



Wachusett Rangers

Protecting water,
serving the public

By DCR Watershed Ranger Staff

Visitors and watershed residents alike often ask about the Watershed Rangers' duties and responsibilities. This article provides some insight into the role of the Watershed Ranger throughout the seasons in the Wachusett Reservoir watershed.

The Rangers' focus changes depending on the time of the year and the type of activities occurring on watershed lands, however all functions are guided by the Watershed Ranger's mission statement (see box).

The Wachusett Reservoir has nine full-time Rangers and the Quabbin Reservoir has seven. Although guided by the same mission statement, the Ranger's specific duties at Quabbin differ from the Rangers at Wachusett. The following descriptions focus primarily on the Wachusett Reservoir Rangers; look forward to hearing about the Quabbin Rangers' role in protecting the watershed in a future edition of *Downstream*.

Spring

As the ground thaws and the reservoir ice begins to retreat, the watershed

lands and waters begin to teem with life. Fish rise from the deep, cold water attracting anglers from all around the state. The main event of springtime at the reservoir is the beginning of a new fishing season.

Opening day is always on the first Saturday in April, provided that the reservoir is ice free. It is a very busy weekend, as several hundred anglers are anxious to cast for a bite from the reservoir's abundant fishery. Wachusett holds six state fishing records, including lake trout and land-locked salmon. The Rangers' role at this time is to speak with the fishermen, check their fishing licenses and creel, check for lead sinkers (which are banned at Quabbin and Wachusett Reservoirs), and educate people on the rules and regulations of the reservoir, as well as the impacts from invasive aquatic species. Patrols are conducted by boat, bike, foot, and ATV.

...the Rangers seek to help safeguard the quality of the MWRA Water Supply by maximizing public compliance with the Department of Conservation and Recreation, Division of Water Supply Protection's rules, regulations, and policies. The Rangers strive to achieve their mission by being a proactive presence on watershed property and by education of the public through formal and informal means.

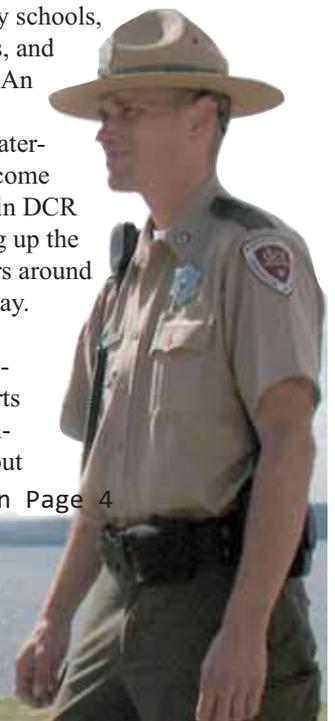
-DCR Watershed Rangers Mission Statement

Visitors also come to the reservoir in springtime to catch a glimpse of loons, eagles, hawks, and many other wildlife species. The Rangers switch to the role of interpreter by providing information and answering questions. Spring also sees the start of organized education programs. The Rangers

offer historical presentations for the watershed elementary schools, libraries, scouts, and friends groups. An annual cleanup event, where watershed residents come together and join DCR staff in cleaning up the reservoir, occurs around April's Earth Day.

An outdoor interpretive program series starts in May and continues throughout

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Ranger Tom Gonzalez on patrol near Wachusett Dam.

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Massachusetts Department
of Conservation and Recreation
Division of Water Supply Protection
www.mass.gov/dcr/watersupply.htm

Creeping Normalcy

Three decades of successful land protection efforts

By Jim French, DCR/DWSP Land Acquisition Coordinator



This privately owned forest is permanently protected from development by a DCR Watershed Preservation Restriction.

“Buy Land, they aren’t making any more of the stuff.”

Will Rogers

“The law locks up the man or woman who steals the goose from the common; but the greater villain the law lets loose, who steals the common from the goose.” *Anonymous, 17th century*

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To work to protect landscape is to work for the prosperity of our children’s children while expecting them to ever do the same. They will only carry on this work if we succeed in passing on a reverence for the natural world around us.

Long ago one could bend and drink from a cool New England stream without a thought of any health consequences. Open water anywhere was safe to slake one’s thirst. The air was pure and the soil was chocolate dark and rich with the promise of robust sustenance. Soft rain delivered chemical-free moisture gathered from vast unbroken oxygen-producing forests. The incredible diversity of plant and animal life would astound the modern observer, for we cannot even imagine all that has been lost.

Creeping normalcy is the term coined to describe the loss of great things so slowly that they are not noticed. No better example of this phenomenon exists than in describing the deliberate and persistent surrender of our natural land base to suburban development sprawl. Each house and lawn, mall and parking lot, school and soccer field, takes without giving back a small piece of the pristine pre-colonial conditions now collectively forgotten. Landscape amnesia, as it has also been described, robs us without our knowing we are being robbed.

Clean air and water is our lowest common denominator for a healthy life.

Therefore, we start there in our efforts to protect many of the remaining tracts of our natural landscape - lest the shaded tree-lined rivers and reed-washed wetlands creep from our conscience one grove and one river bend at a time. In one of many successful synergistic accomplishments of the DCR/MWRA water supply protection team, the land protection program has proven highly effective in converting acquisition funding opportunities into swaths of green along our rivers and streams.

Since the first open space funding specifically for protecting the water supply acreage was established 25 years ago, DCR has acquired 22,000 acres of carefully selected watershed lands within the Wachusett Reservoir, Ware River, and Quabbin Reservoir watersheds – the 400 square mile region in Central Massachusetts from which the pure water consumed by 2.4 million Bay State residents and businesses is collected.

Hundreds of private landowners within this region have participated in the land acquisition program, with the 500th purchase having been recorded this past summer. An additional milestone for 2010 was crossing the 100,000-acre threshold of land under the DCR Division of Water Supply Protection’s care and ownership. Within that figure is yet another significant and celebratory number: the acquisition of DCR’s 5,000th Watershed Preservation

10 Ways to Cleaner Water

Simple steps to protect ground and surface waters

By Kelley Freda, DCR Environmental Analyst

- 1 Pick up after your pet and put the waste in the trash. For more information, go to www.mass.gov/dcr/watersupply/watershed/documents/wachdogwaste.pdf.
- 2 Limit the use of fertilizers and pesticides. NEVER apply before a heavy rain.
- 3 Don't sweep sand into the roadway and keep it away from storm drains (especially in the springtime after the snow melts).
- 4 Fix automobile leaks.
- 5 Wash your car on the lawn, where water won't flow directly into storm drains, or take it to a car wash.
- 6 Dispose of household hazardous materials properly. Residents of the Wachusett Reservoir watershed can utilize the recently opened Wachusett Watershed Regional Recycling Center operated by Wachusett Earthday (<http://wachusettearthday.org>)
- 7 Plant grass if there are bare spots in your yard. Fix any eroded areas.



- 8 Make sure your septic system is functioning properly.
- 9 Don't feed or attract wildlife. Feces from wildlife (such as raccoons) can cause high bacteria counts in nearby streams.
- 10 Dispose of unused medications properly. NEVER flush in the toilet or down the drain. For more information, go to www.mass.gov/dcr/watersupply/watershed/documents/DWSPPHarmbrochure.pdf.

Planning Spotlight on Public Access

Sudbury completed, Wachusett up next

by Joel Zimmerman, DCR/DWSP Planner

There are four Public Access Plans that detail management policies and explain the programs and activities used to limit and control access to the lands and waters of the DCR water supply system. These plans are periodically updated to identify changes in existing conditions, evaluate the policies that have been implemented, and assess additional needs to meet the mandate of water quality and resource protection.

The Sudbury and Foss (Framingham #3) Reservoirs are the reserve source water supplies for metropolitan Boston. **The Sudbury and Foss Reservoirs 2010 Public Access Plan Update** was completed in July. Building upon information from the 1994 and 2002 versions, needs assessments and implementation objectives were developed for nine major issues: Structural and Access Controls, Signs, Mapping, Enforcement, Encroachments, Public Education/Interpretive Services, Partnerships, Open Space Coordination, and Monitoring/Program Evaluation. The plan can be found on-line at www.mass.gov/dcr/watersupply/watershed/sudaccplan.htm.

Updating the **Wachusett Reservoir Watershed Public Access Plan**, originally developed in 1996 and last revised in 2003, is a major task for this coming year. A kick-off event explaining the process was held at John Augustus Hall in West Boylston on October 28. A survey has been developed to help DCR gain a perspective on how people recreate on the public water supply lands around the Wachusett Reservoir.

Take the Wachusett Public Access survey on-line at www.mass.gov/dcr/watersupply/watershed/wachaccess.htm.

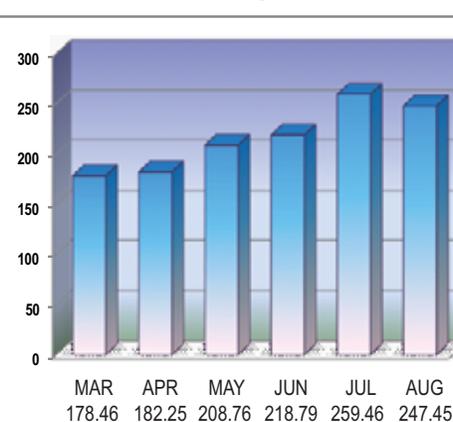
All DCR Watershed plans can be found at www.mass.gov/dcr/watersupply/watershed/dwplans.htm. For additional information, contact the Wachusett/Sudbury Regional Headquarters at (508) 792-7806.

Reservoir Watch

Reservoir levels and 6-month precipitation

Reservoir	Quabbin	Wachusett
Minimum	525.71'	389.78'
% Full	92.0%	89.6%
Date	8/31/10	5/6/10
Maximum	530.58'	396.35'
% Full	101.2%	102.7%
Date	4/2/10	3/16/10
Precipitation	21.31"	22.92"
Seasonal Avg	25.05"	23.2"

System-wide 6-month Water Usage (in million gallons per day) March to August 2010



Wachusett Rangers protect and serve from Page 1



Outdoor activities, such as biking, are popular during the summer months. Ranger Will Anderson chats with a frequent rider of the Mass Central Rail Trail at DCR's West Boylston parking lot.

the summer. All programs are free and open to the public and can be viewed on the DCR website at www.mass.gov/dcr/events.htm. In addition, spring is the time for the Rangers to refresh the kiosks, bulletin boards, and brochure boxes that provide visitors with information about the reservoir.

Summer

As spring turns to summer, the hot weather forces the fish into the deep cold waters and fishing begins to slow down.

However, activities such as biking and hiking increase, so patrols change focus to high use areas such as the Rail Trails and the Old Stone Church. Rules signs that use universal symbols to show allowed and prohibited activities are posted at every access gate. These signs also have the phone numbers for the Ranger Station and the State Police so visitors can report emergencies or illegal activity.

The Ranger's major summertime focus is keeping visitors out of the water. The reservoir is

patrolled by boat to check the shoreline for people wading or swimming. While on the boat, the Rangers are also looking for other unlawful behavior on watershed lands, such as low flying planes, fires, dogs, and people in areas posted as "No Trespassing."

Fall

Autumn lures the fishermen back to the reservoir as the cooler waters rise to the surface. Lake Trout prefer water temperatures around 50°F; in the fall they can be

found closer to shore following bait fish. Wild, non-native, landlocked Atlantic Salmon also travel up the rivers to spawn at this time. Rangers walk the shorelines talking to the fishermen, making sure they are in compliance with the rules. Many visitors also come to the reservoir to enjoy the fall foliage and scenic vistas, providing the Rangers an opportunity to interact with people from all over New England and educate them about watershed management.

Fall also brings the start to deer hunting season, keeping the Rangers very busy with both legal and illegal hunters. Hunting is allowed, following all other state regulations, on DCR Watershed lands that are north and west of I-190. Lands immediately around the reservoir, however, are off-limits to hunting. Some people do not follow the law – illegal tree stands are often confiscated and the Environmental Police work with DCR to investigate poaching on watershed lands.

Another large part of the Watershed Ranger's role is hazardous materials response. Fall is the time for training, both on water and land, in boom deployment and spill containment. Ranger staff have the capability to provide spill response equipment and personnel to assist in the detection and containment of hazardous material that releases into



Shoreline fishing is most popular at Wachusett Reservoir in the spring and fall. Captain Derek Limantainen provides an angler information about the fish population, checks for a proper fishing license and teaches about the water supply system.



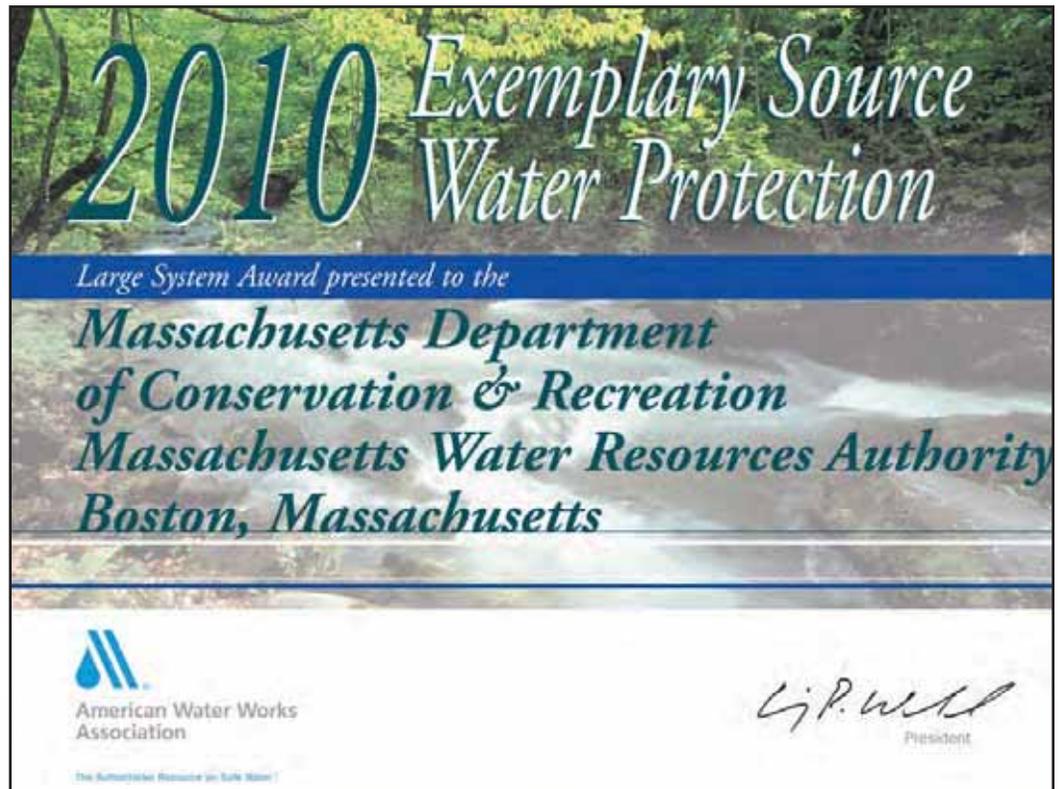
In addition to patrols and educational services, the Watershed Rangers are also trained to assist in emergency spill response situations on the reservoir. In this picture, they are deploying a spill containment boom as part of a training operation.

DCR Wins National Clean Drinking Water Award

The Massachusetts Department of Conservation and Recreation's Division of Water Supply Protection (DCR/DWSP) has received the American Water Works Association (AWWA) 2010 Exemplary Source Water Protection Award for Large Systems. The Division's Office of Watershed Management has a long-standing reputation for successfully providing pure water to the Massachusetts Water Resources Authority (MWRA) for treatment and distribution to more than 2 million people. This award certifies DCR as an international role model for drinking water quality protection.

AWWA, an international nonprofit and educational society, is the largest and oldest organization of water professionals in the world, with membership of more than 60,000 people and 4,600 utilities that supply water to roughly 180 million people in North America. Members represent treatment plant operators and managers, scientists, environmentalists, manufacturers, academicians, regulators, and others who hold genuine interest in water supply and public health. AWWA is the authoritative resource on safe water.

The significance of this award is magnified by the fact that DCR's advocate was its regulating agency, the MA Department of Environmental Protection (DEP). DEP's detailed nomination to the award committee was based on its intimate knowledge of DCR's work, derived from DEP's annual inspections and on-going program review, which are required for DCR's source water to maintain MWRA's federal filtration waiver. DEP's recommendation was supported by the New England chapter of the AWWA, which subsequently submitted the nomination material to be considered with other applicants from around the country.



The water at Quabbin Reservoir is crystal clear.



A tranquil day on the Ware River.

The nominations were judged on how well a water system meets six components of AWWA’s Source Water Protection Standard: 1) program vision; 2) source water characterization; 3) explicit protection goals; 4) development of an Action Plan; 5) implementation of the Action Plan; and 6) periodic evaluation and revision of the entire program. The award was also based on three additional factors: the 1) documented effectiveness of the program; 2) innovativeness of the approach; and 3) the difficulties overcome by the organization.



Quabbin Reservoir, frozen over in winter.

DCR’s watershed management programs excel in all of these areas. DEP explicitly noted DCR’s extensive planning processes, water quality monitoring, natural and cultural resource stewardship activities, and community outreach through advisory committees, interpretive services, technical assistance, ranger patrols, and publications. All of these elements are unified into an annual Work Plan and corresponding budget that is reviewed and approved by the Water Supply Protection Trust. The following are factors that contributed to AWWA’s recognition of DCR’s efforts.

Effective. The source water provided by DCR to MWRA continuously meets the federal standard for unfiltered source water fecal coliform. Components to this success include:

- ◆ A bird harassment program at both reservoirs that is a major element in DCR’s ability to meet critical water quality parameters.
- ◆ A strong understanding of water quality issues throughout the watersheds and reservoirs.
- ◆ An excellent track record of planning, entailing periodic updates to the Watershed Protection Plans, Public Access Plans, and Land Management Plans, with appropriate public involvement integrated into the process.
- ◆ The ability to control harmful land uses across the watershed system provided by the targeted expenditures of the Land Acquisition Program and implementation of the Watershed Protection Act regulations.
- ◆ A team of scientists, labor and craftsmen, planners, engineers, rangers, foresters, educators, and managers who work together to accomplish the 100+ programs and projects identified in each annual Work Plan.

Innovative. DCR’s professional staff draws upon the resources of experts and academic institutions to bring the most advanced strategies into its watershed protection programs, such as:

- ◆ Research tracking the migratory habits of gulls that will advise components of the bird harassment program.
- ◆ Microbial tracking on tributaries to the Wachusett Reservoir that identified the need for educational programs focusing on dog waste.
- ◆ Multi-jurisdictional emergency planning, training, and equipment deployment, performed in association with MWRA, state, and local officials.



- ◆ Ongoing water quality related education programs at the Quabbin Visitors Center, in watershed community classrooms, out in the field, and on-line.
- ◆ Community infrastructure developments that address long-term waste issues, such as the Wachusett Earthday recycling site.
- ◆ The Quabbin boat decontamination program, rapidly developed and implemented, which minimizes the threat from invasive aquatic species while allowing private fishing boats on the reservoir.

Perseverance. DCR has a long history of addressing myriad political and logistical challenges.

- ◆ Creating a source water protection program that encompasses four watersheds and close to 500 square miles, coordinating with dozens of individual community governments, legislators, and stakeholder groups.
- ◆ Working with the citizens of the watersheds, who do not consume the water from either the Quabbin or Wachusett Reservoirs. DCR identifies projects that promote protection of both the locally utilized natural resources as well as the drinking supply for people close to 100 miles away.
- ◆ Respecting and honoring the sacrifices made by previous generations that had their communities transformed into a drinking water supply.

At a ceremony in the Division's field headquarters in West Boylston, DCR Commissioner Rick Sullivan heralded the daily efforts of the 150 staff dedicated to Watershed Protection. Division Director Jonathan Yeo recognized the men and women who have worked for the agency as it has evolved over the past century. The Director also praised the support and team efforts of the MWRA, whose ratepayers provide the money for operations, land acquisition, payments in lieu of taxes, and long-term capital

investments. The Water Supply Protection Trust's five trustees – MWRA Executive Director Fred Laskey, Katherine Haynes Dunphy, Judith Eisman, William Meehan, and Kathy Baskin (EEA Secretary Ian Bowles' representative) – were also acknowledged for their effective oversight and support of the Division.



DWSP Director Jonathan Yeo proudly displays the AWWA Clean Drinking Water Award with DCR Commissioner Rick Sullivan.

The AWWA award would not have been possible without the commitment and expertise of the Division of Water Supply Protection staff. Commissioner Sullivan and Director Yeo thanked the current employees in the Office of Watershed Management for all of their contributions that help protect some of the best drinking water in the world.

For more information:

www.mass.gov/dcr/watersupply.htm

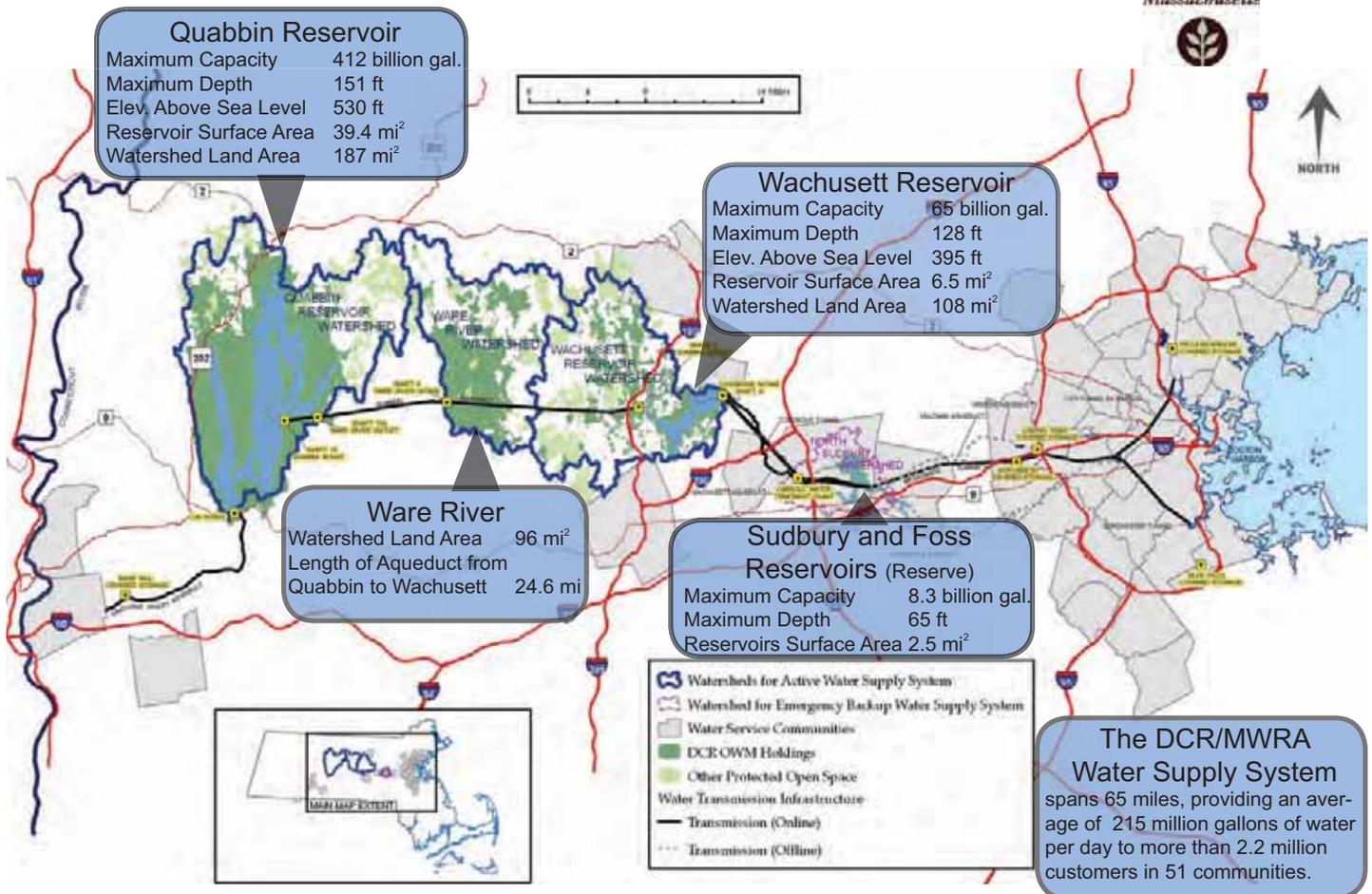


Department of Conservation and Recreation
 Division of Water Supply Protection
 Office of Watershed Management
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November 2010

Wachusett Reservoir on a crisp fall morning.

The DCR Watershed System at a Glance



Congratulations and Special Thanks to the DCR Division of Water Supply Protection, Office of Watershed Management 2010 Staff!

Director: Jonathan Yeo. **Regional Directors:** Quabbin – Bill Pula; Wachusett – John Scannell.

Assistant Regional Directors: Quabbin – Dave Small; Wachusett – Scott Murphy.

Natural Resource Director: Dan Clark. **Budget Manager:** Eileen Honen.

Environmental Quality: Quabbin – Bob Bishop, Rebecca Budaj, Peter Deslauriers, Lisa Gustavsen, Yuehlin Lee, Paul Reyes, Bernadetta Susianti-Kubik; Wachusett – Pat Austin, Kelley Freda, David Getman, Tristan Lundgren, Paula Packard, Larry Pistrang, Steve Sulprizio, Vincent Vignaly, Dave Worden.

Natural Resources: Steve Anderson, Jim French, Kiana Koenen, Thom Kyker-Snowman, Ken MacKenzie, Jillian Pereira, Caroline Raisler, Jim Taylor.

Forestry: Quabbin – Herm Eck, Derek Beard, Dennis Morin, Randall Stone, Steven Ward, Steve Wood; Wachusett – Greg Buzzell, Brian Keevan.

Watershed Protection Act: Quabbin – Jeff Lacy; Wachusett – Nancy McGrath, Allan Rantala; Boston – Joel Zimmerman.

Watershed Engineering: Quabbin – Scott Campbell, Peter Izyk, Douglas Williams, Steve Mansfield; Wachusett – Bill Moulton, Ed Connor, Paula Davison, Ross Goodale.

Administrative and Technical Support: Quabbin – Paul Lyons, Linda Boulette, Sandra Conkey, Philip Lamothe, Kimberly Turek, Jennifer Peterkin; Wachusett – Marybeth Bonin, Craig Fitzgerald, Christine Muir, Christy Power; Boston – Ashley Chan, Joanne Driggs-Williams, Flora Martinez, Paul Penner, Mulunesh Sisay, Cynthia Smith.

Watershed Rangers: Quabbin – Dave Zaganiacz, Peter Baldracchi, Gerard Houle, Jamie Hogan, Tiffany Leclair, John Maslon, Sean McQuaid; Wachusett – Rick Mathews, Derek Liimatainen, Rebecca Baronoski, Bruce Fant, Thomas Gonzales, Tim O'Connor, Benjamin Pollini, Nathan Tobey, Keith Vicari, Dave Wright.

Interpretive Services: Quabbin – Clif Read, Maria Beiter-Tucker, Dale Monette; Wachusett – Jim Lafley, Roger Clifford.

Watershed Maintenance & Operations: Quabbin – Al Walsh, Jeffrey Adams, Bruce Andrew, Steven Baran, Michael Barnes, Ray Cusson, Al Detour, Camille Domina, Randall Florence, Gary Gaines, Laurie Gauvin, Jason Holden, Gordon Humphrey, Allyn Hurlburt, Stephen Jarvis Jr, David Kenyon, John Krasnecky, Chet Krol, Paul Lapierre, Lars Larson, Conrad Letourneau, Thomas Peloquin, Ronald Peters, Frederick Provost, Andrew Ohlson, Donald Sorrenho, Craig Stoddard, Michael Strzemienski, Michael Wisnoski; Wachusett – Mike Tomaiolo, Ronald Anderson, John Buckley, Albert Bull, Robert Carlson, Glenn Cheries, Wayne Chestna, Zack Costa, Brian Dziokonski, Terry Fellowes, Paul Gosselin, Francis Guy, Terance Kearney, Sean Lovejoy, Fred Mellor, George Nelson, Tim O'Connor, Robert Parker, Vincent Pasquale, Ray Pelletier, John Pingeton, Michael Ponyta, Ed Power, Pete Ramig, Paul Silvestri, Dave Simmons, Chris Tuff, Dan Valerio, John Vento, Dan Wolski, Ted Zdonczyk.



Ranger Rebecca Baronoski leads an outdoor aquatic environmental education seminar with the assistance of DCR Aquatic Biologist Jamie Carr.

the water supply. The Rangers are also responsible for the monthly inventory and upkeep of the equipment in the three response trailers that are located around Wachusett Reservoir.

Winter

The unofficial start of winter at the Wachusett Reservoir is the November 30 closing of the fishing season. Even though visitation is low, Rangers are still very busy and active in the field. Once the snow starts, the public continues to recreate on the trails around the reservoir, so patrolling is done on snowshoes and cross-country skis. Snowmobiles are used to cover a lot of ground, checking property boundaries and investigating illegal activity on DCR lands. The Rangers look for signs of prohibited activities such as ice fishing, snowmobiling, property encroachment, dumping, and poaching. There is ongoing coordination with both the State



Wachusett Watershed Ranger Captain Rick Mathews retired in December 2009 after an exemplary 13-year career with DCR. His love of the outdoors and the environment brought him to DCR as an entry-level Ranger after positions with both Digital Equipment Corp. and New England Power. He quickly rose to a supervisor level and ultimately to the captain's position as the head ranger at Wachusett Reservoir. Rick advanced the role of the Watershed Ranger as an environmental educator who gains rules compliance through user interactions. Rick was also instrumental in developing the emergency response program at Wachusett Reservoir, leading DCR in the post-9/11 world of watershed protection and water supply security. Rick leaves DCR with a proud legacy of a committed, professional Watershed Ranger.

Police and Environmental Police to try to put a stop to these activities.

Watershed Rangers are required to hold their certifications in First-Responder and CPR. In-service training is held during the winter months to re-certify qualifications. Attendance at other training sessions, such as Railroad Safety, Search and Rescue, Boating Safety, and Incident Command, keep the Rangers up to date on public safety issues and techniques.

Year-round Services

In addition to these seasonal patrols, there are a number of year-round, daily responsibilities, including: security inspections of DCR and MWRA buildings and grounds, response to emergency situations on DCR property, reservoir patrols looking for any rule violations, and maintenance of a daily log of all activities and visitor contacts.

The offices for the Wachusett Watershed Rangers, led by Captain Derek Limantainen, are at 506 Wilson St. in Clinton; the phone number is (978) 365-3800. The "Ask the Ranger" column will continue in future editions of *Downstream*, so please send in your questions to rebecca.baronoski@state.ma.us. 💧

Ask the Ranger Answers to questions from *Downstream* readers



Q. In *Reservoir Watch* you show reservoir measurements at 526.84' for the Quabbin and 389.81 for Wachusett. Is that depth or above sea level?

A. The reservoir measurements are measured in height above sea level. The Reservoir system is a marvel of late 19th and early 20th Century engineering. This height differential allows an average of 200 million gallons a day to flow by gravity from Quabbin Reservoir through Wachusett Reservoir into Boston. No pumps are used for 100 miles, until there is a need at distribution points around the city.

Q. Why are there logging operations on watershed lands?

A. A primary goal for the Division of Water Supply Protection is to establish and maintain a vigorous, actively regenerating forest, diverse in both species mix and age structure. This watershed protection forest provides a living, green, solar powered, 24 hour-a-day bio-filter that rivals the most responsibly engineered water treatment plant in the efficiency and reliability of its water quality protection, yielding a consistent supply of clean water. Forestry operations have been conducted across the watershed system for decades without creating any water quality problems. DCR Watershed lands are transitioning from a mostly even-aged condition to a forest comprised of inter-mixed, variously-sized patches of at least three age classes. Please visit www.mass.gov/dcr/watersupply/watershed/forestry.htm for additional information.

Ask the Ranger from Page 5

Q. Why is bodily contact with the water prohibited?

A. The link between water contact activities and the spread of water-borne disease is well documented. Swimming and wading can introduce pathogens, as well as increase nutrients and turbidity. DCR Watershed policy, as described in the Public Access Plans developed for each of the four watersheds in the DCR/MWRA water supply system, prohibits body contact with the source water supplies for more than 2 million people.

Q. I am overwhelmed by the number of agencies who have regulations that impact my property... it seems like a never ending list of town, state, and even federal laws. I know DCR works closely with MWRA, but I'm not clear of their respective responsibilities. It would be helpful to have a brief explanation for each group that regulates the activities on my land, or at least the ones that work with DCR.

A. A basic answer to the first part of this question is that DCR is responsible for providing "pure water" to the Massachusetts Water Resources Authority (MWRA) for treatment and distribution; DCR manages the state-owned property and reservoirs in the watershed system, and the

water comes under MWRA control once it enters the distribution pipes. These functions are detailed in a Memorandum of Understanding between the two agencies, whose staff work closely together to ensure safe, high quality drinking water for more than 2 million people. MWRA ratepayers, through the Water Supply Protection Trust, fund DCR's Office of Watershed Management, as well as the long-term financing to maintain the dams.

Public health and safety rely on private landowners meeting myriad local, state, and federal land use and environmental laws. There are differences by each community, so we can't answer this question based on a particular town, but the following are some of the laws that are in effect in the Quabbin Reservoir, Ware River, and Wachusett Reservoir watersheds. They are presented by name, regulation, and agency(ies) that implement the law, as well as a short description. *Please note that this information is provided for educational purposes only; consult counsel for legal advice.*

Watershed Protection Act (350 CMR 11 – DCR Office of Watershed Management). This law provides important land use restrictions within 400' of tributaries in the DCR/MWRA watershed system. Section 11.09 of these regulations provides additional water

quality protections for the entire watershed system.

Wetlands Protection Act (310 CMR 10 – Local Conservation Commission and MA Department of Environmental Protection (DEP)). The law requires careful review of any proposed work that may alter wetlands, as well as land subject to flooding, the riverfront area (added by the Rivers Protection Act), land under water bodies, waterways, salt ponds, fish runs, and the ocean. There may also be additional local wetlands bylaws.

Title 5 (310 CMR 15 – Local Board of Health and DEP). This law controls permitting, designing, siting, installing, and maintaining septic systems.

Endangered Species Act (321 CMR – Department of Fish and Game). The Natural Heritage Program administers these regulations that protect rare species and their habitats.

National Pollutant Discharge Elimination System Stormwater Construction General Permit (33 USC 1251 et. seq. – US EPA). This federal law requires construction activities that disturb one or more acres to obtain a permit for a stormwater pollution prevention plan, including sediment, erosion, and pollution prevention control measures.

Creeping normalcy from Page 5

Restriction acre (WPR, sometimes called Conservation Restrictions or CRs). Land is purchased by DCR either outright (in fee) or by acquisition of partial interests (WPR), where the private citizen maintains ownership of land committed to conservation.

MWRA has provided \$127 million since 1985 to achieve these milestones. Most notably, the Wachusett Reservoir watershed, the least protected and most urbanized basin within the DCR/MWRA system, is now afforded a permanent land protection level of 27.4% of the watershed – up from just 7.9% in 1985. This represents an increase in DCR-protected

land – primarily along rivers, streams and aquifers - from 5,700 acres to 19,500 acres.

Important and strategic acquisitions within the Ware River and Quabbin Reservoir watersheds have also bolstered crucially needed protection of tracts flanking numerous drinking water tributaries.

DCR watershed protection has come a long way in 25 years, and there is still much to be accomplished in the land protection arena. DCR will continue its efforts to keep the most water sensitive lands green and pristine, for to be sure, "they aren't making any more of the stuff". 💧

There is not enough space in this newsletter to provide a comprehensive description of every possible regulation you may encounter. DEP provides a detailed matrix of the primary environmental state statutes and regulations and the agencies that implement them at www.mass.gov/dep/service/matrix.htm. Every community will also have a unique set of bylaws that govern development, including zoning, land subdivision, and historic preservation. If you have any questions about DCR Watershed Protection Regulations, contact staff in either West Boylston (508-792-7806) or Belchertown (413-323-6921). 💧

Kids Corner

A Water Supply Jumble

by Jim Lafley, DCR/DWSP Wachusett Education Coordinator

Unscramble the list of eight jumbled words, one letter to each square.

Hint: The jumbled words are all towns and rivers that the Watershed Rangers patrol.

Use the letters in the circle boxes to form two words, fitting in the box at the bottom of the list, which is one of the sources of Boston's water supply.

You will find the Jumble answers at the bottom of this page...no peeking!

Good Luck!

OY EWS N T B N O L S

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And another thing...

by J. Taylor



"I dunno what it is, but it has appeal"

Jumble Answers West Boylston, Quinapoxet, Stillwater, Nashua, Sterling, Holden, Rutland, Princeton, Wachusett Reservoir

For more information about the Wachusett Rangers:

Watershed Ranger Events
www.mass.gov/dcr/events.htm

For more information about environmental regulations:

Watershed Protection Act
www.mass.gov/dcr/watersupply/watershed/wspa.htm

Wetlands Protection Act
www.mass.gov/dep/water/resources/wetlands.htm
www.maccweb.org

Title 5
www.mass.gov/dep/water/wastewater/septicsy.htm

Endangered Species Act
www.mass.gov/dfwele/dfw/nhosp/regulatory_review_mesa/ mesa_home.htm

National Pollutant Discharge Elimination System Stormwater Construction General Permit
<http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>

Matrix of Massachusetts Environmental Regulations
www.mass.gov/dep/service/matrix.htm

Quabbin Cemetery Remembers the Past

by Cliff Read, Quabbin Visitors Center

When Quabbin Reservoir was built in the 1930s, about 2,500 people still lived in the Swift River Valley. There were also more than 7,500 known deceased scattered throughout the valley. Thirty four cemeteries in eight towns had to be relocated. Thirteen acres of the 104-acre Quabbin Park was set aside outside the watershed boundary for use as a cemetery, which was formally dedicated in 1933.

Exhumation and reinterment was an awesome, unsettling task. Eventually 6,551 persons were reinterred at the Quabbin Cemetery while another 1,101 were buried in cemeteries in other communities. Careful records were kept of where remains were taken from and where they were reinterred. They are now part of the Vital Records available for public review at the Quabbin Visitor Center in Belchertown.

In addition to headstones and family

Right: The Enfield Civil War Monument in its original location on the Enfield Town Common, 1937. This location is now under about 100 feet of water.

Far right: The present location of the monument in the Quabbin Cemetery off Rt. 9 in Ware.



monuments, town monuments from Dana, Enfield, Greenwich, and Prescott were also moved to a central location in the Quabbin Park Cemetery. Each May, a special Memorial Day Service is held at the Cemetery at the town monuments. The four former Swift River Valley com-

munities taken for the Quabbin Reservoir Project as well as the Veterans are honored. The Services are held the Sunday before Memorial Day and are co-sponsored by DCR, local veterans groups, and the Friends of Quabbin, Inc. All programs are open to the public. ♠

downstream

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Downstream is produced twice a year by the Massachusetts Department of Conservation and Recreation, Division of Water Supply Protection. It includes articles of interest to the Watershed System communities. Our goal is to inform the public about watershed protection issues and activities, provide a conduit for public input and promote environmentally responsible land management practices.

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