
Yes ___ No ___
6. Any of the Great Lakes
Yes ___ No ___

SAMPLE

If you answered "No" to all questions in Section A, and to the best of your knowledge your boat is free of all other aquatic invasive species, sign this form on the reverse side and launch your boat.

If you answered "Yes" to any of the questions in Section A above, please see the reverse side of this form.

If you answered "Yes" to any question in Section A, DECONTAMINATE as described below. SAMPLE **PLACE THIS SIDE OF CERTIFICATE FACING UP ON YOUR DASHBOARD**

B. DECONTAMINATION PROCEDURES

B1. SELF DECONTAMINATION

CLEAN all plants, fish, mussels and mud from boat
Yes ___ No ___

DRAIN all water (bilge, livewells, motor)
Yes ___ No ___

DRY (at least one week in hot/dry weather; at least 18 days in cool/wet weather)
Yes ___ No ___

IF YOU CAN'T KEEP YOUR WATERCRAFT DRY,

WASH your boat's hull, trailer, equipment, and any other exposed surfaces, and the inside of your bilge area, livewell, and engine cooling system with:

- 1) High-pressure, hot water AND
- 2) Household bleach (1/2 cup per 2 cups water) OR
- 3) 100% Vinegar OR
- 4) 1% Salt Bath (as NaCl) (1/8 cup per 1 gallon water).

B2. PROFESSIONAL DECONTAMINATION

You may also use a professional car wash, provided it can apply scalding water (140 degree F) to wash your boat and trailer and to flush your bilge, livewells and motor.

Commercial Wash Company Agent Signature Date

CERTIFICATE OF DECONTAMINATION

My boat is clean and I have not put it in any waters listed in Section A; or I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Circle one: → Self Decontamination Professional Decontamination

Sign and Date: → _____
Boater's signature and date (not valid unless signed and dated)

CERTIFICATE OF DECONTAMINATION

My boat is clean and I have not put it in any waters listed in Section A; or I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Circle one: → Self Decontamination Professional Decontamination

Sign and Date: → _____
Boater's signature and date (not valid unless signed and dated)

CERTIFICATE OF DECONTAMINATION

My boat is clean and I have not put it in any waters listed in Section A; or I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Circle one: → Self Decontamination Professional Decontamination

Sign and Date: → _____
Boater's signature and date (not valid unless signed and dated)

CERTIFICATE OF DECONTAMINATION

My boat is clean and I have not put it in any waters listed in Section A; or I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Circle one: → Self Decontamination Professional Decontamination

Sign and Date: → _____
Boater's signature and date (not valid unless signed and dated)

SIGN A NEW LINE BELOW FOR EACH VISIT

Boat Decontamination Procedures

The following procedures have been taken from *2009 DCR and MA Department of Fish and Game, MA Interim Zebra Mussels Action Plan* and are subject to revision and updating.

All Boats

Follow the basic steps of CLEAN, DRAIN, and DRY:

1. Inspect and clean your boat after removing it from the water and away from the launch ramp.
2. Thoroughly inspect all exposed surfaces on your vessel and trailer. If you find any mussels or plants, scrape them off and kill them by crushing them. Dispose of the remains in the trash.
3. Remove all plants and mud from your boat, trailer, and all equipment. Dispose of all material in the trash.
4. Empty and dry all buckets and dispose of all bait in trash receptacles before you leave. Do not take bait home, or leave it on the ground or dump it in any waterway.
5. Carefully feel your boat's hull for rough or gritty spots, which may be young mussels too small to be seen that have settled on your vessel. Microscopic Quagga/Zebra mussels will feel like sandpaper.
6. Away from the waterway, drain all water from your boat (pull all plugs) and dry all areas, including the motor, motor cooling system, live wells, ballast tanks, bladders, bilges, and lower outboard units.

Boats on an AIS Affected Lake Within Past 30 days

Additional Decontamination Steps for equipment:

7. Keep your watercraft dry for at least 1 week (during hot, dry weather) and at least 18 days (during cool, wet weather) before launching into any freshwater lake or pond. Drying is the only way to prevent the spread of zebra mussels.
8. Thoroughly clean all fishing and recreational equipment (fishing nets, etc.).
9. Inspect, clean and dry all life jackets, water skis or other items that have been in the water, including anchors, ropes, etc.
10. Clean and dry personal belongings, clothing, and footwear that have come in contact with the water.
11. Wash, dry, and brush pets that have been in the water.
12. Divers must thoroughly clean all regulators, BCDs (inside and outside), wetsuits, and any other dive gear. Use a commercially available dive equipment cleaning compound that contains ammonia, vinegar, or chlorine. Allow gear, suit, and other equipment to dry before diving in different waters (veligers can survive on a wetsuit if left damp)

Alternative Decontamination Steps for Boats on an AIS Affected Lake Within Past 30 days

Wash your boat's hull, trailer, equipment, and any other exposed surfaces, and the inside of your bilge area, live-well, and engine cooling system with either high pressure, hot water that is at least 140°F, household bleach solution (½ bleach/2 cups water), 100% vinegar, a 1% salt bath, or any other recommended disinfectants that can be found at www.mass.gov/dcr/watersupply/lakepond/downloads/ZebMussBro09.pdf.

DCR Gate and Bar-way Closing Schedule

DCR designs and maintains its internal road system in the Ware River watershed for vehicle access necessary for watershed protection activities (**Figures 4, 5, 6, 7, 8, 9 and 11**). These management activities include: water sampling, forest management activities, patrolling and monitoring, maintaining fire roads for fire protection, conducting sanitary surveys, scientific research, and inventory activities. DCR manages this road system to reduce road erosion and possible sedimentation. Besides DCR maintained roads, there are many farm lanes, past logging roads and seasonal access routes that provide limited access under specific situations to DCR lands. DCR owns approximately 23,000 acres in the Ware River watershed, and maintains access roads to most of this land. As part of the Division overall watershed management program, the Division installs gates and bar-ways on roads accessing DCR lands in order to control and limit vehicular traffic, and thus limit regulatory noncompliance, prevent illegal dumping, and minimize erosion. All gates and bar-ways have been marked with a placard for identification purposes. Over time, the Division anticipates the installation, as appropriate, of additional gates, bar-ways, and barriers.

DCR currently operates and maintains approximately eighty-five metal gates and wooden/steel bar-ways in the Ware River watershed to limit and control public access. DCR gates and bar-ways are painted yellow, if metal, and green, if wooden. DCR's closing schedule of DCR gates and bar-ways is designed to improve control of public access, to limit non-compliance, to prevent illegal dumping, and to limit the degradation of the Division's road systems, especially during mud season. The closure schedule below will be applied to the Division's roads (**Table 10**). This schedule may be amended over time.

Table 10. DCR Gate Categories

Gate/Bar-way Type	Description
Three-season Access	Gates and bar-ways are closed during spring "mud season" (March-April) or during threat of flood
Seasonal Access	Gates and bar-ways are open seasonally: <ul style="list-style-type: none">➤ May through December➤ November and December
Year Round Closure	Gates or bar-ways are closed at all times to vehicle access except for officially designated limited access

DCR Sanitary Waste Facilities

Reducing the risk of waterborne disease via pathogens (i.e., bacteria, viruses, and protozoa) is a top water quality goal for DCR. The Division’s watershed protection program is designed to minimize this risk at each step in the water supply pathway (source, treatment, and distribution). The Division’s use of portable toilets, located in strategic locations, is part of this strategy.

DCR currently locates, operates, and monitors two sanitary waste facilities (i.e., portable toilets) near Comet Pond in Hubbardston, Massachusetts. There are two other public sanitation facilities on state and federal lands in the Ware River watershed: the U.S. Army Corps of Engineers operate restroom facilities at the Barre Falls Dam complex in the towns of Hubbardston, Barre, and Oakham; DCR-Parks operates and maintains another facility in Rutland State Park.

Designated DCR Trail Signs and Standards

The 25,000 acres of DCR-Watershed owned land within the Ware River watershed is an important, forested land holding for public drinking water supply protection. With increasing regulatory constraints and population pressures, effective signage is a critical part of managing this natural resource. Signs are targeted to raise public awareness of the Ware River watershed’s role in water supply source protection, to increase visitors’ compliance with agency rules and regulations, to insure public safety, to identify the boundaries of DCR-Watershed land holdings, and to protect the area resources.

DCR-Watershed has implemented sign standards since 2000 on its recreational trails in the Ware River watershed. The sign standards listed below will now apply (**Table 11**).

Table 11. Sign Standards for DCR-Watershed Access Routes–Ware River Watershed

Trail Type	DCR Trail Markings
DCR Designated Snowmobile Routes	Blue diamond plus “stay on trail signs” at certain intersections.
DCR Designated Horseback Riding Roads	Yellow square plus yellow, green or blue flagging for special rides.
Cross-country Ski Trail	Green circle
Mid-State Trail	Yellow triangle

Since 2008, new signage efforts have been underway (**Figure 14**). The goals of these efforts, based on staff and public input, are:

- Incorporate DCR-Watershed’s role in public drinking water supply protection into the signs.
- Create consistency between all signs with respect to color schemes, font styles, and consistency in message and language. Use icons or universal symbols whenever possible.
- Designate sign location carefully to insure appropriate number and efficient placement.
- Develop interpretive signs for sites with specific historical or natural history significance (e.g., the Prison Camp, Ware River tributaries, etc.).
- Provide more general information to the public. Present basic drinking water supply and watershed protection information with a location-specific map of the area.

Most DCR-Watershed signs are posted around the perimeter of the Division’s land holdings and at the major access points used by motorized vehicles, snowmobiles, bicyclists, horseback riders, and hikers. Based on public input, DCR-Watershed will continue to locate signs at major public access points in order to maintain the wild appearance of these watershed lands, to prevent visual clutter, and to make the signs useful. DCR will limit signage in its interior locations to those designed to educate users about management practices and/or to address specific public access issues.

Figure 14. Ware River Public Access Signage



Information Kiosks

Information Kiosks at the five entrance/exit points into the Ware River Reservation were first installed in 2000. The information posted on the kiosk is developed and managed by DCR-Watershed staff from the Interpretive Services, Environmental Quality, and Natural Resources work units. The kiosks are monitored by the Watershed Rangers. The kiosk information is updated yearly, as needed.



Photo 7: DCR-Watershed Information Kiosk near Rutland State Park - 2008

6. Plan Implementation

DCR staff will communicate, implement, monitor, and enforce the Division's updated policies regarding public access on Division land in the Ware River watershed beginning in January, 2010. DCR has listed activities to date, to initiate the implementation of the *Public Access Management Plan Update 2010 - Ware River Watershed* (**Table 12**). These activities will change over time.

DCR's staff has designed the *Public Access Management Plan Update 2010 - Ware River Watershed* to guide and control the recreational use of approximately 25,000 acres of DCR land and waters for water quality protection and ecological purposes in the Ware River Watershed. The Plan includes twenty-seven public access policies for common activities conducted within DCR lands and waters in the Ware River watershed. DCR has incorporated new information related to drinking water supply protection into this updated Plan. The primary sources of information used in the Plan and the updated policies include new legislation and regulations, scientific and professional literature review, public input, and field-staff recommendations. As a result of the Division's update process, DCR has also revised the 1998 Master Policy Statement regarding public access within the Ware River watershed. DCR's revisions have clarified information and policy gaps identified over the past ten years.

Watershed protection strategies change over time, depending on new scientific information, regulatory changes, land use changes, and public values. Given these externalities, DCR fully recognizes the likelihood that the scope and focus of today's Public Access Management Plan will change during the next decade. At this time, the *Public Access Management Plan Update 2010 - Ware River Watershed* provides the framework for the following improvements to DCR's watershed protection program conducted in the Ware River Watershed:

- Enhanced pathogen prevention techniques.
- Improved regulatory compliance through specifically tailored control measures.
- Enhanced sanitary waste facilities.
- Coordinated monitoring, patrolling, education, and enforcement activities.
- Improved visitor informational resources.
- Continued partnership activities with stakeholders, advisory committees, and state and federal agencies.

The Division will amend or update this plan and maps in 2020, or earlier if needed.

Table 12. Implementation Plan

Work Unit	ACTIVITIES
All Staff	<ul style="list-style-type: none"> • Implement policies of the <i>Public Access Management Plan Update 2010 - Ware River Watershed</i>. • Evaluate policies annually beginning in 2011. • Monitor threats, report violations, take corrective action. • Document findings for annual report. • Conduct public education and outreach for watershed protection. • Evaluate public access uses and intensity over time and throughout DCR lands and waters. • Continue to gather public input.
Environmental Quality Section	<ul style="list-style-type: none"> • Monitor water quality threats due to access type, frequency, location, etc. • Investigate and report anomalies found in routine water quality monitoring data. • Report violations found in the field to appropriate personnel. • Make corrective actions. • Document findings for annual report.
Watershed Rangers	<ul style="list-style-type: none"> • Conduct regularly scheduled patrols of the Ware River Watershed. • Document findings for annual report. • Coordinate with local law enforcement agencies.
Foresters	<ul style="list-style-type: none"> • Maintain and mark property boundaries in Ware River Watershed. • Monitor, investigate, or report illegal actions found in the field.
Watershed Maintenance	<ul style="list-style-type: none"> • Maintain roads, bridges, culverts, and dams on DCR lands and waters. • Install and maintain access controls (e.g., gates and bar-ways). • Install and maintain erosion controls.
Interpretive Services	<ul style="list-style-type: none"> • Conduct environmental programs for schools in watershed communities. • Maintain information kiosks.
Programs	
Aquatic Invasive Species	<ul style="list-style-type: none"> • Conduct Boat Ramp Monitor program. • Provided educational material and post signage.
DCR Gate and Bar-way Closings	<ul style="list-style-type: none"> • Conduct closing schedule to improve control of public access, limit non-compliance with rules and regulations, and prevent degradation of road system.
Sanitary Waste	<ul style="list-style-type: none"> • Locate, install, and maintain portable toilets. • Work with groups to provide adequate sanitary waste facilities related to various trails (e.g., Mass Central Rail Trail, Ware River Rail Trail, Mid-State Trail, etc.).
Signage Program	<ul style="list-style-type: none"> • Continue to replace existing signs with new signage. • Install “restricted zone” signs prior to winter season (2010). • Install snowmobile access zone signs prior to winter season.
Information Kiosks	<ul style="list-style-type: none"> • Monitor status of kiosk structures. • Maintain up-to-date signage and information within information kiosks.

7. Conclusion

Water distributed from the Quabbin Reservoir has not been implicated in any waterborne disease outbreak, according to the MA Department of Public Health (DPH) which monitors waterborne disease outbreaks in both filtered and unfiltered water supply systems in Massachusetts (DPH, 2008). The U.S. Environmental Protection Agency (EPA) and MA Department of Environmental Protection (DEP) conduct strict oversight of DCR operations and watershed protection activities in the Ware River watershed. DEP conducts annual inspections of the system because DCR is a public drinking water supplier. DEP uses four distinct criteria in its evaluation of DCR's watershed protection efforts:

- Demonstration and implementation of watershed control.
- On-site inspection of the water supply system.
- Documented absence of waterborne disease outbreaks.
- Compliance with the existing U.S. Safe Drinking Water Act's maximum contaminant levels.

For the past eight years, DEP has found that DCR has demonstrated adequate control measures for water quality protection. DEP's 2008 on-site inspection found that DCR's Quabbin Reservoir and Ware River watersheds continue to meet all the necessary criteria to maintain an avoidance of filtration according to the Safe Drinking Water Act Amendments. However, based on the 2008 inspection DEP recommended that DCR update the Ware River Watershed Public Access Plan (DEP, 2008). DCR-Watershed has successfully met this request with the completion of the *Public Access Management Plan Update 2010 - Ware River Watershed*.

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GLOSSARY OF TERMS

Listed in alphabetical order below are terms and definitions that DCR uses throughout *Public Access Management Plan Update 2010 - Ware River Watershed*.

Access: public access in the Division's management context is wide-ranging and ever-changing. It includes the concepts of the physical ability to enter and use land, restrictions or prohibitions on specific land or water-based recreational activities, signage, mapping, public education, intergovernmental coordination, land and easement acquisition, public safety, and protection of public and private property rights.

All-terrain vehicle (ATV): a vehicle designed for off-road use with aggressive tread patterns to overcome natural obstacles.

Automobile: a passenger vehicle that has four wheels and an engine used for land transport.

Basin or Sub-basin: the land area from which all water flows to a single, identified water source, such as a stream, a river, or a reservoir. Sub-basin is used to refer to the basin of a tributary.

Best Management Practices (BMP): a set of standards that have been designed for an activity, and often a region, to protect against degradation of resources during management operations.

***Cryptosporidium parvuum*:** a protozoan parasite found in humans and various wild and domestic animals that can be transmitted via water, and often causes serious intestinal illness.

Department of Conservation and Recreation, Division of Water Supply Protection, Office of Watershed Management (DCR-Watershed): a Massachusetts State Agency within the Executive Office of Energy and Environmental Affairs, that is responsible for the collection and safe storage of water, protection of reservoir water quality, and management of the watersheds for metropolitan Boston and the Chicopee Valley Service Area. Formerly the Metropolitan District Commission, Division of Watershed Management.

Dog Handling: causing dogs to be present (included dog walking, hunting with dogs, etc.).

Gate: a structure of metal, wood, or other material installed and or maintained by DCR-Watershed staff on DCR lands.

Geographic Information System (GIS): a computer-based analysis and mapping system for spatially-linked data sets.

***Giardia lamblia*:** a protozoan parasite found in humans and various wild and domestic animals that can be transmitted via water, and often causes serious intestinal illness.

Hazard: an act or phenomenon that has the potential to produce harm or other undesirable consequences to humans or what they value.

Kelly-Wetmore Act: Chapter 737 of the Acts of 1975 which set forth rules for the management of Quabbin Reservoir and Ware River watershed lands and waters.

Jet Ski: see personal watercraft.

Maintained road: an open way for the passage of vehicles through DCR managed lands used in on-going watershed management activities (excludes skid trails).

Massachusetts Water Resources Authority (MWRA): an independent public authority established in 1984 by the Massachusetts Legislature. MWRA's primary mission is to modernize the metropolitan area water and sewer systems, to conserve water resources, and to improve the water quality of Boston Harbor.

Mud Season: a time of year typically defined as the months of April and May, but which varies seasonally.

Off-Reservation: DCR-owned lands within the Ware River Watershed located outside of Rts. 122, 122A, 56, 68, and 62.

Off-road vehicle (ORV): nonregistered motorized vehicles such as ATVs and dirt bikes.

Pathogen: an agent that causes disease, especially a microorganism such as protozoa or bacteria.

Personal Watercraft: small performance oriented, engine powered, boat, usually designed for 1 or 2 passengers (e.g., Jet Ski).

Primary contact recreation: recreational activities with prolonged and intimate contact by humans when the ingestion of small quantities of water is likely to occur.

Risk: a concept used to give meaning to things, forces, or circumstances that pose danger to people or to what they value.

Snowmobile: a small vehicle with ski-like runners in front and tank-like tread, used for driving in or traveling on snow.

Swimming: to propel, float, or immerse oneself through or on water.

Vehicle: an automobile used for carrying passengers, registered for public roadways.

Wading: to walk in or through water.

Ware River Reservation: all DCR-controlled lands and waters within Rts. 122, 122A, 56, 68, and 62, and subject to additional restrictions set forth in Ch 737 of the Acts of 1972 (aka, Kelly-Wetmore Act).

Ware River Intake: the MWRA diversion facility located on the Ware River in Barre, MA, also referred to the "Restricted Area" in this Plan.

Watershed protection: an integrated, holistic processes that effectively and efficiently preserves, protects and restores, the physical, chemical, and biological integrity of the water resources within a defined hydrologic area.

Water quality: defined using the physical, chemical, and biological integrity mandates of the U.S. Clean Water Act.

REFERENCES

Massachusetts General Laws (MGL)

- MGL Chapter 350, Acts of 1919 (Creation of MDC)
- MGL Chapter 375, Acts of 1926 (“Ware River Act”)
- MGL Chapter 737, Acts of 1972 (“Kelly-Wetmore Act”)
- MGL Chapter 373, Acts of 1984 (Creation of MDC Division of Watershed Management)
- MGL Chapter 92, Acts of 1992 (“Watershed Protection Act”)

Code of Massachusetts Regulations (CMR)

- 310 CMR 22.00 Drinking Water (1997)
- 324 CMR 2.00 Boat Launching Facilities and Land Under the Control of the Public Access Board
- 350 CMR 8.00 Land Within Watershed Reservation
- 350 CMR 11.00 Watershed Protection

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Annotated Literature Review

Since the mid 1980s, DCR and its predecessor has reviewed the scientific literature related to drinking water supply protection and recreational activities on water supply sources, within the buffer areas of these sources, and within the watershed contributing to these sources. These reviews are performed to inform the agency's approach to public access management in the public drinking water supply watersheds of the Quabbin Reservoir, Ware River and Wachusett Reservoir Watersheds.

The literature related to the effects of recreational activity on drinking water supplies over the past thirty years has documented the ever growing complex world: increased recreational interests and conflicts; increased water supply contamination issues within a changing landscape of human values; population pressures on drinking water supplies and their watersheds. In the 1980s the literature had just touched on the threat of microbial contaminants such as *giardia* and *cryptosporidium* to public drinking water supplies. The 1990s confirmed these threats and added the myriad of possible impacts from global climate change to the potential list of threats. The scientific literature and public awareness in 2009 is looking carefully at the threats to water quality nationally—from the use and disposal of personal care products and pharmaceuticals as well as aquatic invasive species, from a local perspective

The following are summaries of the literature identified by DCR-Watershed on the topic of recreational activities and source water protection.

American Water Works Association. 2009. **2009 Policy Statement - Recreational Use of Domestic Water Supply Reservoirs**. American Water Works Association, Denver, CO.

The AWWA updated policy, first written in 1971, was revised for clarification and emphasis. The Association reiterated the founding principle of its policy remained that the highest quality of water should be used as the source water for public drinking water.

Edge, T, et al.. 2008. ***Threats to Sources of Drinking Water and Aquatic Ecosystem Health in Canada***. National Water Research Institute, Environment Canada.

This assessment, written by experts in the field for the Canadian Government, reviews current scientific knowledge, trends, and information and program needs in order to define research priorities and to develop sound management policies and practices. The study identified 15 threats to drinking water sources in Canada; waterborne pathogens were list as the first threat. The waterborne pathogen assessment reported the lack of scientific knowledge regarding microbial pathogen waterborne sources. The experts recommended a preventive approach to pathogen pollution in source water protection programs.

Fight, Roger D.; Kruger, Linda E.; Hansen-Murray, Christopher; Holden, Arnold; Bays, Dale. 2000. **Understanding Human Uses and Values in Watershed Analysis**. Gen. Tech. Rep. PNW-GTR-489. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Portland, OR. 16 p.

This paper presents a watershed-based approach to collect information about human interactions, values, and interests, such as recreational uses, within a watershed. The six-step process was developed to supplement a Federal process for watershed analysis of which human issues is one of the seven main topics, but for which little guidance existed. The study categorized human uses into four, on-site use categories: 1) commercial, 2) recreational, 3) cultural, and 4) infrastructure/settlement. The resulting recreational module contained historic research, public involvement, and local demographic data to understand past, present, and proposed future recreational demands. This study did not address American Indian traditional cultural and religious issues in depth.

Kakoyannis, Christina; Stankey, George H. 2002. **Assessing and Evaluating Recreational Uses of Water Resources: Implications for an Integrated Management Framework**. Gen. Tech. Rep. PNW-GTR-536. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Portland, OR. 59 p.

This collaborative study between a Ph.D. candidate and a research social scientist analyzed conflicts over water as they related to human uses and values for water. The first phase examined how water-based recreation affects water management regimes and how water management regimes affect water-based recreation. Then the study looked at how demographics (e.g., population growth and migration) may affect recreation trends. The report concluded that there is limited understanding on how to resolve the conflicts between among recreationists and between recreation and other uses of water.

Krogh M, Davison A, Miller R, O'Connor N, Ferguson, C, McClaughlin V and Deere D. 2008. **Effects of Recreational Activities on Source Water Protection Areas - Literature Review**. Water Services Association of Australia, Melbourne, Australia.

This literature review describes both the human and ecological effects of human access on source water protection areas – water bodies, buffer areas, and watershed – with a focus on ecological issues. Recent risk-based approaches to quantify recreational impact on water quality are being used to help address the complex human access debate, amid public pressure, human behavior, and political influence. The literature identified activity-specific water quality impacts ranging from the introduction of microbial pathogens to potential spread of invasive species. The cumulative ecological impacts from access activities were noted. Absolute levels of risk were not reported in the studies. The review concludes that the literature links both ecological and health impacts on drinking water sources by human access. The review recommends limits and controls on

human access to protect not only water resource and ecological values, but also the “recreational” access experience.

United States Environmental Protection Agency. 2009. *Review of Published Studies to Characterize Relative Risks from Different Sources of Fecal Contamination in Recreational Water*. USEPA, Office of Water Health and Ecological Criteria Division EPA 822-R-09-001.

This report reviews studies related to human health risk from waterborne fecal contamination to inform US EPA’s revision of the Clean Water Act Section 304(a) criteria for recreation. The review’s primary question was “what is the risk to human health from swimming in water contaminated with human fecal matter as compared to swimming in water contaminated with nonhuman fecal matter?” The review used both drinking water outbreak surveillance reports as well as recreational outbreak literature. Both drinking water literature and recreational water literature provided evidence that human illnesses can and do occur from animal-based contamination. However, the review concludes that current published studies do not substantially enhance the current state of knowledge on quantitatively characterizing risks from animal-related pathogen sources compared with human sources for both drinking water and recreational water exposures.

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FORMS

Form A. Geocache Placement Request and Self-Certification Form

Geocache Placement Request and Self-Certification Form

To request permission for a Geocache placement on DCR-Watershed lands, this Form, including the self-certification section, must be completed by applicant and sent to: Quabbin Visitor Center, DCR Quabbin, 485 Ware Road, Belchertown, MA 01007. A photograph of the geocache must also be included with the application. If the request is approved by DCR, notice will be sent by email to the applicant. The geocache must then be registered on www.geocaching.com and placed on site.

Owner Information:

Name: _____

Address: _____

Phone: _____ Email _____

Geocache Information:

Coordinates of geocache

Latitude: _____ Longitude: _____

Geocache Name: _____

Self-certification:

- Geocache will be in a waterproof, transparent container.
- Photograph of geocache is attached to application.
- I, the geocache owner, certify that: all of the above information is correct to the best of my knowledge. I have read, understand, and will comply with DCR-Watershed's Geocaching Policy. I will comply with all other DCR property regulations. I agree to remove this geocache within three years of the registration approval date and/or apply for a registration extension by the permit end date or risk having the geocache removed by DCR personnel. In addition, DCR shall assume no responsibility whatsoever for the loss or damage to the geocache or its contents or injury of the owner from any cause and the owner agrees at all times to indemnify, protect, and save harmless DCR and its agents and employees from liability in connection with owner's property and/or operation under this permit.

Geocache Owner Signature: _____ Date: _____

FOR DCR USE ONLY

Approved _____ Denied _____ Hold _____

Permit #: _____

Regional Director Signature: _____

If Denied or Placed on Hold, state reasons below:

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Form B. Group Access Permit

**DEPARTMENT OF CONSERVATION AND RECREATION
DIVISION OF WATER SUPPLY PROTECTION
QUABBIN SECTION
485 WARE ROAD
BELCHERTOWN, MA 01007
413 – 323 – 7221**



PUBLIC ACCESS PERMIT APPLICATION-WARE RIVER WATERSHED

Permits are required for groups of more than 25 individuals or 15 horseback riders with horses, anywhere on DCR Office of Watershed Management lands in the Ware River Watershed System.

Permits are granted to incorporated, non-profit and certain other groups or individuals conveying appropriate need for such access.

DCR may suspend all permits due to seasonal conditions such as mud, forest fire season, etc.

Access to critical wildlife areas will be limited during certain time periods.

Group size may be limited by the Regional Director.

Requests for group access should be made in writing and should be received by DCR at least three weeks prior to the proposed access date.

Please return this form to the address above.

Should your plans change, the Quabbin Visitor Center staff must be notified a minimum of 24 hours prior to the event.

Please complete all information legibly.

NAME(S):

STREET:

CITY _____ STATE _____ ZIP _____

PHONE(S)

Type of assembly: _____ Number of participants: _____

Date of access (include alternate date): _____

Time of arrival and departure: _____

Number and type of vehicles:

Specify Area of access; Gate # or road intersection:

Purpose of Trip:

Specify itinerary (trip route)

I agree to comply with all DCR Rules and Regulations. I acknowledge my permit and privileges for use of the Ware River Watershed System may be revoked for Rules and Regulations violations.

Signature

Date _____

DCR USE ONLY

Request accepted _____ Restrictions:

Request denied for the following reason(s):

DCR Signature _____ **Date** _____

4/2006

Appendices

Appendix A – Legislation

350 CMR 11.00 Watershed Protection Regulations

Department of Conservation and Recreation

with corrections, May, 1994

Official Disclaimer: These regulations are provided to you for your convenience. Official versions of all Massachusetts State statutes are available through the State Bookstore. Please be aware that this copy may differ from the official version. If you need the statutes for work that may have any legal implications, make sure to get the official version from the State bookstore.

Section

11.01: Introduction and Purpose

11.02: General Provisions

11.03: Definitions

11.04: Jurisdiction

11.05: Exemptions

11.06: Procedures

11.07: Maps

11.08: Relationship of Act with other State and Municipal Statutes, Ordinances and Regulations

11.09: General Rules and Regulations for the Protection of Watersheds and the Watershed System

11.10: Enforcement

11.11: Miscellaneous

11.12: Severability

11.13: Forms

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11.01 Introduction and Purpose

(1) Introduction - 350 CMR 11.00 is promulgated by the Commissioners of the Department of Conservation and Recreation pursuant to the authority granted under St. 1992 c. 36. St. 1992 c. 36, s. 2 amends M.G.L. c. 92, s. 104 by adding certain definitions which are used in 350 CMR 11.03; St. 1992 c. 36, s. 3 adds M.G.L. c. 92, s. 107A defining the jurisdiction and exemptions contained in 350 CMR 11.04 and 350 CMR 11.05, respectively; and St. 1992 c. 36, s. 4 amends M.G.L. c. 92, s. 108 by requiring the Division of Watershed Management, after consultation with the Department of Environmental Protection, to make rules and regulations for the protection of Watersheds as defined in St. 1992 c. 36.

In addition, St. 1992 c. 36 and M.G.L. c. 92 authorize the Department of Conservation and Recreation and the Division of Watershed Management to make rules and regulations to protect the Watersheds as defined in St. 1992 c. 36 and the Watershed System as defined in St. 1992 c. 36 and M.G.L. c. 92. The Department of Environmental Protection is also required under St. 1992 c. 36, s. 14 to adopt rules and regulations for the prevention of pollution and securing the sanitary protection of all waters used as sources of water supply in the Commonwealth other than in the Watersheds as defined in St. 1992 c. 36. Regulations currently exist for:

- (a) the sanitary protection of waters used by the Department of Conservation and Recreation (310 CMR 23.00);
- (b) land within Watershed Reservations (350 CMR 8.00);
- (c) sanitary rules and regulations for the Metropolitan Water Supply (350 CMR 9.00); and
- (d) fishing in Wachusett and Sudbury Reservoirs (350 CMR 10.00).

In order to facilitate review of all regulations promulgated by the Department of Conservation and Recreation and the Division of Watershed Management relating to Watersheds and the Watershed System, 350 CMR 11.09 includes regulations of general applicability to Waters of the Watershed System. The regulations in 350 CMR 11.09 are intended to supersede the regulations in 310 CMR 23.00, 350 CMR 8.01, 350 CMR 9.00, and 350 CMR 10.00, which shall be repealed on March 31, 1994.

(2) Purpose - The purpose of St. 1992 c. 36 is to improve the protection of the metropolitan water supply. St. 1992 c. 36 and 350 CMR 11.00 set forth a comprehensive scheme to regulate land use and activities within certain critical areas of the Watersheds and Watershed System.

The purpose of 350 CMR 11.00 is to define and clarify the restrictions and prohibitions set forth in St. 1992 c. 36 by establishing standard definitions and procedures under which the Division of Watershed Management may carry out its responsibilities under St. 1992 c. 36. 350 CMR 11.00 shall complement St. 1992 c. 36 and shall have the force of law on March 31, 1994.

11.02: General Provisions

(1) Time Periods. Unless otherwise specifically provided in St. 1992 c. 36 or 350 CMR 11.00, computation of any time period referred to in 350 CMR 11.00 shall begin with the first day following the action which initiates the running of the time period. The last day of the time period so computed is to be included unless it is a Saturday, Sunday or legal holiday or any other day on which the office of the Division is closed, in which event the period shall run until the end of the next following business day. When the time period is less than seven days, intervening days when the Division is closed shall be excluded in the computation.

(2) Timely Filing. All Papers must be filed at the Division office or such other place as the Division shall specify in 350 CMR 11.00 within the time limits set forth herein.

Unless otherwise specifically provided in St. 1992 c. 36 or 350 CMR 11.00, Papers filed in the following manner shall be deemed to be filed as set forth herein:

(a) *Hand delivery during business hours*. By hand delivery during business hours shall be deemed filed on the day delivered.

(b) *Hand delivery during non-business hours*. By hand delivery at times other than during regular business hours shall be deemed filed on the next regular business day.

(c) *Mailing*. By placing in the United States Mail certified or registered mail, return receipt requested shall be deemed filed on the date received by the Division.

All Papers shall show the date received by the Division and the Division shall cooperate in giving date receipts to Persons filing Papers by hand delivery.

(3) Actions by the Division. Where St. 1992 c. 36 states that a particular action (except receipt of a request or notice) is to be taken by the Division, that action is to be taken by the person designated by 350 CMR 11.00 or, if by a committee, by more than half the members present at a meeting of at least a quorum. A quorum is defined as a Majority of the members then in office.

(4) Burden of Proof. Any Person who files a request for Advisory Ruling, a request for Watershed determination of applicability, an application for variance or a request for Exemption of a Tributary shall have the burden of producing credible evidence from a competent source in order to demonstrate to the Division or, in the case of an appeal, to the Commission, support for the position taken or the relief requested.

(5) Capitalized Terms. Any capitalized terms used in 350 CMR 11.00 shall have the meanings ascribed to such terms in 350 CMR 11.03.

11.03 Definitions

Advisory Ruling means a ruling issued by the Division pursuant to 350 CMR 11.06(1).

Agriculture, Land in Agricultural Use and Normal Maintenance or Improvement of Land in Agricultural Use shall have the meanings ascribed to such terms in 310 CMR 10.04.

Alteration means:

- (a) draining, dumping, dredging, damming, discharging, excavating, filling or grading;
- (b) the erection, reconstruction or substantial expansion of any buildings or Structures;
- (c) the driving of pilings;
- (d) the construction or reconstruction or paving of roads and other ways;
- (e) the construction or reconstruction of utilities;
- (f) the changing of run-off characteristics;
- (g) the intercepting or diverting of ground waters, surface waters, reservoirs, tributaries, or aquifers; and
- (h) the installation or substantial expansion of drainage, sewage and water systems.

Applicability Decision means the written decision issued by the Division pursuant to 350 CMR 11.06(2)(e).

Aquifer means a geological formation, group of formations, or part of a formation in the Wachusett Watershed that is capable of yielding a significant amount of water to a well or spring, as determined by reference to the Maps, 350 CMR 11.07. The land directly overlaying an aquifer shall be deemed to be part of said aquifer.

Authority means the Massachusetts Water Resources Authority.

Bank means the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a Bordering Vegetated Wetland and adjacent Flood plain, or in the absence of these, it occurs between a water body and an upland. A bank may be partially or totally vegetated or may be comprised of exposed soil, gravel or stone. The upper boundary of a bank is the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a bank is the mean annual low flow level.

Bordering Vegetated Wetland means a wet meadow, except meadows used for the grazing of livestock, marsh, swamp, bog or other area, hydrologically connected to and bordering on a Tributary, Reservoir, Flood plain, or Surface Water, which supports at least 50% wetland species and as defined in the Wetlands Protection Act as defined herein.

Commission means the Department of Conservation and Recreation.

Commonwealth means the Commonwealth of Massachusetts.

Date of Issuance means the date a determination, order or decision is hand delivered or mailed as provided in 350 CMR 11.00.

Date of Submission means the date the Division assigns a file number to a request or application submitted pursuant to 350 CMR 11.06. Assignment of a file number shall not imply that a request, application or supporting documents have been determined adequate to support the relief requested, but only that the submission is complete in accordance with the requirements of 350 CMR 11.06.

Department means the Department of Environmental Protection of the Commonwealth of Massachusetts.

Discharge or Discharge of Pollutant means any addition of Pollutants or combination of Pollutants from any source including, but not limited to, discharges from surface runoff, which are collected or channelled by man and through pipes, sewers or other conveyances.

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, incineration or placing into or on any land or water so that the matter disposed of may enter the environment or be emitted into the air or discharged into any waters, including Ground water.

Division means the Division of Watershed Management of the Commission.

Dwelling means any structure or building, or any portion thereof which is used, intended to be used, or designed to be occupied for human habitation purposes, including, but not limited to, houses, hotels, motels, apartments and condominiums.

Exemption Decision means a decision of the Division, in consultation with the Department, to exempt a Tributary from regulation under St. 1992 c. 36 issued pursuant to 350 CMR 11.06(4)(g).

Flood plain means the land adjoining a Tributary, Reservoir or Surface Water, which is subject to inundation from a flood having a 1% chance of being equaled or exceeded in any given year, commonly known as the 100 year flood plain, as determined by reference to the Maps, 350 CMR 11.07.

Generate or Generation of Pollutants means the origination, creation or production of Pollutants.

Ground water means water below the land surface in a saturated zone, including perched ground water.

Hazardous Material or Waste means any material or waste, in whatever form, which because of its quantity, concentration, corrosivity, flammability, reactivity, toxicity, or infectious, chemical or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Hazardous Material or Waste shall include those materials listed in 40 CFR 261, or 310 CMR 40.900 Appendix I.

Impervious means not allowing entrance or passage of water due to the presence on or above the ground of material having a percolation rate of greater than 30 minutes per inch, including, but not limited to, pavement, concrete, stone, peat, loam and other organic matter.

Leaching Field means a soil absorption system as such term is defined in Title 5 (350 CMR 15.00).

List of Affected Parcels means the list developed by the Division from maps prepared pursuant to M.G.L. c. 92 s. 107A(q).

Lot means an area of land subject to St. 1992 c. 36 in one ownership with definite boundaries described in a deed or shown on a plan recorded in the registry of deeds or registered in the registry district of the land court.

Maps means the maps described in 350 CMR 11.07.

Majority means more than half of the members of any body making a decision pursuant to 350 CMR 11.00.

Natural Basin means an area bounded peripherally by a water parting and draining ultimately to a particular water course or body of water; the catchment area or drainage basin from within which the waters of a stream or stream system are drawn.

Owning an Interest in Real Property or Real Property Interest means having alone, or jointly or severally with others:

(a) legal title to real property;

(b) the care, charge or control of real property in any capacity including, but not limited to as agent, executor, executrix, administrator, administratrix, trustee, or guardian of the estate of the holder of legal title;

(c) lessee under a written lease; or

(d) an agent, trustee or other person appointed by the Courts of the Commonwealth.

Papers means all requests, documents, papers, notices, appeals and other written communications permitted or required by the regulations to be filed with the Division or the Commission.

Party Aggrieved means any Person who, because of an act or failure to act by the Division or the Commission under St. 1992 c. 36 or 350 CMR 11.00, may suffer an injury in fact which is different, either in kind or magnitude, from that suffered by the general public, and which is within the scope of the interests identified in St. 1992 c. 36. Such party must specify, in writing, sufficient facts to allow the Division or the Commission to determine whether or not the party is, in fact, aggrieved.

Person means an individual, partnership, corporation, firm, association or group, including a city, town, county, the Commonwealth or other governmental unit owning property or carrying on an activity regulated by St. 1992 c. 36.

Plans means such data, maps, engineering drawings, calculations, specifications, schedules and other materials, if any, deemed necessary by the Division to describe the Lot, portion of the Lot or the Alteration to determine the applicability of St. 1992 c. 36 or to determine the impact of the Alteration upon the interests identified in St. 1992 c. 36.

Pollutant means any substance, man-made or resulting from human activities, that can alter the biological, chemical, physical, or radiological character of water.

Reservoir means either the Wachusett or the Quabbin Reservoir.

Sewage Treatment Facility means any wastewater treatment facility used for treating, neutralizing or stabilizing sewage, including: treatment or disposal plants; the necessary intercepting outfall and outlet sewers; pumping stations integral to such facilities; and equipment and appurtenances related to the foregoing.

Sewer System means pipelines or conduits, pumping stations, force mains, and all other structures, devices, appurtenances, and facilities used for collecting and conveying wastes to a site or works for treatment or disposal.

Storage means the actual or intended containment on a temporary basis or permanent basis which does not constitute Disposal.

Structure means a combination of materials assembled at a fixed location to give support or shelter, such as, but not limited to, a Dwelling, a building, framework, retaining wall, tent, reviewing stand, platform, bin, fence over six feet high, sign, flagpole, recreational tramway, mast for radio antenna or the like. The word "structure" shall be construed, where the context requires, as though followed by the words "or part or parts thereof."

Subsurface Waste Water Disposal System means an on-site subsurface sewage disposal system as defined in Title 5 (310 CMR 15.00).

Surface Water(s) means water in the Watersheds, including any lake, spring, impoundment, and pond, as determined by reference to the Maps, 350 CMR 11.07. Surface water shall include the land located thereunder and the Banks thereto. Surface water shall exclude all Reservoirs, Tributaries, Aquifers, Ground waters, and man-made farm ponds used for irrigation, as well as so-called great ponds of the Commonwealth which do not drain into a Tributary or a Reservoir.

Title 5 means Title 5 of the Massachusetts Environmental Code governing standard requirements for the siting, constructing, repair, replacement and maintenance of on-site sewage treatment and disposal systems, 310 CMR 15.00.

Treatment means any method, technique, or process, including neutralization, incineration, stabilization or solidification, designed to change the physical, chemical or biological character or composition of any Hazardous Material or Waste so as to neutralize such Material or Waste or so as to render such Material or Waste less hazardous, non-hazardous, safer to transport, amenable to storage, or reduced in volume, except such method or technique as may be included as an integral part of a manufacturing process at the point of generation.

Tributary means a body of running water, including a river, stream, brook and creek, which moves in a definite channel in the ground due to a hydraulic gradient and which flows ultimately into a Reservoir in the Watersheds or the Ware River above the Ware River intake, as determined by reference to the Maps, 350 CMR 11.07. A Tributary shall include the land over which the water therein runs and the Banks thereto.

Uses and Activities means those uses and activities described in M.G.L. c. 92, s. 107A(a) and (b)(2) and 350 CMR 11.04(3).

Variance Decision means the written decision issued by the Division pursuant to 350 CMR 11.06(3)(g).

Waters of the Watershed System means all waters that in their natural course would flow into the Ware River above the Colbrook Diversion, the open channel of the Wachusett Aqueduct, the Quabbin, Wachusett, Sudbury and Foss reservoirs and any other lake, pond, reservoir, aqueduct, stream, ditch, watercourse or any other open water under the provision of M.G.L. c. 92, s. 109.

Watershed Reservation(s) means land within the Watershed System and described in St. 1972 c. 737 as amended by St. 1990 c. 436.

Watershed(s) means the Natural Basin from within which water drains or in the natural course would drain into the Quabbin Reservoir, the Wachusett Reservoir, or the Ware River upstream of the Ware River intake.

Watershed System means:

(a) all real and personal property interests held by or on behalf of the Commonwealth immediately prior to the effective date of St. 1992 c. 36 in and for the Department of Conservation and Recreation water system which were part of or appurtenant to the Quabbin Watershed, Quabbin Reservoir, Ware River Watershed, Wachusett Watershed, Wachusett Reservoir, North and South Sudbury watersheds, Sudbury Reservoir, Framingham Reservoirs 1, 2 and 3, Blue Hills Reservoir, Bear Hill Reservoir, Spot Pond Reservoir, Fells Reservoir, Weston Reservoir, Norumbega Reservoir, Chestnut Hill Reservoir, including land, easements, buildings, Structures, all equipment, machinery, vehicles and appliances, improvements, water rights and rights in source of water supply; and

(b) all enlargements and additions to the former Department of Conservation and Recreation water system acquired or constructed by the Division for the purpose of the Watershed System, including land, easements, buildings, Structures, equipment, machinery, vehicles, and appliances, improvements, reservoirs, dams, water rights and rights in sources of water supply, but excluding the Waterworks System of the Authority.

Waterworks System means waterworks system as defined in M.G.L. c. 92 App. and 360 CMR 10.00 et seq.

Wetlands Protection Act means the Wetlands Protection Act, M.G.L. c. 131, s. 40 and regulations promulgated pursuant thereto, 310 CMR 10.00 et seq.

11.04: Jurisdiction

(1) Areas Regulated. Areas regulated by St. 1992 c. 36 and 350 CMR 11.00 include those portions of the Watersheds which lie:

(a) within 400 feet of the Bank of a Reservoir;

(b) within 200 feet of the Bank of a Tributary or Surface Waters;

(c) within the area between 200 and 400 feet of the Bank of a Tributary or Surface Waters;

(d) within the Flood plain of a Tributary or Surface Waters, including that flood plain;

(e) within Bordering Vegetated Wetlands that border on Tributaries or Surface Waters or Reservoirs;

(f) within land that overlays an Aquifer with a potential well yield of 100 gallons per minute or more as determined in accordance with St. 1992 c. 36 and 350 CMR 11.00; or

(g) within land that overlays an Aquifer with a potential well yield of one or more but less than 100 gallons per minute pursuant to a finding by the Division, in consultation with the Department, that regulation of said Aquifer is necessary for the protection of the quality of the water in the Surface Waters, Aquifers, Reservoirs or Tributaries.

(2) *Presumptions - Properties Identified in the List of Affected Parcels.* For purposes of 350 CMR 11.00, all properties identified in the List of Affected Parcels shall be presumed to be in an area regulated under 350 CMR 11.04(1)(a) through (g). Any property which is not identified in the List of Affected Parcels shall be presumed not to be in an area regulated under 350 CMR 11.04(1)(a) through (f).

(3) *Uses and Activities Regulated or Prohibited.*

(a) Any Alteration, or the Generation, Storage, Disposal or Discharge of Pollutants is prohibited within those portions of the Watershed that lie:

1. within 400 feet of the Bank of a Reservoir (350 CMR 11.04(1)(a)); or

2. within 200 feet of the Bank of a Tributary or Surface Waters (350 CMR 11.04(1)(b)).

(b) 1. Within those portions of the Watershed that lie:

a. within the area between 200 and 400 feet of the Bank of a Tributary or Surface Water (350 CMR 11.04(1)(c));

b. within the Flood plain of a Tributary or Surface Water (350 CMR 11.04(1)(d));

c. within Bordering Vegetated Wetlands that border on Tributaries or Surface Waters or Reservoirs (350 CMR 11.04(1)(e));

d. within land that overlays an Aquifer with a potential well yield of 100 gallons per minute or more as determined in accordance with St. 1992 c. 36 and 350 CMR 11.00 (350 CMR 11.04(1)(f)); or

e. within land that overlays an Aquifer with a potential well yield of one or more but less than 100 gallons per minute, pursuant to a finding by the Division, in consultation with the Department, that regulation of said Aquifer is necessary for the protection of the quality of the water in the Surface Waters, Aquifers, Reservoirs or Tributaries (350 CMR 11.04(1)(g)),

2. the following uses are prohibited:

- a. the Disposal of Pollutants from either privately or publicly owned Sewage Treatment Facilities;
- b. the placement of the Leaching Field of a Subsurface Waste Water Disposal System less than four feet above the maximum water table level as measured at the time of annual high water;
- c. the storage of liquid petroleum products of any kind; provided, however, that an end user of such product, such as a resident in connection with normal residential use or a person responsible for supplying heat to a residence, may store a reasonable volume of such material so long as such storage is in a free standing container inside of the Structure, which Structure shall include at a minimum a foundation thereof with a poured cement slab floor or a concrete reservoir of sufficient volume to hold 125 percent of the tank's capacity;
- d. the Treatment, Disposal, use, generation or Storage of Hazardous Material or Waste, except a reasonable volume of Hazardous Material or Waste incidental to normal residential use;
- e. the Storage and the Disposal of solid waste other than a reasonable volume incidental to normal residential use;
- f. the outdoor Storage of road salt or other de-icing chemicals; provided, however, that 350 CMR 11.00 shall not prohibit the outdoor Storage of sand, gravel or materials used in road construction which are not Hazardous Materials or Waste;
- g. the outdoor Storage of fertilizers, herbicides and pesticides;
- h. the use or Storage of pesticides or herbicides which carry a mobility rating as provided for by the United States Environmental Protection Agency or which have been determined by the Commonwealth using United States Environmental Protection Agency standards to pose a threat or potential threat to Ground water;
- l. the outdoor, uncovered Storage of manure;
- j. the servicing, washing or repairing of boats or motor vehicles other than as reasonably incidental to normal residential use;
- k. the operation of junk and salvage yards;
- l. the rendering Impervious of more than ten percent of any Lot or 2,500 square feet, whichever is greater;
- m. the excavation of gravel and sand to a depth greater than six feet above the maximum water table, except where incidental to the construction of permitted Structures;
- n. the Alteration of Bordering Vegetated Wetlands;
- o. any other activity which could degrade the quality of the water in the Watersheds as determined by the Division after consultation with the Department; provided, however, that de-icing may be performed on a roadway under procedures approved by the Commonwealth's Secretary of Environmental Affairs; or

p. the construction of any Dwelling which exceeds a density of two bedrooms per acre or any use which may generate more than 220 gallons of sanitary sewage per acre per day.

(c) In addition to, and without limiting, the prohibitions contained in 350 CMR 11.04(3)(a) and (3)(b), within those portions of the Watersheds which overlay Aquifers with potential well yields of between 100 and 300 gallons per minute as determined by the Division, or land whose regulation has been determined to be necessary for the protection of the quality of the water in the Surface Waters, Aquifers, Reservoirs and Tributaries, pursuant to 350 CMR 11.04(1)(g), the construction of any Dwelling which exceeds a density of one and one-third bedrooms per acre and any use which may generate more than 147 gallons of sanitary sewage per acre per day are prohibited.

(d) In addition to, and without limiting, the prohibitions contained in 350 CMR 11.04(3)(a), (3)(b) and (3)(c), within those portions of the Watersheds that overlay Aquifers with potential well yields of over 300 gallons per minute as determined by the Division, the construction of any Dwelling which exceeds a density of one bedroom per acre and any use which may generate more than 110 gallons of sanitary sewage per acre per day are prohibited.

(e) In making the calculation required under 350 CMR 11.04(3)(b)2.I, all contiguous real property within an area described in 350 CMR 11.04(1) owned by the same Person shall be used, in the aggregate; provided, however, that said area may be so used in making such calculation for only one Lot.

(f) In making the calculation required under 350 CMR 11.04(3)(b)2.p., all contiguous real property within an area described in 350 CMR 11.04(1) owned by the same Person shall be used, in the aggregate, to determine the total acreage for density purposes; provided, however, that said area may be so used for determining area density for only one Lot.

11.05: Exemptions

The provisions of 350 CMR 11.04 shall not apply to the following:

(1) Uses, Structures or Facilities in Existence. Uses, Structures or facilities lawfully in existence or for which all applicable municipal, state and federal permits and approvals, other than building permits and permits for septic systems, were obtained prior to July 1, 1992;

(2) Reconstruction, Extension or Structural Change. Any reconstruction, extension or structural change to any Structure lawfully in existence on July 1, 1992, provided that such reconstruction, extension or structural change:

(a) does not constitute a substantial change to or enlargement of that lawfully existing Structure; and

(b) does not degrade the quality of the water in the Watershed;

(3) Lot in Existence. The construction of one single-family Dwelling on any Lot existing as such prior to July 1, 1992, or the division of an owner occupied Lot existing as such as of July 1, 1992 into one additional Lot for a single family dwelling; provided that, wherever

possible, there shall be no Alterations within the areas described in 350 CMR 11.04(1)(a) and 11.04(1)(b);

(4) Construction - Sewer System. The construction of any Dwelling described in 350 CMR 11.04(3)(b)2.p., 11.04(3)(c) or 11.04(3)(d) if a Sewer System existed prior to July 1, 1992 to which a direct connection shall be made without expansion of capacity and said connection is used for all sanitary sewage of any Dwelling or other Structure resulting from said construction;

(5) Tributaries. Tributaries, or portions thereof, which the Division, in consultation with the Department, has exempted pursuant to 350 CMR 11.00, upon a determination that such exemption will pose no significant risk to the quality of the water, after taking into account the rate of flow, slope, soil characteristics, proximity to a Reservoir or the Ware River above the Ware River intake, the current level of water quality and the current degree of development;

(6) Work of the Division. The Division, in the performance of its responsibilities and duties to protect the quality of the water in the Watersheds, or the Authority in the performance of its responsibilities and duties to maintain, operate and improve the Waterworks System;

(7) Conversion of Land for Agricultural Use. Conversion of Land for Agricultural Use or preparation of Land for Agricultural Use; provided, however, that such conversion shall be made under a plan approved by the United States Department of Agriculture, Soil Conservation Service and the Commission, in consultation with the Commonwealth's Department of Food and Agriculture;

(8) Maintenance of Public Roadways in Existence. The maintenance, repair, replacement or reconstruction of public roadways existing as of September 1, 1989 or railroad track and rail bed existing as of September 1, 1990, including associated drainage systems, that are necessary to preserve or restore the facility's serviceability for the number of travel lanes and uses existing as of September 1, 1990; provided, however, that in the case of any replacement the design is substantially the functional equivalent of, and is of similar alignments to that which is being replaced; provided, further, that design plans and specifications for said work on roadways, or railroad track and rail beds are provided to the Division prior to the work's commencement;

(9) Maintenance or Improvement - Agricultural. Activities relating to normal maintenance or improvement of Land in Agricultural Use; provided, however, that such activities do not impair the quality of the water;

(10) Construction of Public Highways. The construction of public highways, railroad track and rail beds and facilities directly related to their operation; provided, that the Commonwealth's Secretary of Environmental Affairs has determined that such highway or transportation service construction project requires direct access to or location in the lands described in 350 CMR 11.04(1) to avoid or minimize damages to the environment and that said Secretary and the Division have determined that such construction does not materially impair the quality of the water in the Watersheds;

(11) Maintenance of Public Utilities. The maintenance, repair or expansion of lawfully located Structures or facilities used in the service of the public to provide electric, gas, water, sewer, telephone, telegraph and other telecommunication services; provided, however, that such maintenance, repair or expansion activities, Structures, or facilities do

not materially impair the quality of water in the Watersheds as determined by the Division after consultation with the Department;

(12) Maintenance of Public Utilities - Wetlands. The maintenance, repair or replacement, but not the substantial changing or enlargement of, an existing and lawfully located Structure or facility used in the service of the public and used to provide electric, gas, water, sewer, telephone, telegraph and other telecommunication services in Bordering Vegetated Wetlands; provided, however, that such maintenance and repair activities do not materially impair the quality of water in the Watersheds;

(13) Clean up or Prevention of Releases. The undertaking by any Person, municipality, the United States government or the Commonwealth of temporary operations to clean up, prevent or mitigate releases of Hazardous Material or Waste;

(14) Changes in Agricultural Crops Produced. Changes in agricultural crops produced;

(15) Agricultural Technologies. The use of new or existing agricultural technologies that do not degrade the quality of water in the Watersheds more than the present agricultural technologies that such new or existing agricultural technologies replace; and

(16) Municipal Sewage Treatment Facility or Water System. The construction of a new municipal Sewage Treatment Facility or new municipal water system if the Division determines that water quality will not be adversely impacted from said construction and provided that such new systems comply with all existing regulations and standards applicable to water pollution abatement districts.

11.06: Procedures

(1) Advisory Rulings

(a) Request for Advisory Ruling. Any person Owning an Interest in Real Property may, by written request to the Division at the addresses specified in 350 CMR 11.11 by certified mail or hand delivery, request an Advisory Ruling as to:

1. whether such Person's property is located within an area regulated by St. 1992 c. 36 or 350 CMR 11.00; or

2. whether existing or proposed Structures, Uses or Activities on such Person's property are permitted under St. 1992 c. 36 or 350 CMR 11.00 by virtue of the exemptions set forth in 350 CMR 11.05.

(b) Information Required. Such written request shall identify the property by street address and include:

1. a copy of the current Assessor's Map showing the location of the property or reference to the applicable Assessor's Map by sheet and parcel number;

2. a copy of (or reference to) the most recent edition of the Massachusetts Geographic Information System map based on the United States Geological Survey, 1 to 25,000 scale, quadrangle maps, showing the location of the property;

3. a copy of such Owner's deed as recorded in the applicable registry of deeds; and
4. copies of any plans, mortgage inspection plans and tape surveys of the property which are available.

(c) *Issuance of Advisory Ruling.* Within 30 days of the Date of Submission of a request for Advisory Ruling, the Division may issue a written ruling to the Person who submitted the request, or in its sole discretion, the Division may notify such Person that a request for Watershed determination of applicability is required pursuant to 350 CMR 11.06(2).

(d) *Remedy.* The Person to whom an Advisory Ruling is issued shall have no right to appeal such ruling, but may at such Person's election, submit a request for Watershed determination of applicability or an application for variance in accordance with 350 CMR 11.00. A Person who has not been issued an Advisory Ruling within 30 days may, at such Person's election, resubmit the request, or submit a request for Watershed Determination of Applicability or an application for variance in accordance with 350 CMR 11.06.

(e) *Authorization; limitations.* Any Advisory Ruling hereunder shall be issued by the Division pursuant to and subject to the limitations of M.G.L. c. 30A, s. 8.

(2) Requests for Watershed Determinations of Applicability

(a) *Filing.* Any Person Owning an Interest in Real Property who desires a determination as to whether or not:

1. such Person's property is located within an area regulated by St. 1992 c. 36 or 350 CMR 11.00;
2. proposed Structures, Uses or Activities on such Person's property are permitted under St. 1992 c. 36 or 350 CMR 11.00;
3. a reconstruction, extension or structural change constitutes a substantial change or enlargement or one which will degrade the quality of water under 350 CMR 11.05(2);
4. Alterations within areas described in 350 CMR 11.04(1)(a) and 11.04(1)(b) in connection with construction permitted under 350 CMR 11.05(3) are possible;
5. the maintenance, repair or replacement activities described in 350 CMR 11.05(9), (10) or (11) will impair or materially impair the quality of the water in the Watersheds; or
6. a new municipal Sewage Treatment Facility or new municipal water system will have an adverse impact on water quality under 350 CMR 11.05(16),

may submit to the superintendent of the Reservoir of the Watershed in which such property is located at the address specified in 350 CMR 11.11, by certified mail or hand delivery, a request for Watershed determination of applicability (See 350 CMR 11.13).

(b) *Land Surveyor Determination.* Any request for Determination under 350 CMR 11.06(2)(a)1. shall be accompanied by a written determination of a land surveyor registered with the board of registration of professional engineers and land surveyors of the

Commonwealth as to whether such Person's real property interests are located within areas regulated by St. 1992 c. 36.

(c) *Related Statement.* Requests for Watershed Determinations other than those in 350 CMR 11.06(2)(a)1. shall include a detailed description of the Structures, Uses and Activities which are proposed.

(d) *Additional Materials.* All surveys and additional materials or studies required to make a determination, whether or not requested by the Division, shall be prepared and delivered at the sole cost of the Person desiring the determination.

(e) *Issuance of Applicability Decision.* Within 60 days of the Date of Submission of such request for Watershed Determination, the Division shall issue a written Applicability Decision to the Person who submitted such request, in form suitable for recording in the registry of deeds or registration in the registry district of the land court where the property is located (See 350 CMR 11.13), which shall contain a brief statement of the reasons for the Decision. If the Division fails to issue the Applicability Decision within such 60 day period, the Division shall be deemed to have:

1. concurred with the land surveyor's determination set forth in a request for Determination under 350 CMR 11.06(2)(a)1.; or
2. determined that the proposed Structures, Uses and Activities on such Person's property described in the request for Determination are permitted by St. 1992 c. 36 and 350 CMR 11.00; or
3. determined that such Structures, Uses and Activities will not impair or materially impair the quality of water in the Watersheds.

(f) *Appeal.* A Person to whom the Division's Applicability Decision has been issued, who seeks to appeal such Decision, shall file a Notice of Claim for an Adjudicatory Proceeding with the Commission at the address specified in 350 CMR 11.11 within 21 days from the Date of Issuance of the Decision by the Division. The procedures for appeal before the Commission shall be as set forth in 801 CMR 1.00 et seq. At the time of filing of such Notice of Claim, a copy shall also be filed with the Division.

(3) Variances

(a) *Variances.* The Division may grant a variance from the provisions of St. 1992 c. 36 and 350 CMR 11.00 with respect to particular Structures, Uses and Activities, and shall grant, upon request, a variance with respect to crossings of Tributaries and Bordering Vegetated Wetlands, where the Division specifically finds that owing to circumstances relating to the soil conditions, slope, or topography of the land affected by such Structures, Uses or Activities, desirable relief may be granted without substantial detriment to the public good and without impairing the quality of water in the Watersheds.

(b) *Presumptions and Standards for Required Findings.*

1. There shall be a presumption that granting a variance from the applicability of St. 1992 c. 36 and 350 CMR 11.00 to specific Structures, Uses and Activities is contrary to the achievement of the purpose of St. 1992 c. 36. This presumption may be rebutted only by

the submission of credible evidence by the Person submitting the application for variance to establish that such variance may be granted without substantial detriment to the public good and without impairment of water quality in the Watersheds.

2. The standard of substantial detriment to the public good shall mean a factual determination by the Division of the overall effect of the proposed Structure, Use or Activity at a particular location in relation to the purpose of St. 1992 c. 36.

3. The standard of impairment of water quality shall mean:

a. the risk of water quality impairment presented by Structures, Uses and Activities which are permissible under all other relevant federal, state and local laws, but would not be permissible under 350 CMR 11.00 without a variance; and

b. the cumulative risk of water quality impairment from all Structures, Uses and Activities allowed under current regulations over time.

(c) *Applications.* Any Person Owning an Interest in Real Property may make an application for variance to the Division (See 350 CMR 11.13) by filing the same by certified mail or hand delivery with the Division at the address specified in 350 CMR 11.11. A copy of the application for Variance shall be sent to the Department at the address specified in 350 CMR 11.11.

(d) *Detailed Statement.* The application for variance shall include a detailed description of the Structures, Uses and Activities proposed on such Person's property. The application for variance shall include detailed information regarding each specifically enumerated factor stated in 350 CMR 11.06(3)(a). Detailed information regarding each factor shall be provided as follows:

1. *Soil Conditions.* A map prepared at a minimum scale of 1"=100' indicating the soil types as mapped by the USDA Soil Conservation Service ("SCS") shall be provided. Site specific soils data, including borings, test pits and percolation tests, may be submitted including copies of all field logs, notes, observations, conclusions and test methods employed. A detailed analysis of the soil characteristics of erodibility and permeability shall be provided. Permeability should be described in terms of percolation rate measured as minutes per inch as specified in Title 5 (310 CMR 15.00).

2. *Slope.* Calculations of the ground slope at all lands within the areas that would be subject to St. 1992 c. 36 if the variance were not granted shall be provided. The results of such calculations shall be presented graphically on a map prepared at a scale of 1"=100' or larger, expressed as percent slope. Where applicable, the average slope of a Tributary measured as the change in elevation divided by the distance in stream miles from the upstream point of the Tributary at or near such Person's property to the downstream point of the Tributary at or near such Person's property shall also be stated.

3. *Topography.* A topographical plan at a minimum scale of 1"=100' or larger showing contour elevations at two foot intervals shall be submitted. Said plan shall be prepared and stamped by a professional surveyor or engineer registered in the Commonwealth of Massachusetts and shall show the location of all areas which would be subject to St. 1992 c. 36 if the variance were not granted. The plan shall show the location of all Ground water, soil and percolation test locations. Such topographic information as depth to the maximum

annual high Ground water table, depth to ledge or refusal, and distances from all mapped and unmapped streams, ponds and water bodies shall also be provided.

4. *Water Quality.* The application shall include a detailed analysis of the impacts on Surface Water and, where applicable, Ground water quality of any proposed Structure, Use or Activity which would be allowed if the variance is granted. An evaluation of the potential impact of such proposed Structure, Use or Activity on water quality by reference to the Department's Surface Water Quality Standards for Class A Surface Waters and Outstanding Resource Waters of the Commonwealth, set forth in 314 CMR 4.00 *et seq.*, and/or where applicable, the Massachusetts Ground Water Quality Standards, set forth in 314 CMR 6.00 *et seq.* shall be provided. The application shall include the water quality data and results to support each analysis and shall provide a detailed description of any methodology employed in performing such analysis to show that water quality will not be impaired by the Structure, Use and Activity for which the variance is being requested, whether during construction or upon continued use or operation of such Structure, Use or Activity.

5. *Mitigating Measures.* The application shall include an analysis of any mitigating measures which will be used which would enable the Division to grant a variance without substantial detriment to the public good and without impairing the quality of water in the Watersheds.

(e) *Additional Materials.* All surveys and additional materials or studies required to act on an application for variance, whether or not requested by the Division, shall be prepared and delivered at the sole cost of the Person submitting the application.

(f) *Public Hearing.* Within 30 days of the Date of Submission of the application for variance with the Division, the Division shall hold a public hearing. Notice of the time and place of the public hearing shall be given by the Division, at the expense of the Person who submitted the application, not less than five days prior to such hearing by publication in a newspaper of general circulation in the city or town where the property in question is located and by mailing a copy of such notice to the Person who submitted the application at the address specified in the application, and to the Building Inspector, Conservation Commission, and Board of Health in such city or town. At the request of the Person who submitted the application filed with the Division at least two days before the date of such hearing, the date of the hearing may be rescheduled to a time which is mutually convenient for such Person and the Division, provided that such rescheduled time shall permit re-publication of notice as provided herein.

The public hearing may be continued, with the consent of the Person who submitted the application, to an agreed upon date, which shall be announced at the hearing. At the public hearing, such Person may be represented by counsel and/or professional consultants and may present oral or written evidence and oral or written testimony of witnesses.

(g) *Variance Decision.* Within 30 days of the close of the public hearing, the Division shall issue a written Variance Decision on the application for variance. If the variance is granted, the Division may impose in the Variance Decision such reasonable conditions, safeguards and limitations as it may find desirable in its sole discretion, which, based on the application for variance and the evidence presented at the public hearing, are necessary to protect the water in the Watersheds. If a variance is denied, the Variance Decision shall contain a brief statement of the reasons for the denial. The granting of a variance is limited to the provisions of St. 1992 c. 36. All other applicable laws, regulations and ordinances shall not be affected by the granting of a variance.

(h) *Recording of Variance Decision.* No variance granted hereunder shall take effect until a Variance Decision (See 350 CMR 11.13) shall have been recorded and indexed in the grantor index in the registry of deeds or registered in the registry district of the land court for the county or district where the property is located, containing any conditions applicable thereto and describing the land by metes and bounds or by reference to a recorded or registered plan showing the property's boundaries.

(i) *Appeal.* A Person to whom a Variance Decision is issued, who seeks to appeal the Division's Variance Decision, shall file a Notice of Claim for an Adjudicatory Proceeding with the Commission at the address specified in 350 CMR 11.11 within 21 days from the Date of Issuance of the Variance Decision by the Division. The procedures for appeal before the Commission shall be as set forth in 801 CMR 1.00 et seq. At the time of filing of such Notice of Claim, a copy shall also be filed with the Division.

(4) Exemption of a Tributary

(a) *Exemption of a Tributary.* The Division, in consultation with the Department, may exempt a Tributary, or portions thereof, upon a determination that such exemption will pose no significant risk to the quality of water, after taking into account the following factors:

1. rate of flow;
2. slope;
3. soil characteristics;
4. proximity to a Reservoir or the Ware River above the Ware River intake;
5. the current level of water quality; and
6. the current degree of development.

(b) *Presumptions and Standards for Required Findings.*

1. The standard of no significant risk to the quality of water refers to:
 - a. the risk of water quality impairment presented by Structures, Uses and Activities which are permissible under all other relevant state, federal and local laws, but would not be permissible under 350 CMR 11.00 without an exemption; and
 - b. the cumulative risk of water quality impairment from all Structures, Uses and Activities allowed under current regulations over time.
2. There shall be a presumption that exempting a Tributary or portion thereof is contrary to the achievement of the purpose of St. 1992 c. 36. The presumption may be rebutted only by the submission of credible evidence by the Person submitting the request for Exemption to establish that such exemption will pose no significant risk to the quality of water, taking into account the factors enumerated at 350 CMR 11.06(4)(a).

(c) *Requests for Exemption.*

1. A request for Exemption of a Tributary may be made by:
 - a. An affected landowner;
 - b. Any state agency or regional planning commission;
 - c. The Board of Selectmen, City Council, Mayor, Planning Board or Conservation Commission of any city or town which would be affected by the exemption; or
 - d. The Governor or any member of the General Court.
2. A request for Exemption of a Tributary shall be made to the Division (See 350 CMR 11.13) by filing the same by certified mail or hand delivery with the Division at the address specified in 350 CMR 11.11. A copy of the request for Exemption of a Tributary shall be sent to the Department at the address specified in 350 CMR 11.11.

(d) *Detailed Statement.* The request for Exemption of a Tributary shall include detailed information regarding each specifically enumerated factor listed in 350 CMR 11.06(4)(a)1. through 6. Such detailed information shall be provided based on conditions existing as of the time of the request and based on conditions which would, or may, result if such exemption were granted and if development occurred to the maximum extent and type allowed by current law. Detailed information on each factor shall be provided as follows:

1. *Flow Rate.* The request shall include the flow rate of the Tributary stated as the annual average daily stream flow, reported as cubic feet per second ("cfs") as measured at the downstream point of discharge for the Tributary or portion thereof, taking into account the entire contributing drainage area. Such flow rate may be based on field data collected in accordance with accepted stream flow measurement methods as established by the United States Geologic Survey, or estimated based on procedures established by the United States Geologic Survey. The request shall describe, in depth, the basis and method employed for the reported flow rate to assess full build-out scenarios.

2. *Slope.* The request shall state the average slope at the Tributary measured as the change in elevation divided by the distance in stream miles from its source to the downstream point of discharge. The ground slope of all lands adjacent to the Tributary within the areas that would be subject to St. 1992 c. 36 if the exemption were not granted shall be calculated and the results of such calculations shall be presented graphically on a map prepared at a scale of 1"=100' or larger, expressed as percent slope.

3. *Soil Characteristics.* A map prepared at a minimum scale of 1"=100' shall be submitted indicating the soil types as mapped by the SCS. Site specific soils data supporting or contradicting the SCS soil mapping including borings, test pits and percolation tests may be submitted including copies of all field logs, notes, observations, conclusions and test methods employed. A detailed analysis of the soil characteristics of erodibility and permeability shall be provided. Permeability should be described in terms of a percolation rate measured as minutes per inch as specified in Title 5 (310 CMR 15.00).

4. *Proximity to a Reservoir or the Ware River above the Ware River Watershed.* Proximity of the Tributary proposed to be exempted to a Reservoir or the Ware River above the Ware River intake shall be indicated by reference to the Protection Zone, defined by the Department's Division of Water Supply, Watershed Resource Protection Plan Policy as Zone

A, Zone B and Zone C. The measured distance in stream miles from the downstream discharge point of the Tributary or portion thereof in question from that Tributary's ultimate point of confluence with a Reservoir or stream miles above the Ware River intake shall be stated.

5. *Water Quality.* The request shall include water quality monitoring data for the Tributary consisting of, at a minimum, monthly samples for a continuous one year period at a sampling station located at or near the downstream point of discharge of the Tributary or portion thereof for which exemption is requested. Water quality data of the Division and the Department may be utilized in satisfaction of this requirement where such data is available. Minimum analysis shall include fecal coliform bacteria, color, turbidity, temperature, pH, dissolved oxygen, total suspended solids, total phosphorus, ammonia nitrogen and chloride. A detailed analysis of the water quality data with reference to the Department's Surface Water Quality Standards for Class A Surface Waters and Outstanding Resource Waters of the Commonwealth, 314 CMR 4.00 et seq., shall be provided. The request shall include a detailed analysis of the impact on water quality of any potential Structures, Uses or Activities allowed if the exemption is granted.

6. *Development.* A general plan showing existing land use within the contributing drainage area upstream at the point of discharge of the Tributary or portion thereof shall be provided. The request shall include a calculation of the percent imperviousness of the contributing drainage area based on the existing land uses shown and shall indicate the change of percent imperviousness which may result from any Structures, Uses or Activities allowed or proposed if the exemption is granted.

7. *Other Information.* The request shall include a detailed description of the Structures, Uses and Activities which are or may be proposed to occur within those areas which would be subject to St. 1992 c. 36 without the exemption and shall include an analysis of any mitigating measures which will be used which would ensure that granting the exemption would present no substantial risk to the quality of water.

(e) *Additional Materials.* All surveys and additional materials or studies required to act on a request for Exemption of a Tributary, whether or not requested by the Division, shall be prepared and delivered at the sole cost of the Person submitting the request.

(f) *Public Hearing.* Within 30 days of the Date of Submission of the request for Exemption of a Tributary with the Division and the Department, the Division and the Department shall hold a public hearing. Notice of the time and place of the public hearing shall be given by the Division, at the expense of the Person who submitted the request, not less than five days prior to such hearing by publication in a newspaper of general circulation in the city or town where the property in question is located and by mailing a copy of such notice to the Person who submitted the request at the address specified in the request, and to the Building Inspector, Conservation Commission and Board of Health in such city or town. At the request of the Person who submitted the request filed with the Division at least two days before the date of such hearing, the date of the hearing may be rescheduled to a time which is mutually convenient for such Person, the Division and the Department, provided that such rescheduled time shall permit re-publication of notice as provided herein. The public hearing may be continued, with the consent of the Person who submitted the request, to an agreed upon date, which shall be announced at the hearing. At the public hearing, such Person may be represented by counsel and/or professional consultants and may present oral or written evidence and oral or written testimony of witnesses.

(g) *Exemption Decision*. Within 60 days of the close of the public hearing, the Division shall issue a written Exemption Decision on the request for Exemption of a Tributary. If the exemption is granted, the Division may impose in the Exemption Decision such reasonable conditions, safeguards and limitations as it may find desirable in its sole discretion, which, based on the request for Exemption of a Tributary and the evidence presented at the public hearing, are necessary to protect the water in the Watersheds. If the exemption is denied, the Exemption Decision shall contain a brief statement of the reasons for the denial. The granting of an exemption is limited to the applicability of St. 1992 c. 36. All other applicable laws, regulations and ordinances shall not be affected by the granting of an exemption.

(h) *Notice of Exemption*. Notice of the Exemption Decision shall be mailed to the Person who submitted the request, and to the City Council or Board of Selectmen in the city or town where the Tributary is located. Notice shall also be published once in a newspaper of general circulation in such city or town, provided, however, that a failure to publish shall not affect the validity of the Exemption Decision. A record of the Exemption Decision shall be kept on file with the Division and, if a Tributary or portion thereof is exempted, the affected area shall be shown on the most recent edition of the Massachusetts Geographic Information System Map (See 350 CMR 11.07).

(i) *Appeal*. A Person to whom an Exemption Decision is issued, who seeks to appeal the Division's Exemption Decision, shall file a Notice of Claim for an Adjudicatory Proceeding with the Commission at the address specified in 350 CMR 11.11 within 21 days from the Date of Issuance of the Exemption Decision by the Division. The procedures for appeal before the Commission shall be as set forth in 801 CMR 1.00 et seq. At the time of filing of such Notice of Claim, a copy shall also be filed with the Division.

(5) Work Pending Appeal of Applicability Decision, Variance Decision or Exemption Decision - No Alterations shall be made or Structures, Uses or Activities commenced until a final administrative or judicial determination has been made and all appeal periods shall have expired if the Division issues:

(a) an Applicability Decision that the property is located in an area regulated by St. 1992 c. 36, that the Structures, Uses or Activities proposed are prohibited by St. 1992 c. 36 under 350 CMR 11.04(3), or that the Structures, Uses or Activities will impair or materially impair the quality of water in the Watersheds; or

(b) a Variance Decision denying the variance requested in an application for variance; or

(c) an Exemption Decision denying a request for Exemption of a Tributary.

11.07: Maps

(1) *Aquifers*. The location and potential well yield of Aquifers shall be determined by reference to the most recent edition of maps generated by the Massachusetts Geographic Information System based on the United States Geological Survey Water Resource Atlases.

(2) *Flood plains*. The location of Flood plains shall be made by reference to the most recent edition of the Flood Hazard Boundary Maps issued by the Federal Emergency Management Agency.

(3) *Surface Waters and Tributaries.* The location of Surface Waters and Tributaries shall be determined by reference to the most recent edition of maps generated by the Massachusetts Geographic Information System based on the United States Geological Survey, 1 to 25,000 scale quadrangle maps.

(4) *Adoption of More Accurate Maps.* With respect to any of the maps referred to in 350 CMR 11.07, the Division, in consultation with the Department, may adopt more accurate maps pursuant to notice and a public hearing as provided by M.G.L. c. 30A. The Division shall file any of such maps which are adopted with the Clerk of the House of Representatives and Clerk of the Senate and such maps shall not take effect until 90 days have elapsed from the time of said filing. Copies of maps which have taken effect shall be filed with the Chief Executive Officers of all cities and towns within the Watersheds, provided that the Division's failure to do so shall not invalidate the maps or any actions taken by the Division in connection therewith.

11.08: Relationship of Act with other State and Municipal Statutes, Ordinances and Regulations

350 CMR 11.00 is intended solely for use in administering St. 1992 c. 36; nothing contained herein should be construed as preempting or precluding more stringent protection of the areas regulated by St. 1992 c. 36 by other statutes, ordinances, by-laws or regulations. The duties and obligations imposed by St. 1992 c. 36 shall be in addition to all other duties and obligations imposed by any general or special law or regulation or any by-law, ordinance or regulation lawfully adopted pursuant thereto.

11.09: General Rules and Regulations for the Protection of Watersheds and the Watershed System

In order to facilitate review of all regulations promulgated by the Commission and the Division relating to Watersheds and the Watershed System, this Section includes regulations of general applicability to Waters of the Watershed System. The regulations in 350 CMR 11.09 are intended to supersede the regulations in 310 CMR 23.00, 350 CMR 8.01, 350 CMR 9.00, and 350 CMR 10.00.

(1) Waters of the Watershed System.

(a) No Person shall take or divert any Waters of the Watershed System of the Commission and no Person shall corrupt, render impure, waste or improperly use any such water.

(b) No Person shall:

1. engage in any construction activity involving filling, dredging, grubbing or altering land without adequate provisions to prevent erosion resulting in clay, silt or other turbidity laden waters from entering the Waters of the Watershed System;

2. construct, establish or maintain any agricultural facility or place where animal manure may be deposited or accumulated without adequate provision to prevent any manure or other Pollutant from flowing or being washed into the Waters of the Watershed System;

3. engage in any other activity which could degrade the quality of Waters of the Watershed System or interfere with their use as a source of water supply.

(c) No Person shall allow a condition to exist on such Person's property which could result in the direct or ultimate discharge of any Pollutant into the Waters of the Watershed System.

(d) Any records of any board of health or health agent concerning matters within the Watershed shall be open to inspection by the employees and agents of the Commission and the Department.

(e) Whenever an incident occurs, is likely to occur, or a situation exists that threatens to add Pollutants to the Waters of the Watershed System, the Person causing or contributing to the pollution or potential pollution shall notify the Commission and the Department immediately.

(2) Watershed System.

(a) General Regulations.

1. Entrance on and exit from land of the Watershed System shall be made through gates or other designated areas.

2. No Person is allowed within any land of the Watershed System, except from one hour before sunrise to one hour after sunset, unless authorized by a written permit from the Commission or its designee.

3. Powered boats are prohibited within the Waters of the Watershed System except in areas designated by the Commission or its designee.

4. All acts which pollute or may pollute the water supply are prohibited. No litter or refuse of any sort may be thrown or left in or on any land or water within any Watershed System. All Persons within said System shall use the sanitary facilities provided for public use.

5. All acts which injure the property of the Commonwealth are prohibited. No Person shall injure, deface, destroy, remove or carry off any property, real or personal, under the care and control of the Commission, including but not limited to, all historic artifacts and natural materials. The removal of gravel, topsoil, stones, boulders, or other earthen material is prohibited from the Watershed System except for removal for official use for land management purposes by Commission staff. No Person shall build or construct any object or structure of the property of the Commonwealth except with the written permission of the Commission or its designee.

6. Cooking and all fires are prohibited within the Watershed System.

7. No Person shall wade or swim in any reservoir except wading while using boots for the purpose of launching boats at designated boat launch areas.

8. No Person shall wade or swim in any Tributary or Surface Waters on or within the property of the Commonwealth except at areas designated by the Commission or its designee.

9. Organized sports activities, including but not limited to orienteering and baseball, are prohibited in the Watershed System except by written permit from the Commission or its designee.

10. Any violation of 350 CMR 11.09 will be deemed sufficient cause for revocation of fishing privileges for a period of time not less than one year from the time of violation. The Commission and its employees are not responsible for any damage to or loss of property sustained by fishermen, or for any injury or loss of life which may be incurred in connection with public use of the reservoirs and Watershed System.
11. Breach of peace, profanity or other disorderly conduct offensive to the general public is strictly prohibited within the Watershed system. Possession of and drinking of alcoholic beverages is prohibited within said System.
12. No Person shall drive a motorized vehicle within the Watershed System except upon roads authorized for such use by the Commission or its designee. Recreational vehicles are prohibited on all Watershed System property except the use of snowmobiles in areas designated by the Commission or its designee. Motor vehicles shall be parked only in areas designated by the Commission or its designee. Operators of motor vehicles shall obey all regulatory signs unless otherwise directed by a police officer or person in charge. No Person shall willfully obstruct the free passage of vehicles or Persons within the Watershed System. Vehicle access for official use may be granted by the Commission or its designee.
13. No Person shall bring any animal within any Watershed System property except for horses and dogs at the Ware River Watershed at areas designated by the Commission or its designee.
14. The use of bicycles, skis and other means of non-motorized transportation within the Watershed system shall be permitted only in areas designated by the Commission or its designee.
15. No Person, except in an emergency, shall bring, land or cause to descend within any Watershed System property any aircraft except with a written permit from the Commission or its designee.
16. Parades, games, fairs, carnivals, fishing derbies, bazaars, gifts or solicitations for raising or collecting funds shall not be permitted within the Watershed System without written approval of the Commission or its designee.
17. Lotteries, raffles, gambling and games of chance are prohibited; and no Person shall have possession of machinery, instruments or equipment of any kind for use of same in the Watershed System.
18. Public assemblies of more than 25 persons shall not be allowed within the Watershed System without a written permit from the Commission or its designee.
19. No Person shall engage in any business, sale or display of goods or wares within the Watershed System without a written permit from the Commission or its designee.
20. Commercial signs and advertising are prohibited in the Watershed System.
21. No Person shall have possession of or discharge any weapon, firearm, fireworks, or other explosive on or within the Watershed System except at times and areas designated by the Commission or its designee. All forms of target shooting are prohibited on or within the Watershed System.

22. No Person may hunt, shoot or trap animals on or within any Watershed System property except at times and in areas designated by the Commission or its designee.

23. All Persons within the Watershed System shall obey the lawful directions of regulatory signs, police officers or persons in charge, or of Federal or Commonwealth wardens or enforcement officers.

24. The Watershed System or parts thereof may be closed for public access at the discretion of the Commission or its designee when necessary to protect the lands and waters under the care and control of the Commission.

25. The possession of all types of metal detectors or similar devices is prohibited on all of the Watershed System property.

(b) Special Regulations for Quabbin Reservoir.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations, will be allowed to fish from shore in areas designated by the Commission or its designee. A valid state fishing or sporting license is required by any Person renting or launching a boat at any Commission facilities subject to 350 CMR 11.09. Reasonable fees for the use of boats, for rental of outboard motors for fishing purposes, or use of Commission facilities including parking and boat ramps, may be charged by the Commission.

2. Persons permitted to fish from boats shall, at all times, be responsible for the sanitary condition of the boats. Persons under 16 years of age must be accompanied by a Person possessing a valid fishing license in order to boat on Quabbin Reservoir.

3. Only boats of a minimum length of 12 feet, and of a type considered safe by the Commission representative in charge, shall be used. No inboard motors, collapsible boats, sailboats, pontoon boats, square sterned canoes, or other similar craft will be permitted in the water, and no boats will be permitted in the water except in areas designated for boating by the Commission or its designee. Outboard motors shall have a rating of not more than one-half the BIA or OBC rated horsepower for the boat and shall not exceed 20 horsepower, except that outboard motors for Commission boats less than fourteen 14 feet six inches in length shall not exceed ten horsepower. Boats less than 14 feet six inches in length will be limited to three occupants, and boats of that length and in excess thereof may be licensed to carry four occupants. No boats shall carry more than four occupants. Canoes and jon boats of a minimum length of 12 feet, and of a type considered safe by the Commission representative in charge, shall be used and only in areas designated for boating by the Commission on Pottapaug Pond above the regulating dam and at Gate 31 above the regulating dam. Canoes less than 16 feet and jon boats less than 14 feet six inches in length will be limited to two occupants, and canoes and jon boats in excess thereof may be licensed to carry three occupants. All boats must be in compliance with current Commonwealth Boating Laws. All boats must be clean and contain no refuse of any kind. Commission personnel shall have the right to inspect all private boats launched at Commonwealth facilities and may deny access in order to protect water quality or the safety of occupants. Chock blocks must be used on vehicles when removing boats from the Reservoir.

4. No Person shall operate a motor boat at a speed other than reasonable and proper or in such a manner as to annoy or endanger the occupants of other boats.

5. Fishing from the shorelines of the Quabbin Reservoir and its Tributaries within the Watershed System or from boats shall be allowed only during a season designated by the Commission or its designee. All privately-owned boats, motors and other equipment must be removed from the property of the Commission each day.

6. Boats shall not leave the mooring areas before dawn, and must return at the time posted at each mooring area. The beaching of boats at any point except at the designated mooring and landing areas is strictly prohibited, except in cases of extreme emergency.

(c) Special Regulations for Ware River.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations will be allowed to fish in the Ware River in areas designated by the Commission or its designee.

2. Powered boats and powered canoes are prohibited within the Ware River Watershed Reservation.

(d) Special Regulations for Wachusett Reservoir.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations will be allowed to fish from the shore of Wachusett Reservoir in areas designated by the Commission or its designee.

2. Boating is prohibited in Wachusett Reservoir.

3. Fishing from the shoreline of the Reservoir shall be allowed only during a season designated by the Commission or its designee.

(e) Special Regulations for Sudbury Reservoir.

1. Persons in compliance with Commonwealth Fish and Game Laws and Regulations will be allowed to fish from the shore of Sudbury Reservoir in areas designated by the Commission or its designee.

2. Boating is prohibited on Sudbury Reservoir except in areas designated by the Commission or its designee.

11.10: Enforcement

Any Person who, without lawful authority, takes or diverts any Waters of the Watershed System or corrupts or defiles any such Waters or any source of such Waters or who violates and refuses to comply with any rule, regulation or order of the Commission shall be subject to the fines set forth in M.G.L. c. 92, s. 111. The provisions of 350 CMR 11.00 shall be enforced upon petition of the Commission or of any town or Person interested by the Supreme Judicial Court or Superior Court or any justice of either court as provided in M.G.L. c. 92, s. 112. In addition, upon written request by the Division, the Department shall have the authority to enforce the provisions of St. 1992 c. 36 and 350 CMR 11.00 by all legally permitted enforcement mechanisms including, but not limited to: issuing notices of noncompliance; convening pre-enforcement conferences; issuing water supply orders pursuant to M.G.L. c. 111, s. 160; and imposing administrative penalties pursuant to M.G.L. c. 21A, s. 16 and 310 CMR 5.00. Such written request by the Division to the Department

may seek enforcement for a specified type of violation or area, for a designated group of cases or for an individual matter.

11.11: Miscellaneous

(1) Addresses - Offices of Division

Department of Conservation and Recreation

Quabbin Reservoir

485 Ware Road

Belchertown, Massachusetts 01007

Department of Conservation and Recreation

Wachusett Reservoir

P.O. Box 206

Clinton, Massachusetts 01510

(2) Address of Commission -

Department of Conservation and Recreation

251 Causeway Street, Suite 600

Boston, Massachusetts 02114

(3) Address of Department -

Department of Environmental Protection

Commonwealth of Massachusetts

Regional Division

One Winter Street

Boston, Massachusetts 02108

(4) Access to Property by Division - Any Person making a request for Watershed determination of applicability, an application for variance or a request for Exemption to the Division shall, upon request, allow the Division or its duly authorized representatives to inspect the property in question in order to assist the Division in the determination which is to be made. Personnel of the Division may enter, at reasonable times, any property, public or private, for the purpose of investigating or inspecting any condition relating to the discharge or possible discharge of Pollutants into the Watershed System and may make

such tests as may be necessary to determine the existence and nature of such discharge as provided in M.G.L. c. 21, s. 4.

11.12: Severability

If any provision or any part of 350 CMR 11.00 or the application thereof is held to be invalid, such invalidity shall not affect any other provision of 350 CMR 11.00.

11.13: Forms

Forms for use under the Watershed Protection Act shall be as follows:

Form 1 - Request for Watershed Determination of Applicability

Form 2 - Applicability Decision

Form 3 - Application for Variance

Form 4 - Variance Decision for Recording in Registry of Deeds

Form 5 - Request for Exemption of a Tributary

Forms 1, 3 and 5 and a Guidance Document, which may be of assistance in completing the forms, may be obtained from the Division at the addresses specified in 350 CMR 11.11(1) and (2).

REGULATORY AUTHORITY

350 CMR 11.00: St. 1992, c. 36.

Advisory Committee Legislation

GENERAL LAWS OF MASSACHUSETTS

PART I.

ADMINISTRATION OF THE GOVERNMENT

TITLE XIV.

PUBLIC WAYS AND WORKS

CHAPTER 92. METROPOLITAN SEWERS, WATER AND PARKS

ARTICLE PROVISIONS.

Chapter 92: Section 114A Ware river watershed advisory committee

[Text of section effective until July 1, 2003. Repealed by 2003, 26, Sec. 289. See 2003, 26, Sec. 715.]

Section 114A. The commissioner is hereby authorized and directed to establish a Ware river watershed advisory committee. The purpose of the committee shall be to advise the division on its policies and regulations regarding recreational activities, land use and environmental, wildlife and habitat matters within the Ware river watershed. The commissioner of the metropolitan district commission shall appoint to said advisory committee one person from three names nominated by each of the following organizations: the Massachusetts Council of Sportsmen, the Worcester County League of Sportsmen, Trout Unlimited, a rod and gun club located in the town of Barre, Hubbardston, Oakham or Rutland, a designee of the board of selectmen of each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the historical societies in each of the towns of Barre, Hubbardston, Oakham and Rutland, a representative of the Massachusetts Wildlife Federation, a representative of the Massachusetts Audubon Society, a representative of the Sierra Club, and a representative of the Upper Ware river watershed association and one member from the general public.

The committee shall elect a chairperson from among its members, shall meet at least twice each calendar year and may provide for alternate members to participate fully in its meetings whenever a regular member is unable to do so.

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Appendix B – Written Public Input

1. 12/10/08 Senator Brewer and Representative Gobi –Re: Ware River Snowmobile Club
2. 1/28/09 Ware Snowmobile Club – Re: Trails
3. 2/10/09 W. Howes – Re: Illegal ATVs
4. 3/6/09 K. Makela – Re: Cross-country skiing and snowshoeing.
5. 4/19/09 K. Makela – Re: Cross-country skiing and snowshoeing.
6. 4/29/09 Coldbrook Snowmobile Club – Re: Trails
7. 8/21/09 Coldbrook Snowmobile Club – Re: Trails
8. 10/8/09 WRWAC – Re: Cross country trail grooming
9. 10/8/09 WRWAC – Re: Boat Contamination and Trail Grooming
10. 10/19/09 M. Hopkinson – Re: Plan Comments
11. 10/20/09 E. Yaglou – Re: Mass Central Rail Trail
12. 10/22/09 M. Sullivan – Re: Snowmobile Trails

12/10/08

Senator Brewer and Representative Anne Gobi



COMMONWEALTH OF MASSACHUSETTS

THE GENERAL COURT

STATE HOUSE, BOSTON 02133-1053

December 10, 2008

Richard Sullivan, Commissioner
Department of Conservation and Recreation
251 Causeway Street
Boston, MA 02114

Dear Commissioner Sullivan:

We are writing on behalf of the Ware River Snowmobile Club (WRSC) (Contact: Jay Pease, President, P.O. Box 396, Hardwick, MA 01037; Telephone: 413-477-6990 or 413-519-0090), relative to its use of land in Barre State Forest.

It is our understanding from Mr. Pease that the WRSC has been using trails behind the Barre Landfill in order to connect with snowmobile trails used by the Coldbrook snowmobile club. It is our additional understanding that the WRSC has been unknowingly using this trail without permission and is seeking permission to use this section of trail in the future (see enclosed). We would appreciate your reviewing this matter at your earliest possible convenience and contacting Mr. Pease directly. It would also be appreciated if you would provide us with a copy of any correspondence that you may have with him in this regard.

Thank you for your time and attention to this matter.

Sincerely,

STEPHEN M. BREWER
State Senator

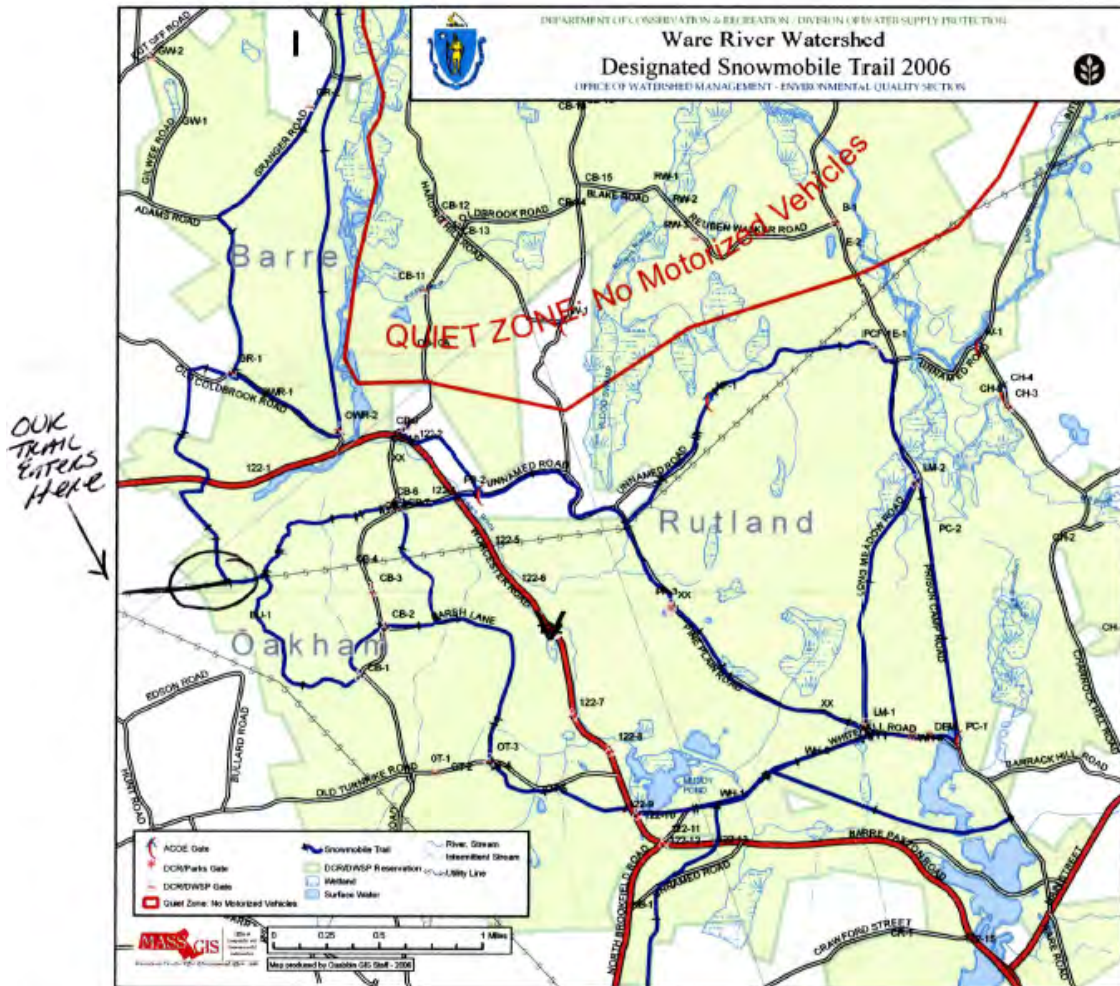
ANNE M. GOBI
State Representative

SMB/kt
Enclosure

1/28/09
 Ware River Snowmobile Club

Ware River
 Snowmobile Club
 Received 2/10/09

Hope this helps
 S.



2/10/09
Wendy Howes

58 New Templeton Road
Hubbardston, MA 01452
February 10, 2009

Mr. Bill Pula, Regional Director
DCR Division of Watershed Protection
485 Ware Road
Belchertown, MA 01007

Dear Bill,

First of all, I want to thank you and John Maslon for continuing to be in contact with me with regard to the illegal ATV and snowmobile use that is occurring on DCR property abutting Ragged Hill Road and New Templeton Road in Hubbardston. I am very grateful for Mr. Maslon's calls to me letting me know that the matter is being addressed. However, over the past couple of weeks I have seen the situation getting worse, not better. I am writing in order to update you on the continued use of the trails within the Natty Pond watershed and drainage system, review my observations over the past several years, and offer volunteer help with regard to care of the property.

Although illegal riders are also able to access this property from the west side of Natty Pond, the situation I've been observing is the continued use by an individual (or individuals) who appears to reside at 32 Ragged Hill Road, where the mailbox is labeled "Girouard." Since my last email message to Mr. Maslon and his follow-up telephone call to me, at least one individual is taking a snowmobile out every late afternoon or evening, and possibly sometimes after dark, and on most weekends. This rider originates from Ragged Hill Road, follows the trail through DCR property to New Templeton Road—where there are three heavy rocks which were placed long ago, but one of the small boulders was many years ago moved aside by trail-riders—then crosses New Templeton Road and proceeds through Ware River Lot # 4358. This is the section about which I wrote to you last fall, expressing my concern that the timber harvest in the lot would enable illegal motorized vehicle riders to access the back trails more easily. This has happened. Steve Wood and I walked the area after last winter's harvest, back in March or April. Although the loggers had placed three heavy tree trunk logs across the old trail on the west side of New Templeton Road just a couple of weeks earlier, Steve and I observed that one of the extremely heavy logs had already been pushed aside to allow access by an ATV-sized vehicle. There was no way we could move the log back into place. Steve made a note of the problem, but the log has never been moved back to block the trail.

Last year, two signs were placed near the property after I talked to you about other ATV riders who live on New Templeton Road. (By the way, those individuals appeared to cease using their ATVs on the west side of the road; it may be that you contacted them by mail.) One sign is at the old landfill gate to the south and is a red line through an ATV silhouette. The other sign is on the fence at the old landfill entrance (last year's log harvest landing) and states "NO ATVS ON STATE LAND." There are no signs on either side of New Templeton Road where the riding is going on now, and no signs addressing prohibitions against trail bikes (which were being used here very frequently last summer and fall) or snowmobiles.

Yesterday at about 4:45 p.m. I saw the man that I believe is the usual rider cross New Templeton Road between the moved boulders on the east side and the moved logs on the west side. Over the past few weeks, this snowmobile rider—or another rider—has gone around branches that are down from the ice storm and ruined young trees and saplings to make a new trail. Whoever it is seems also to have taken a chain saw in and cut some down branches that were blocking his intended route. Whoever is riding there then habitually proceeds over the old landfill, along the existing trail between the ponds and shallow pools, and into the wetlands on the southeast side of Natty Pond. From spring through fall, motorized vehicles pass through and damage about 20-30 feet of wetland vegetation and soil, then proceed across the stream which flows between the two sections of Natty Pond. This activity is continuing this winter; the only difference is that there is somewhat of a buffer of ice and snow on the ground. Late last fall, I noticed that a very large old tree had fallen across the trail on the west side of the stream; this may have slowed the ATV riders down for awhile. But recently the snowmobile rider(s) has begun going around this obstacle, again damaging vegetation and making a trail where one should not exist. Beyond this stream crossing are miles of illegal trails snaking through DCR property. Basically what seems to be happening now is that the individual(s) is clearing and grooming a trail with the intention of continuing to ride illegally in all seasons. Mud season will soon be here, and the situation is always worse at that time.

The illegal riding on this trail system has been going on at least since I moved here almost 5 years ago and probably much longer. In the beginning I made complaints, but to the wrong people—it wasn't until two years ago that I learned of the Environmental Police. As you know, complaints to that agency usually cannot be followed-up effectively for a variety of reasons; I have no knowledge of any successful intervention as a result of any of my calls. Had I contacted the EP yesterday after seeing the snowmobile rider on DCR land, for example, the rider would certainly have been home before anyone could respond. Also, the riders in this area are not usually active between 8 a.m. and 4 p.m. on weekdays.

I have been aware of the wetland degradation and stream crossings by motorized vehicles for three years, and illegal riding over the capped landfill is commonplace in all seasons, too, but, again, knew of no place to turn with my concerns. At which point does the environmental trespass and damage become serious enough to warrant intervention?

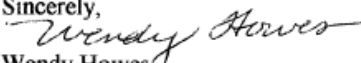
I understand that your department is overwhelmed with responsibilities and obligations overseeing all the DCR lands in central Massachusetts. Because I am tired of complaining without trying to be helpful, I would like to offer to help in some way. First, I would be interested in gathering a small group of volunteers who could place “Ware River Watershed Protection” and “No Motorized Vehicles” signs. With your permission, I would also attempt to find volunteer assistance in order to move the heavy logs and rocks back into place in an attempt to once again block the trail.

If crossing of the wetland area and stream is expected to continue because of the old right-of-way that apparently exists here, could a bridge be built? Again, I would offer to find volunteer assistance and funding for such a project.

Finally, I would like to propose holding a public educational forum in our area within the next few months, with DCR representatives as the speakers. I would be happy to organize such an event. I would like to see such a forum describe the boundaries of the Ware River Watershed, DCR land management policies, and especially focus on permitted and prohibited activities. I would seek sponsoring groups for such a forum, such as our town's Open Space Committee, perhaps our Police Department, Mass Audubon, and the like, and open the event to relevant surrounding communities. Many, if not most, of the residents of this area are ignorant of DCR policies and the need for watershed safeguards.

Again, I appreciate all the help you and Mr. Maslon have offered, as well as your willingness to listen. I continue to be frustrated by the misuse and degradation of a truly beautiful property that is rich in wildlife and plant communities.

Thank you for your attention. I look forward to hearing from you.

Sincerely,

Wendy Howes

978 928-4737
curiousbooks@verizon.net

cc: John Maslon
Craig Givens
Sharl Heller

3/6/09
Karl Makela

March 6, 2009

Mr. William Pula
Regional Director
DCR Quabbin Sector
485 Ware Rd.
Belchertown MA 01007

Dear Mr. Pula:

I have had a conversation and meeting with Mr. Edward Yaglou regarding the protected area in Rutland, Barre and Hubbardston which is restricted from motorized vehicles during the winter months.

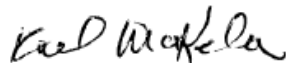
I would be interested in developing the area for cross country skiing and snowshoeing using the existing roads.

The trails would be packed and tracked using a snowmobile to pull a roller, track maker and other equipment as may be necessary.

This would require some sort of parking area for the equipment off loading and loading as well as parking for skiers.

I will be attending the meeting at the school in Hubbardston on March 19th.

Sincerely,



Karl Makela
60 Newell Rd
Holden MA 01520

Tel: 508-829-5181
508-736-4858 Cell

E-mail: suomi61426@aol.com

Cc: Mr Edward Yaglou

4/19/09
Karl Makela

April 19, 2009

Mr. David H. Small
Assistant Regional Director
Quabbin Sec.
Division of Water Supply Protection
485 Ware Rd.
Belchertown MA 01007

Dear Mr. Small:

Below is my proposal for the "Quiet Area". Attached are two maps of the proposed trails.

**Proposed X-C Ski / Snowshoeing Trails
For
The "Quiet Area" of the DRC Ware River Watershed**

Starting at the parking area just north of Barre Falls Dam, following along Barre Rd north into the fields, behind the house at the corner of Barre Rd and Rte 62. From there going from one field to another to Brigham road south. Continue to the bridge which is closed. If the bridge could be renovated to a pedestrian bridge of 6' width and the barriers removed, then packing and tracking for xc skiing could continue along Brigham Rd / Prison Camp Rd. to Rueben Walker Rd. From there going west along Rueben Walker Rd to Old Woods Rd south to Blake Rd., then cross Coldbrook Rd to Harding Hill Rd., and then to Covered Bridge Rd to Junction of Coldbrook Rd. and return.

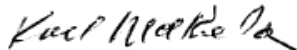
There would also be another loop starting at the parking area going south and east along Tracy Rd. to Brigham Rd.

This would be a total of about 25 kilometers available for x-c skiing and snowshoeing which would be marked as a xc ski / snowshoeing trail along with distances in kilometers.

In addition, a shorter ski trail could also be made along the perimeter of the various fields on the north side of the parking area.

All this would be accomplished by using a snowmobile and various equipment pulled by the snowmobile, including a roller and a tracksetter.

Sincerely,



Karl Makela
60 Newell Rd.
Holden MA 01520

CC: WRWAC
Matt Hopkinson

4/29/09

Coldbrook Snowmobile Club

Coldbrook Snowmobile Club would like to submit its proposed changes for the upcoming Ware River Watershed 2010 Recreation Plan.

We would first like to say that in the past, we have encountered resistance to proposed changes because of DCR's concerns regarding expanded ATV usage. The number of ATVs in the watershed area is related to the size, strength, and number of local dealers, as well as the age of the local riders. The Internet will also bring ATVers into the area. Once there, they will use any and all trails they can get to (motorized AND/OR non-motorized), and/or make their own trails. If you build a launch site for hot air balloons, ATV's will find a way to ride there. There is nothing we can do about ATV usage, and it is NOT related to us.

Our club is on record as being firmly opposed to the use of ATV's in the watershed area. We have installed gates and barricades to help keep them out. DCR Watershed Division must recognize that ATV'S are going to use the watershed land regardless of the size of the snowmobile trail system. If you shrink, or even eliminate the snowmobile trail system, they will not leave. They will simply use the rail trail, and all other trails in the watershed. They are not going to go away. In the past, we have offered to hire Environmental Police details to curb illegal ATV activity. DCR Watershed Division did not act upon our offer.

We ask those people judging the worthiness of our proposals to not use ATV concerns as a justification to shoot us down.

We would also like to point out that DCR's 2000 management guide sent out a survey to 650 abutters and found the majority of people either hiked or drove a car in the watershed area. The statistics generated from the survey were used to justify trail restrictions for snowmobiles and others. The survey was seriously flawed because it did not take into consideration that snowmobilers (and other trail users) ride in from surrounding towns. In January, 2009, Army Corps of Engineers placed a counter on the snowmobile trail that crosses route 122 in Oakham (just before the Barre line). For a one-month period, they counted 3,000 snowmobiles. Based on this data, we ask DCR to recognize that snowmobiling is the number one winter recreation in the watershed.

We would also like to point out that the relationship between DCR and our club has grown over the last 10 years. We have taken on numerous projects that have enhanced the quality of recreation within the park, limited people from going "off trail", and protected water quality. Our commitment to the trails was demonstrated last December when we had trail crews out clearing downed trees in the watershed the day after the ice storm. We had people clearing trails for more than a month afterwards. Together with DCR personnel, we had the snowmobile trails open for business in a short period of time.

We would like to propose the following.

First, we propose reopening the trail from route 122 in Rutland to Treasure Valley. This trail has been used for decades not only by snowmobilers, but also by hikers, equestrians, and skiers as well. The trail was closed to snowmobiles several years ago because of a justifiable complaint

from ONE person. The way the trail is currently routed, it passes very close to one house and allows all trail users (regardless of their form of trail usage) to view their back yard, and into their bedroom windows. We would like to see the trail rerouted through several of the clear-cut operations, and away from houses. The trail may need either several boardwalks or culverts; the club is willing to provide these.

There is another reason this trail is vital to us. Currently, there is only one way to enter the watershed area by snowmobile from the south. That is on the Pine Acres trail. That trail is a narrow trail. As we mentioned above, there are 3,000 snowmobiles using the watershed area each month. The Pine Acres trail is having difficulties handling the traffic. The trail passes close to an abutter's home. While that family has been gracious enough to allow us to use their property, there is too much traffic on that trail.

We need the Treasure Valley trail re-opened and rerouted to improve safety, put some distance between the abutters and snowmobiles, and to ease the pressure on the Pine Acres trail.

Second, we would like to propose a small section of trail that runs from the south of Muddy Pond to the Marsh Lane Extension be rerouted. This trail is designated for both snowmobile and equestrian use. The trail crosses a culvert (just in front of an old beaver dam), and then climbs a very steep hill. The hill is showing signs of erosion; tree roots are showing and there are small washouts. During the winter, the hill becomes icy, making it difficult to climb, and dangerous to descend (due to the turn at the bottom of it). There is a small, clear-cut area between the hill and Old Turnpike Road that we would propose using. This would eliminate the hill, improve safety for all trail users, and reduce the erosion of the hill. The total length of the reroute would be about 250 feet.

We would also like special permission to groom this short section with our big groomer. We currently groom to the bottom of Marsh Lane Extension. Once there, we have the ranger open the gate on Old Turnpike Rd., just before route 122/Muddy Pond, and run the groomer down the side of the road. There are no safe areas large enough to turn the machine around. Traffic runs at 45 to 50 MPH on that section of road; we would like to stay off of the road.

Third, we propose opening up Ware Rd. to snowmobiles, giving us access to the gas station at Four Corners on route 122. Giving us access to the gas station would eliminate the need to bring gas cans and refuel snowmobiles in the parking at White hall. Snowmobiles have been riding on Ware Rd. since the 2000 recreation plan. We realize this, in and of itself, is not a justification to open the road to us. However, it does show how important that trail is, and how much we need to access the gas station instead of refueling in the parking lot.

Fourth, we would like to propose opening the trail from Granger Rd. to the DCR boundary. This gives us access to the gas station in Barre. We currently have landowner permission to ride from the boundary to the gas station. Giving us access to the gas station would eliminate the need to bring fuel cans into the parking area (next to the river) and refueling.

Fifth, we would like to propose opening the trail that runs from Long Meadow Rd. to Pine Plain Rd. This idea was actually brought up by Matt to Bill Mucha one day. So, we thought we would throw it in.

Sixth, we would like to see the 20mph speed limit removed from the recreation plan. NOBODY follows it.

Seventh, we would like to propose that the groomer access trail off of Old Turnpike Rd (just past the field office) be recognized as a snowmobile trail.

Eighth, we would like to give our strong support regarding Ware River Snowmobile Clubs proposal to open up the trail west of the Dump Trail.

And finally, we would like to address grooming. DCR has allowed us to groom the roads in the park for about 5 years with a large (8 foot wide) groomer. The main stipulation is that a park ranger must accompany us while we operate the groomer. Since grooming was an unknown entity to DCR Watershed, this was a good precaution. But, over the years, it has proven very difficult to schedule a ranger. Given the volume of traffic, the area needs to be groomed several times a week. With all of the snow we had this year, we were able to schedule a park range for ONE complete day and ONE partial day. We tried to groom on several other occasions, only to have the ranger cancel out at the last minute or show up very late. Over the last 5 years, we haven't been able to groom more than 4 times per season.

Another major concern regarding grooming is the fact that we have to do it during the daytime. Not only is it very difficult to get operators (since they have to work during the day), but it is also a major safety concern. The groomer travels at a speed between 5 and 10 MPH. During the day, it can be difficult to see through the woods, around corners, and over hills. Grooming operations need to take place at night, where snowmobilers can see the headlights and strobe lights on the groomer. It also makes it easier to get machine operators.

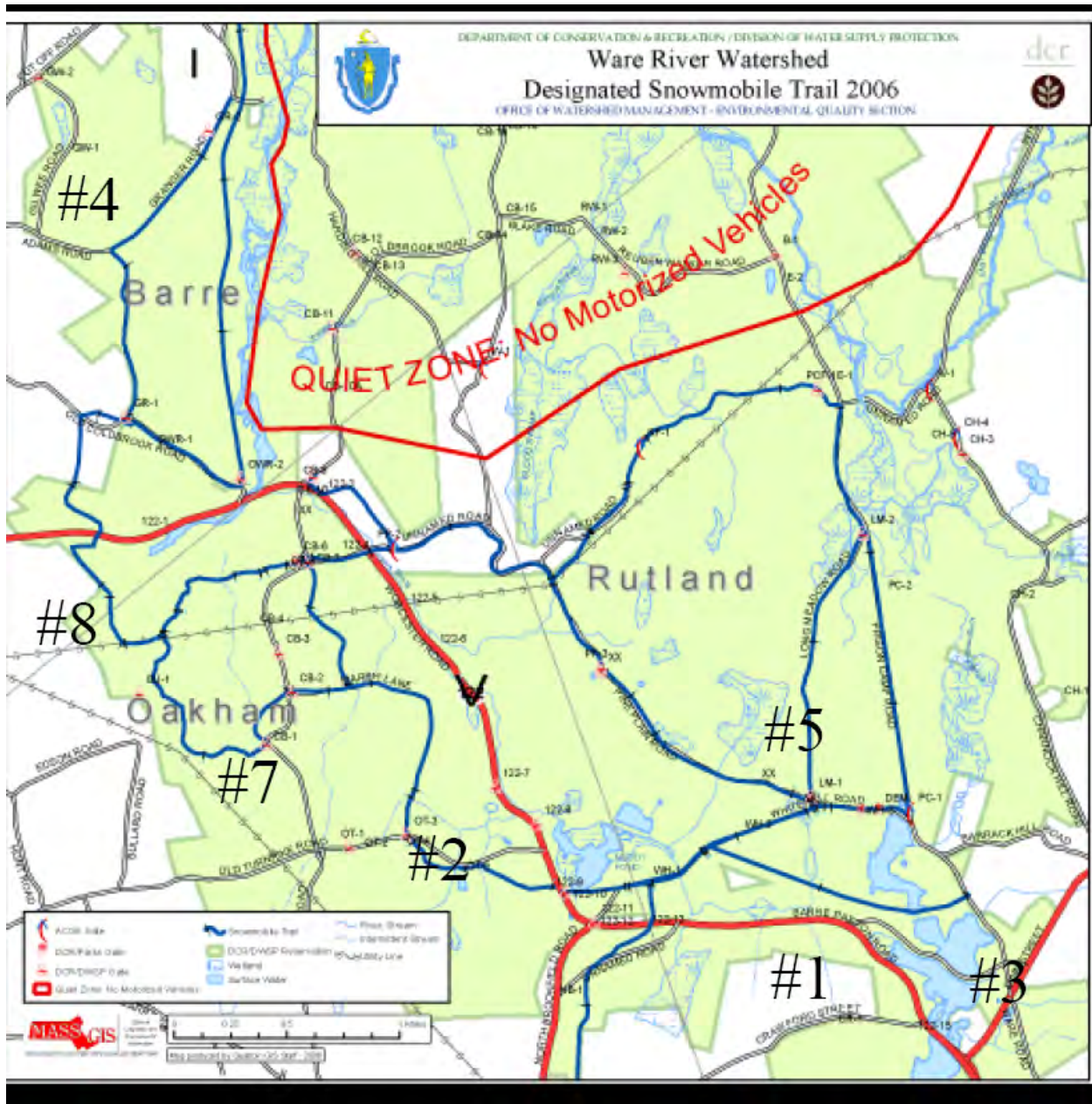
Over the last 10 plus years, we would like to think that we have built up a level of trust between our club and both DCR and the Army Corps of Engineers. ACoE has given us the keys to their gates that are on the snowmobile trails(s). We can groom there without an escort IF DCR agrees. DCR has given us the keys to the gates on the south side of route 122 that we need to open. We propose to put double locks on the remaining gates. If there is a problem, DCR can quickly remove the second lock.

We would also like to address the secondary trails. Currently, we have permission to use a snowmobile with a small drag to groom the smaller trails. Again, given the traffic in the area, the smaller unit can not keep up with the demand. We would like permission to use a 5-½ wide groomer for the secondary trails. The machine has the same impact as the drag that we use behind a snowmobile, but has an enclosed cab and does a better job.

We look forward to sitting down with DCR/Watershed to discuss these, and any other issues DCR would like to address.

Thank you.

Dean Zuppio
V.P., Coldbrook Snowmobile Club



i marked up the map as best I could. I don't have an exact proposed location for the treasure valley trail (#1).

I could not mark the muddy pond change because it is about 30 feet from the existing trail, and there is no room on the map to see it.

8/21/09

Coldbrook Snowmobile Club

Coldbrook Snowmobile Club would like to submit its proposed changes for the upcoming Ware River Watershed 2010 Recreation Plan.

Coldbrook Camp Ground has recently changed ownership. This will be the third time in the last 10 years this has happened. We are not sure if the new owners will allow snowmobiles through their campground. The ONLY trail that links Rutland State Park to the Ware River Rail Trail passes through the campground. We would like to work with DCR to plan a route that connects the Coldbrook trail, to the rail trail. If the new owners of the campground allow us through there, we will not need this. However, we need to be prepared if access is cut off.

Another consideration for this trail would be to connect the Mass Central Rail Trail to the Ware River Rail Trail completely on state owned land. This could be a joint effort project between Wachusett Greenways and Coldbrook Snowmobile Club.



Second, we would like to install a culvert on the upper loop trail (on Old Coldbrook Rd). to allow us to use that trail without having to ride on the side of the road.



Third, there is a water problem at the top of the dump trail. A small culvert is needed.

Fourth, we would like to propose a joint effort with Wachusett Greenways to open up the lower rail bed that runs from Old Coldbrook Rd. to DCR's boundary (Allied Waste). This trail, along with item #1 would be a formal link between the 2 rail trails.

10/8/09

Ware River Watershed Advisory Committee

Ware River Watershed Advisory Committee
c/o Jeffrey Schaaf
74 School Street
P. O. Box 36
Wheelwright, MA 01094

October 8, 2009

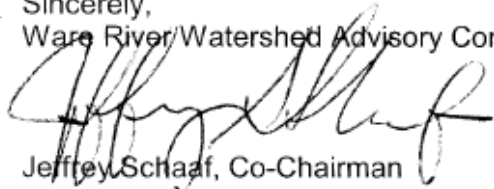
Bill Pula, Regional Director
DCR Division of Water Supply Protection
Quabbin Reservoir
485 Ware Road
Belchertown, MA 01007

Re: Trail Grooming in Ware River Watershed Restricted Zone

Dear Bill,

The issue of using snowmobiles to groom cross-country ski trails in the restricted section (quiet zone, no snowmobiles allowed) of the Ware River Watershed was discussed during the latest meeting of the Ware River Watershed Advisory Committee (WRWAC) on Wednesday, September 30, 2009. The WRWAC unanimously voted to strongly recommend that snowmobiles be allowed in the restricted section, by permit, for cross-country ski trail grooming purposes only.

Sincerely,
Ware River Watershed Advisory Committee



Jeffrey Schaaf, Co-Chairman

Cc: Dave Small, DCR Assistant Regional Director

10/8/09

Ware River Watershed Advisory Committee

Ware River Watershed Advisory Committee
c/o Jeffrey Schaaf
74 School Street
P. O. Box 36
Wheelwright, MA 01094

October 8, 2009

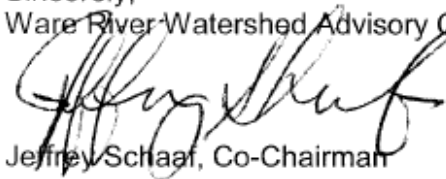
Bill Pula, Regional Director
DCR Division of Water Supply Protection
Quabbin Reservoir
485 Ware Road
Belchertown, MA 01007

Re: Private Boat Decontamination Policy at Quabbin Reservoir

Dear Bill,

On Wednesday, September 30, 2009, the Ware River Watershed Advisory Committee (WRWAC) voted to support the continued decontamination and tagging of all private boats, as now allowed, for access to fishing on the Quabbin Reservoir. The WRWAC vote was unanimous.

Sincerely,
Ware River Watershed Advisory Committee

A handwritten signature in black ink, appearing to read 'Jeffrey Schaaf', is written over the typed name and title.

Jeffrey Schaaf, Co-Chairman

Cc: Dave Small, DCR Assistant Regional Director
Richard Sullivan, DCR Commissioner
Fred Laskey, MWRA Executive Director

10/19/09
Matt Hopkinson

Matt Hopkinson
34 Twin Hill Road
Hubbardston MA 01452

William E. Pula
Regional Director, Quabbin and Ware River
DCR
485 Ware road
Belchertown, MA 01007

10/19/2009

Dear Mr. Pula:

I have had the opportunity to review the 2010 draft Public Access Management Plan for the Ware River Watershed and was pleased to see both enhanced recreational access and improved water quality protection. I find the new plan for winter access to be an excellent combination of activities that addresses the needs of local recreationists while simplifying the task of compliance. Added regulations for boating, while unfortunate, will hopefully protect the waters from aquatic invasives for years to come. Thank you for the opportunity to provide input during the development of this plan.

Creation of a winter boundary line between a non-motorized area and a motorized area as a replacement of the often-confusing network of varied-use trails will not only improve the experience for visitors but be much simpler to implement. I offer these suggested enhancements:

- In the area of Elm Street (north of the Prison Camps), the boundary could follow the power line to the west, allowing snowmobile access on that section. This would give snowmobilers a direction to follow once they have encountered the boundary gate, without having to turn back.
- Snowmobile Trail Grooming and Cross Country Ski Trail Grooming should both be addressed in the plan and both be allowed. Personal Groomers, which are defined as snowmobiles with a tow-behind attachment, should be allowed without permit on any designated snowmobile trail. These same machines should be allowed with permit on designated cross country ski trails. Larger, snow-cat type machines with tow-behind attachments should be allowed by permit on snowmobile trails that follow maintained roads (as they are now).
- The Mass Central Rail Trail that runs through the watershed lands was constructed using grant money earmarked for non-motorized trail development. Additionally, many private donations were made for the advancement of the trail with the same stipulation. Motorized access should not extend to the portions of this trail constructed with such funding.
- The Brigham Road bridge over the West Branch Ware River is an important feature used by the public. Moreover, it provides essential forestry access. The Midstate Trail crosses the river on this bridge as will the proposed ski trail loop. Specific plans to repair or replace this bridge should be made a part of your annual budget. Alternatively, there are a number of groups with which the DCR could partner to provide the maintenance and repair needed for safe pedestrian access.

Again, thank you for the opportunity to provide input on this draft plan. There seems to be a good balance between protection and access, and you have gained consensus from the various user groups.

Sincerely,



Matt Hopkinson
Watershed Resident

10/20/09
Ed Yaglou

From: Ed Yaglou
Sent: Tue 10/20/2009 10:58 PM
To: Bill Mucha; Dave Small; Dean Zuppio; Jeffrey Schaaf
Subject: Request for Inclusion in the 2010 Ware River Watershed Access Plan

This message is intended as a message to Dave Small with copies to Jeff Schaaf, Dean Zuppio and Bill Mucha (but the only way I could get Dean's email address was to swipe it off Kimberly Tureck's last transmission of WRWAC minutes.) I have delivered a map of the proposed route to Dave Small's office.
Ed

In order that the Mass Central Rail Trail could continue to be developed to the west of Coldbrook Road, Oakham, I should like to suggest the following allowance for same in the 2010 Ware River Watershed Access Plan. Mind you, I am writing as an individual member of the Advisory Committee, not promising immediate continuation of Wachusett Greenways' work, but wanting to hold the door open for a Barre group to form and, hopefully, continue building the rail trail west along the old Mass Central route, to eventually connect with the East Quabbin Land Trust's section in Hardwick and New Braintree.

THAT the Mass Central Rail Trail be indicated as an allowable bike trail/road along the abandoned B&M Central Mass Division railbed west from Coldbrook Road, Oakham, to the dcr/DWSP boundary at the Barre dump, to turn right, following the present snowmobile trail north to Route 122 (down the hill along the dump boundary, turning east on the B&A Ware River railbed, then taking the ramp road down to the Snowmobile Club bridge at the gaging station/weir, and across the Ware River and out to Route 122 opposite the MWRA garage). The rail trail would continue on road, northwest on Route 122 to Vernon Avenue to return the the B&M railbed. Eventually, if and when the Barre dump closes, the rail trail could follow the B&A Ware River railbed as it now exists as an access road through the dump west to Depot Road.

This is all conjecture, and perhaps could be requested as an amendment to the Access Plan when a specific group is ready to propose construction. On the other hand, perhaps it would be easier for all concerned to plan for the eventuality in the 2010 writing of the plan.

Respectfully Submitted,
Ed Yaglou

10/22/09
Mike Sullivan

10/22/2009

Lisa C. Gustavsen
 Environmental Analyst
 DCR-DWSP, Office of Watershed Management
 Quabbin Reservoir
 485 Ware Road
 Belchertown, MA 01007

Lisa,

As a follow up to our conversation last week I would like to advise you that I am strongly opposed to any and all expansion of the snowmobile trails in the Long Pond area of Rutland.

I live on Crawford Road and have been an abutter of DCR owned land (on 3 sides of me) for almost 35 years. I have allowed public access to the Mid State Trail over my property since I have owned it. Over this time period I have made every attempt to be a good neighbor as well as "keeping an eye" out for the interests of my neighbor the DCR.

Although I am not a snowmobile enthusiast and respect the rights and interests of those who are, I have found that in the past the closer they are to my property the more annoying they become. There are a few specific concerns I have that are inherent to the sport itself, but are exacerbated by those that do not respect the abutters to their riding trails. Unfortunately in this case 'one bad apple does spoil the whole bunch'.

Some specific concerns I have had in the past and continue to have are:

- My 20-acre field in close proximity to the existing and proposed trails. There have been times in the past where riders have used these fields as their own racetrack.
 - Late in the evening
 - Noise pollution
 - Lights shining into my house
- Crawford Road
 - A very steep and narrow residential road that the trail will have to cross
 - Unfortunately the average speed on this road I estimate to be at least 40 MPH
 - The snowmobiles will have to cross this road with typically steep snow banks on the sides creating a potentially dangerous situation
 - The existing and proposed trail cross Crawford Road on the lower end of the roadway and then cut diagonally across the hillside over at least one tributary to get to the ridge on the top of the hill.
 - Unfortunately many riders choose the path of least resistance and decide that the roadway itself is an easier and faster alternative.
 - This not only creates a hazard to motor vehicles and pedestrians but is extremely annoying in the middle of the night. All three houses that the roadway passes before the logging road entrance have minimal setback.

Although I know that many of the riders are respectful of the law and the environment around them there are also many that are not. It is for these reasons that I respectfully and strongly urge that the DCR not open up the land adjacent to my property to increased snowmobile traffic.

I would be happy to address any of my specific concerns either in person or by telephone @ 508-864-9010.

Mike Sullivan
 30 Crawford Road
 Rutland, MA. 01543

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Appendix C – AWWA Policy on Recreational Use of Domestic Water Supply Reservoirs



American Water Works
Association

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Statement of Policy on Public Water Supply Matters

Recreational Use of Domestic Water Supply Reservoirs

The American Water Works Association (AWWA) supports the principle that water of the highest quality should be used as the source of supply for public water systems. Accordingly, the risks and potential mitigation requirements of any recreational activity on water supply reservoirs should be identified and publicly evaluated. In the evaluation, utility- and customer-determined acceptable levels of risk should be given the highest consideration. No recreation should be permitted on finished-water reservoirs under any circumstances.

Protection of public health and drinking water quality should be the highest priority in operational decisions for reservoirs used jointly for water supply and recreation. Decisions regarding recreational use of domestic water supply reservoirs should be consistent with the intent of the source water protection program developed and implemented by the utilities and other responsible parties.

Recreational uses of domestic water supply reservoirs and the land-based infrastructure necessary to support such uses can add sources of microbial, physical, and chemical contaminants to the drinking water produced from the reservoirs. Water utility decisions on permitting recreational uses of water supply reservoirs should consider the following issues: (1) the potential for water quality degradation, (2) the public health risk, (3) the acceptance of such health risk by the customers, (4) the current required level of treatment, and (5) additional treatment requirements, uncertainties, and costs that may be incurred. Recreational uses should be prohibited in those instances where a scientifically-based risk assessment, or, in the absence of a risk assessment, the best available scientific data demonstrates a probable or imminent degradation of water quality or hazard to public health that cannot be controlled or mitigated in a cost effective manner.

Continued . . .

Adopted by the Board of Directors June 13, 1971, reaffirmed Jan. 28, 1979, and Jan. 25, 1987, revised June 23, 1996, June 13, 2004, and January 25, 2009.

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When considering proposals for recreational use of domestic water supply reservoirs, the water utility should work with stakeholders to develop an integrated reservoir management plan, including appropriate water quality monitoring, to evaluate and, if necessary, mitigate water quality impacts, and to minimize increased risks. Body-contact recreation (e.g., swimming, water skiing, wind surfing) and use of two-cycle gasoline engines on boats should be discouraged or prohibited. In addition, boat inspection/washing stations and restrictive use of live bait should be considered to prevent the introduction of foreign and invasive species (such as zebra mussels or non-native algal species) that could potentially destabilize a reservoir's ecology and water quality. Where feasible, costs for monitoring, evaluations, and mitigation should be borne by those proposing or benefiting from the recreational activity, not by the utility or its customers.

If recreation already exists on a reservoir, the water utility should work or continue to work with stakeholders to develop an integrated reservoir management plan and associated implementation actions to mitigate water quality impacts and to minimize increased risks.

Recreational Use of Domestic Water Supply Reservoirs

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Appendix D – Public Information Contact List

**DCR Office of Watershed Management
Quabbin Reservoir and Ware River Section
January 2010**

Visitor Information	
Interpretive Services	413-323-7221
Regulation and Public Access Policy Information	
DCR-Watershed Rangers	413-323-0192
Security Concerns	
Emergency or report violations	911
DCR-Watershed Rangers	413-323-0192
State Police – Belchertown	413-323-7561
Forestry Questions	
Forestry Section	413-784-1249
Geocache Questions	
Interpretive Services	413-323-7221
Group Access Permit Request	
Interpretive Services	413-323-7221
Horseback Riding Access Permit Request	
Interpretive Services	413-323-7221
Quabbin Reservoir and Ware River Section – Regional Director	
Bill Pula, P.E.	413-323-6921