

Yankee Engineer

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Building Strong

®



**Celebrating 50 years
at West Thompson Lake
and Northfield Brook Lake Dams**
Stories on page 4-7

Yankee Voices

Bob Hanacek, Vincent Gualtieri and Joseph Faloretti



Several honored for exceptional service

Several New England District team members received award for exceptional service to the District and the nation.

Jennifer McCarthy, Chief Regulatory, and **Steven Lahti**, Engineering/Planning both received Commander's Awards for Civilian Service for their meritorious service on the FEST-A team while supporting Operation United Assistance in Liberia. McCarthy, who served as an environmental scientist and Lahti, a mechanical engineer, supported the 101st Airborne Division during the October 5, 2014 to April 15, 2015 time period.

Will Pumyea, Office of Counsel, recently received the Office of the Chief Counsel Keystone Award that is awarded by the Corps Of Engineers Headquarters for demonstrating versatility, sophisticated skills in multiple practice areas, professionalism, and a strong work ethic.

Pumyea also received was a U.S. Department of Justice (DOJ) Certificate of Commendation. He received this award for his efforts in connection with mediation in the Combustion Engineering matter.



Patricia Bolton with an Israeli engineer at a Corps construction project in Israel in 2014.

Employee Spotlight Patricia Bolton, Engineering/Planning

Patricia Bolton is the Chief of Cost Engineering in the Value Engineer Office of Engineering/Planning at Concord Park. A graduate of Ohio State University and the University of Missouri, Bolton has been with the New England District for seven years. "I came to the District out of a passion for the Corps of Engineers as a retired engineer officer," she said.

Bolton's duties include costs, schedules, cost and schedule risk analysis and value engineering support to the District. In addition to her duties, she also serves as a Deputy Director for the District's Leadership Development Program.

When asked what she likes most about working at the District she said, "the people and diverse projects in a historical and dynamic region of the country."

In her spare time, Bolton referees women's lacrosse and plays women's hockey. In fact, her team, the Mass Lady Lobsters, won the 2015 Women's Tier 3 Over 50 U.S. National Hockey Championship. Bolton also loves to travel, but her biggest loves are her three children and her husband, Michael.

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Yes, I'm Pathways Intern at the Corps of Engineers

by Karen Baumert Pathways Intern

After graduating with a B.S. in Environmental Engineering, I still wasn't sure of exactly how I wanted to protect people and the planet. I did know the issue was more complicated than constructing predictive models. I chose to get my M.S. in Environmental Policy at Bard Center Environmental for Policy (CEP) in New York's Hudson Valley because of its interdisciplinary and systems-level approach to problem solving.

The first year at Bard is intensive and focuses on gaining skills and learning methods in statistics, law, policy, economics, science, and communications. The demanding first year allows students to fulfill the program requirement of a four to six month extended internship that occurs during the second year of the Masters program.

For my internship I was given the opportunity to work with the United States Army Corps of Engineers (USACE), New England District.

What exactly does the Corps do? That's a great question. Many people are unaware of the answer.

The stated mission of the Corps is to, "deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters."

In short, the USACE builds and maintains infrastructure to strengthen America's security. The USACE is fondly known as the nation's environmental engineer. Some of the things we do include:

- Environmental remediation;
- Flood risk management;
- Natural resource management;



Karen Baumert

- Shoreline protection;
- Navigation improvements and maintenance;
- Disaster and emergency assistance;
- Regulatory administration.

Engineering and construction management support to other agencies

I am an Economic Trainee through the Pathways Internship Program at the New England District in Concord, Massachusetts (<http://www.usace.army.mil/Careers/Internships.aspx>).

I work with economists, biologists, ecologists, and archaeologists in the Economics and Cultural Resources Section of the Engineering/Planning Division.

The projects I focus on protect people, the environment, and help the economy. Some of the projects I have been working on include:

- Levee screenings;
- Dam flood risk analyses;

- Navigation projects (<http://www.usace.army.mil/Missions/CivilWorks/Navigation.aspx>).

The navigation projects I have worked on range from constructing breakwaters for the protection of small fishing harbors to deepening and widening channels in major ports. For these projects, my main objective is to quantify the National Economic Benefit the project will have through reduced damages, increased efficiencies, and decreased travel and time costs.

For the levee screenings and dam analyses, I look at the number of people at risk if the flood control system is overtopped or breached and the economic damages to buildings that are also impacted. I use programs such as ArcGIS and the Corps' Hydrologic Engineering Center's Flood Impact Analysis program to determine where people and critical infrastructure are in relation to rising waters.

The projects and problems that the USACE deal with are interesting and diverse. All of these projects have required critical thinking and problem solving skills that I have been building up throughout my schooling as an engineering undergraduate and policy graduate student. The statistics, communications, science, hydrology, policy, and, of course, economic skills I have learned at Bard CEP have greatly been put to use at my internship.

The interdisciplinary nature of Bard CEP and my internship at the Corps is exactly what I love about both of these experiences. I am enthusiastic about further contributing to the protection of people, the economy, and the environment by working with the USACE in the coming months.



Col. Christopher Barron, New England District Commander, addresses the crowd during West Thompson Lake's 50th Anniversary celebration.

Photos by Brian Murphy

West Thompson Lake celebrates 50 years with ceremony, displays and tours

Fifty years ago, the U.S. Army Corps of Engineers, New England District, completed the West Thompson Lake Dam to keep the citizens of Connecticut safe from devastating floods.

On Oct. 3, residents traveled to the project to commemorate its construction and to celebrate the faithful service it has provided.

Project Manager Ed Greenough served as Master of Ceremonies for the West Thompson Dam celebration. Nearly 200 people braved the cold temperatures and cloudy skies to be a part of the event.

Father Edward Dempsey gave the invocation at the beginning of the ceremony. Father Dempsey has a close association with West Thompson Dam as his late father John Dempsey was Governor of Connecticut and was present at the dam's original dedication.

Col. Christopher Barron, New England District Commander, spoke during the official ceremony. "In August 1955, Hurricane Diane blew across

Long Island Sound and hit the southern New England shore," he said. "The countryside had already been soaked by an earlier storm when the hurricane dumped another 12-20 inches of rain. Streams gushed and rivers jumped their banks, washing away bridges, roads, homes and businesses."

According to Col. Barron, 90 people lost their lives and more than \$540 million worth of damage was done. In August of that year, President Eisenhower declared much of Massachusetts, Connecticut and Rhode Island disaster areas.

Construction of West Thompson



The gate house at West Thompson Lake stands ready for tours during the anniversary celebration.

Dam, which is located on the Quinebaug River began in 1963 and was completed in October 1965 at a cost of \$7 million. "What you see out there is what we call an earth-fill dam with slope protection," said Col. Barron. "It is 70-feet-high and almost half a mile long. The lake can store over 8 billion gallons of water for flood risk management."

As of the beginning of October 2015, the dam has prevented more than \$56.4 million in flood damages.

Although flood risk management is West Thompson's number one mission, the project area also serves as an excellent recreation resource. More than 96,000 visitors annually take advantage of the swimming, picnicking, fishing, hunting, boating and snowmobiling.

"The reservoir also contributes to the health of the surrounding communities through a variety of recreational and educational interpretive programs," said Col. Barron. "Families, friendships and social values are strengthened, public safety is increased and the local economy is supported. We have been proud to be part of that for the last 50 years."

Other speakers included Col. Gerald Lukowski, Connecticut Air Reserve National Guard and Thompson First Selectman Paul Lensky. The New England District Ranger Color Guard (Jason Robinson, Steven Patchkofsky, Jennifer Samela and Matt Coleman) presented and retired the colors. Joy Lavalley sang the National Anthem. A cake cutting ceremony followed the speeches.

West Thompson Lake and its partners had a multitude of displays and activities on hand for the celebration. Historical and cultural exhibits were sponsored by the Aspinock Historical Society, Thompson Historical Society, the Thompson Ecumenical Empowerment Group, Thompson Recreation Department, Connecticut Outboard



Park Ranger Claudia Hixson answers questions from a participant about the furs and skulls during the celebration.

Association, Boy Scout Troop 66, and Marianapolis Prep School Crew Team. The Last Green Valley sponsored an Envirospace Interactive Display. The New England District hosted a furs and skulls touch table as well as dam tours throughout the morning and into the afternoon.

The West Thompson Lake project is one of 35 dams across New England which is part of an intricate flood risk management network that includes 112 local protection projects and five hurricane barriers. "Many of these projects were authorized and built after catastrophic floods in the 1930's

and 1950's," said Col. Barron. "Our engineers and rangers do an excellent job in managing this complex system and reducing flood risk to people and property throughout New England and have turned an investment of roughly \$538 million over the last 60-70 years into prevention of flood damages exceeding \$6.5 billion."

Basin Manager Adam Durando, Park Manager Ed Greenough, Park Rangers Jason Robinson, Catherine St. Andre, Michelle Cucchi, and others from around the District participated and/or organized the West Thompson Lake event.



The New England District Ranger Color Guard begins the celebration by posting the colors.

Northfield Brook Lake Dam holds 50th Anniversary celebration

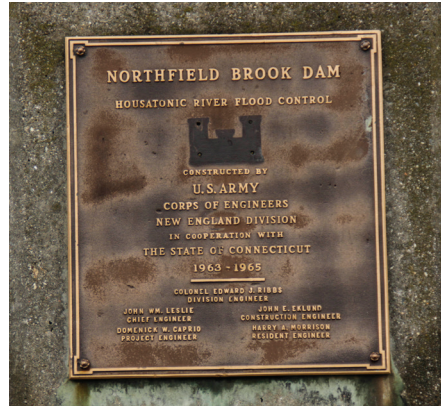
It was fitting that it rained at Northfield Brook in Thomaston, Connecticut during the flood damage reduction project's 50th anniversary celebration on Oct. 3. Fitting because rain is the reason why this project came to be built.

"This year marks the 60th anniversary of the Great Flood of 1955," said Project Manager Vincent Gualtieri during the opening of the official ceremony, held under one of the project's large shelters.

Gualtieri served as Master of Ceremonies. "We often hear terrible stories about the two back-to-back hurricanes Connie and Diane," he said. "Homes, railroad cars and debris racing down the Naugatuck River as well as stories of lives and livelihoods lost."

According to Gualtieri, local, state and federal agencies worked together to construct a network of flood risk management projects. Northfield Brook Lake Dam was one of 35 dams built in New England by the Corps of Engineers.

The project manager thanked the



The original Northfield Brook Dam plaque.

contractor who constructed the dam, Brookside Construction of East Hartford, Connecticut for doing an excellent job. Mike Sawaka, whose late father Michael was onsite during construction, was present for the celebration. His wife Jennifer and other family members were also on hand to enjoy the celebration.

Maj. Daniel Herlihy, Deputy Commander of the New England District also spoke. "More than 50 years ago, my predecessors and many local and state officials made some difficult decisions to bring this project to fruition,"

he said. "Today we can thank those leaders who came before us, who had the vision to plan for the future, and to accomplish what we see here today, as well as what we envision for the future."

Maj. Herlihy said that he believes the Northfield Brook Dam project proved and exceeded its anticipated value through the years. "Although the benefits of flood risk management alone are immeasurable, the multi-use project provides more than flood risk management," he said. "It helps in creating a healthier, more active unified community through its many educational and recreational opportunities, increasing safety, friendships and self-esteem."

Flood Risk Management is Northfield Brook Dam's primary mission, but other benefits such as an array of recreational opportunities are available for the public to enjoy. It is estimated that over 41,000 visitors annually visit the dam and its recreation area to enjoy picnicking, fishing, walking, wildlife viewing and hunting. Visitors bring money with them as well as recreational



A ceremonial tree planting took place immediately after the speeches.

enthusiasm, spending an estimated \$1.1 million at local businesses.

Maj. Herlihy said that the Northfield Brook Dam has saved the region and the nation an estimated \$76 million in damage prevention over the past 50 years.

“At a cost of \$2.8 million to build in 1965, the benefits of the dam have well exceeded its initial cost, meaning a 27-times on investment!” he said.

The Deputy Commander recognized the towns of Thomaston and Litchfield, Basin Manager Christopher Way and Project Manager Gualtieri, their staff and other volunteer Corps employees for making the event possible. “This is a great day for a celebration of the U.S. Army Corps of Engineers and the residents of Thomaston and Litchfield and the visitors here today,” he said. “We thank you all for your tireless service to our nation and the tremendous job you do each and every day.”

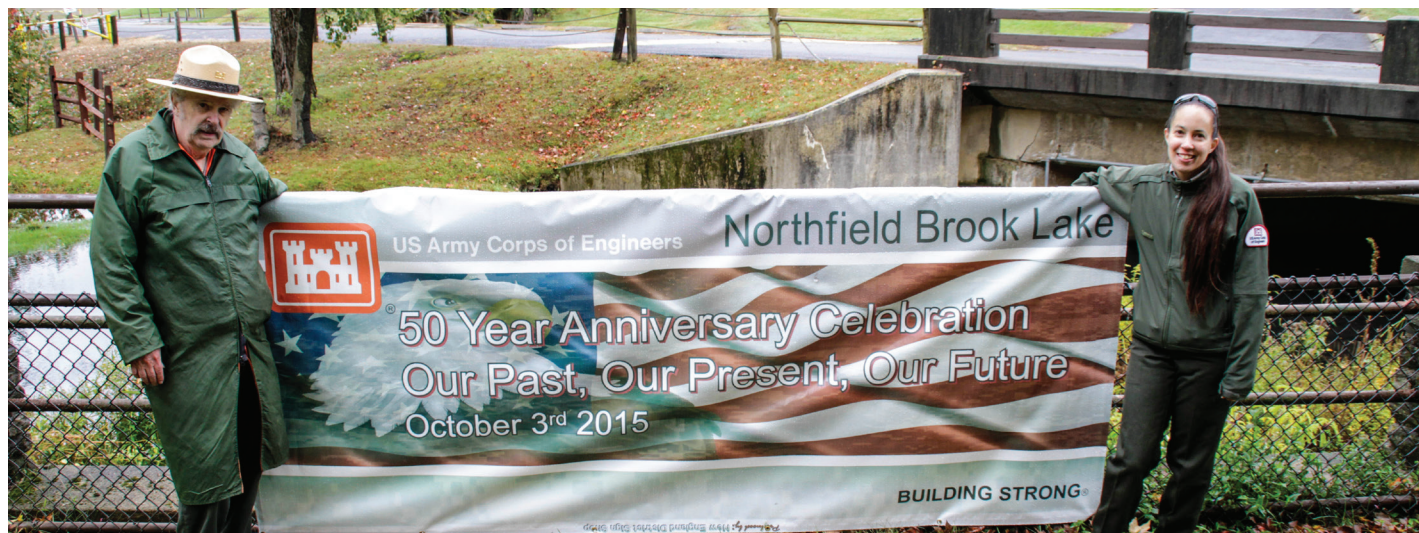
Other speakers were Connecticut State Representative John Piscopo and Thomaston 1st Selectman Ed Mone. At the conclusion of the speeches, Northfield Brook staff held a tree planting ceremony. Guests were invited to enjoy various historical displays in Shelter #2. At noon, there was a dam tour and walk to the inlet. The celebration wrapped up with a Ranger Trail Hike along the brook.



Park Ranger Roy (Mickey) Howe shows Project Manager Vincent Gualtieri, retiree Bob Hanacek, Park Ranger Marissa Wright, and John Organek (USGS retired) a historical picture of the 1955 floods.



Members of Brookside Construction and family members attended the 50th anniversary festivities.



Park Rangers Roy Howe and Marissa Wright prepare to welcome guests to the Northfield Brook Lake 50th anniversary celebration.



Volunteers plant and cultivate new vegetation around West Hill Dam in Massachusetts.

Photo by Viola Bramel

New England District, volunteers celebrate National Public Lands Day

Several New England District recreation sites held celebrations of volunteerism with National Public Lands Day events in September.

The dams at West Hill, Buffumville Lake, Hodges Village and Black Rock all held celebrations. "National Public Lands Day is an event that is held annually in September," said Steven Stockton, P.E., Director of Civil Works for the U.S. Army Corps of Engineers. "Its purpose is to showcase the nation's public lands and emphasize the importance of protecting natural resources through responsible use and volunteerism."

The park rangers at West Hill Dam held their celebration on Sept. 19. The rangers welcomed 115 volunteers to work on projects to improve the areas around the dam.

Park Ranger Viola Bramel headed out with 30 Boy Scouts and leaders to the grassland area and cleared about four acres of small encroaching, non-native red pine, white pine, cottonwood and oak trees. "The Scouts are always thrilled to have their sharp badge requirement and really get to cut something," said Bramel. "The field succession was encroaching, threatening this vital habitats area."

A Cub Scout Pack divided in half with one working with Buffumville Park Ranger Jamie Kordack to clear a critical

pollinator habitat at the Military Monument Beach. While they were at the beach, they also sealed the safety fence and glider as well as laid wood chips beneath all the structures.

The other half of the Cub Scout Pack joined West Hill dam Project Manager Joe Zanca and Park Ranger Andrew Labonte to aerate the playground fall protection system and to dress the playground with manufacture-recommended annual top dress required levels of wood material.

A Northbridge, Massachusetts Senior Girl Scout Troop joined Ranger Mark Larson and cleared brush and waterbars the entire five miles of the Woodland Trail System and sealed all the trail benches with sealant. "Senior Girl Scout Troop 11127 have been together since they were Brownies," said Bramel. "They are all high school seniors now. They came to our NPLD as they have their entire Scout journey to help us out one last time, as it will be their last as an official Girl Scout troop."

A Cadet Girl Scout Troop from Mendon, Massachusetts, improved the pollinator garden at the long beach area, removed dead vegetation, planted new pollinator attractor/sustaining plant species, mulched the entire garden, sealed all the wooden logs and two bench gliders, as well as mulched and prepared eight flowering dogwood trees.

Like the Senior Girl Scout Troop, the Cadets are no strangers to West Hill Dam. “They’ve been volunteering at our NPLD events since they were juniors,” said Bramel. “They completed their Silver Award at West Hill.”

All 115 volunteers gathered at the West Hill Dam shelter after a hard morning’s work for a warm snack made by other volunteers.

Buffumville Lake and Hodges Village Dam held their celebration on Sept. 24. One hundred thirty seven people, to include Scouts and families, came out to volunteer their services.

At Hodges Village, volunteers performed trail clearing, trash pickup and blazing at the East Side Trail. The Observation Blind got some rehab work that included scrubbing and sanding railings, repairing a panel and painting. “Volunteers installed fly pads, added stone dust and sleeves and installed two baskets at the Hodges Village Dam Disc Golf Course,” said Buffumville Park Ranger Jamie Kordack.

Volunteers also performed bench work at the Hodges Village parking lot. They raked out the tilled patch, removed rocks, planted winter rye seed and removed exotic Bittersweet along the railroad bed at the wildlife food plot. Eagle Scout Tobias Nash and his crew completed his floating walkway project at Hodges Village.

At Buffumville’s South West Side Trail volunteers performed planking and other repair work from Putnam Road, Potter Village Road to the South End bridges. Other work in and around Buffumville Lake included causeway pull-off/fishing platform work, removing a tire out of the woods, rehabilitating a table and painting the pirate ship, privacy fence and railings.

Three Girl Scout volunteers from Thomaston Troop 64058, two Scout Leaders as well as Environmental Protection Specialist Marissa Wright, joined forces to enhance



Photo by Marissa Wright

Girl Scout Troop 64058 work on the butterfly garden at Black Rock Dam in Connecticut.

and winterize the native butterfly garden and walking path at the Black Rock Dam in Thomaston, Connecticut. “The Scouts worked diligently as they pulled weeds, deadheaded plants and mulched the garden for winter,” said Wright. “The girls had a blast and are now in their fifth year in a row of maintaining the native butterfly garden.”

Many Scout troops also camped at West Hill, Buffumville and Hodges Village during National Public Lands Day weekend.

Stockton announced in a memorandum that the U.S. Army Corps of Engineers would participate in a free-fee day held on Sept. 26 in partnership with its sister federal lands management agencies. In addition to waving the fee to all its recreational areas, the Corps of Engineers issued a free-fee coupon to all volunteers who participated in a Corps-sponsored NPLD event. The coupon could be used on any day of the volunteer’s choice and is valid for one year.



Eagle Scout Tobias Nash and his team construct a floating walkway at Hodges Village Dam in Massachusetts.

Photo by Jamie Kordack



Park Ranger Viola Bramel shares the excitement of a young visitor before the story walk.



Beautifully illustrated pages of the book lined the walk.

Photos provided by West Hill Dam

West Hill Dam hosts Butterfly Story Walk

Butterflies are fascinating to adults and children alike. Their fluttering wings bring giggles from children and smiles from adults. West Hill Dam, in conjunction with the Building Bridges Community Outreach for Early Education Program and the Uxbridge Police Department Interagency Office, held a Monarch Story Walk Sept. 13 at the dam.

About 10 families totaling 45 people attended the hour and a half event. West Hill Dam Park Ranger Viola Bramel and Emily Murray of Building Bridges took residents through the walk. Panels of the book, “A Place for Butterflies,” by Melissa Steward were posted for the families to read during the walk. “The panels were beautifully illustrated and were original prints from the book,” said Bramel. “Worcester Senior Center volunteers sealed the panels with a high gloss, moisture resistant varnish and mounted on storyboards that attached to the post they provided.”

Bramel said the story was very appropriate as Monarchs

are being considered for the endangered species list. “Silver Streaks are already on the list,” she said. “We have a few Silver Streaks at West Hill.”

In addition to reading the story panels, participants explored the dam’s milkweed plants for Monarchs or their larvae which are a very prevalent population in the West Hill Dam area. Bramel said that everyone had a wonderful time. “They were so excited and had walked three quarters of a mile without realizing it,” she said. “We saw so many other things including hawks. One little girl giggled the whole time, which made the walk all the more enjoyable.”

Some families had three generations – grandparents, parents and children – spend the day together at the dam, enjoying the story walk, the butterflies and the beautiful grounds at the project. “Families and even adults without children told us how much they loved the story panels,” said Bramel. “It was a grand family time.”



Parents read the story panel to their young child as they made their way through the story walk.

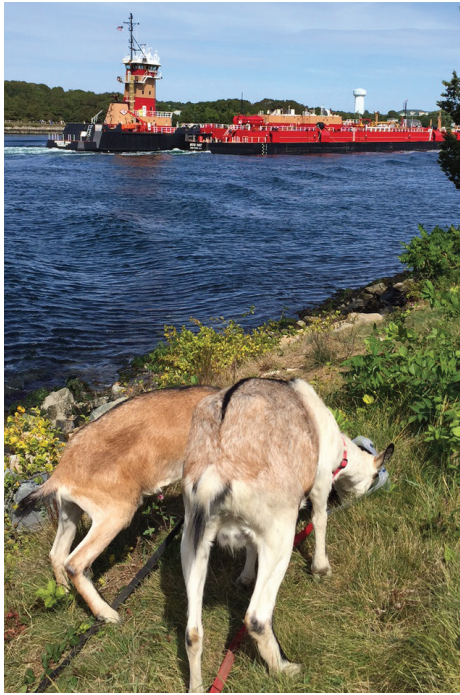


Photo by Michele Breen

Goats munch on vegetation along the banks of the Cape Cod Canal.

Cape Cod Canal personnel hire goats to 'dine' on invasive plants at the Railroad Bridge

When people visit the Cape Cod Canal they expect to see some pretty amazing things – the occasional whale or seal passing through the water, birds, squirrels and so on. Goats are typically not on that list; however, a small herd of goats were seen at the Canal in September snacking on the vegetation on the south side of the Railroad Bridge at the tidal flats recreation area.

The goats had not escaped from a local farm – they were invited guests hired by the Canal personnel to eat all the invasive plants that they could for about a week. The goats' handler set up a fence based on the Canal personnel's grazing requirements and delivered the goats. "The site was specifically chosen for several reasons," said Canal Park Ranger Michele Breen. Breen came up with the eco-friendly idea of having the goats over for a meal. "The control of overgrowth by the Railroad Bridge increases physical security."

According to Breen, much of the vegetation that the goats would eat was invasive and located very close to the water, so the use of herbicides was not an ideal option. The steep terrain where much of the vegetation was located could be hazardous for human workers and machinery. Goats are used to steep, hilly places and so it is an excellent environment for them.

"In addition, a large portion of the vegetation that had to be removed was Poison Ivy," said Breen. "Goats have a natural immunity to it and enjoy eating it."

Hosting a herd of goats for nearly a week had its chal-

lenges. Unlike lifeless equipment that can be turned on and off, goats have their own distinct personalities and like to do as they please. Like humans, they eat the food that they enjoy first and then, if they have room, they'll eat the rest. Goats are also not big fans of large bodies of water, so eating so close to the canal waters took a little time for them to get used to it. "It was a learning curve to manage the goats," said Breen. "I learned a lot!"

Because goats aren't normally seen at the Canal, they became very popular very quickly. Crowds of people came to see them munch. "Although the goats loved it, all the attention did cut into their work time," said Breen.

The arrangement was win-win; the goats got to munch on tasty invasives and no herbicides pollute the water and human workers stayed safe. The advantages of having the goats at the Canal far outweighed any minor adjustment period. "Goats can eat about one fourth of an acre in a week," said Breen. "The amount the goats cleared would have taken at last two government workers a day or two to do it by hand."

Controlling the fast growing, invasive plants that the goats ate – bittersweet, greenbrier, honeysuckle, and Poison Ivy – must be done several times a season, according to Breen. The way that the goats strip the plants actually slows down the regrowth and does not have to be attended to as often.

This was the first time the goats came to work for the Canal and by all accounts it was a success. There is a very good chance they will be invited back to dinner again next year.

Dredging up the past



Photo by Kevin Burke

Jonathan Dumais, Cape Cod Canal, catches a lobster to use for his presentation at the Cape Cod Canal Visitor's Center in this Aug. 22, 2005 picture.

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