V. MANAGEMENT AND PROTECTION OF OUTSTANDING RESOURCES:

Agriculture

Hanson Farm, Bridgewater *Rachel Calabro*

The fertile soils of the Taunton River's post-glacial landscape helped to make this watershed one of the earliest and largest settlement areas for the early Native People. The corridor's deep, mineral rich soils sustained large populations for thousands of years, and they remain fertile and productive today. Since colonial settlement, agriculture has been part of what defines the character of communities in the corridor. Settlers learned from the Native People the time-honored technique of using river herring as fertilizer and the important triad of corn, beans and squash. Today there is still a significant amount of acreage in agricultural use within the Taunton River corridor. These properties provide not only a source of food, nursery, and other agricultural products to the region, but also help to maintain the scenic character of the river corridor, both from the roadways and the river. In addition, several of these agricultural parcels include significant stretches of riverfront, including wetlands, floodplain forest, riffle areas in the river and important agricultural soils.

Agricultural Lands

Several of the larger agricultural parcels in the Taunton River Corridor, such as the Haseotes land in Bridgewater and Halifax, the Massachusetts Correctional Institution in Bridgewater and the Bertarelli Farm in Middleborough encompass close to three linear miles of river frontage on the Taunton River. Properties such as these help to maintain the intact quality of the river corridor that makes it unique and ecologically outstanding. These large areas of open field also provide important wildlife habitat for local, rare and migratory species.

While approximately 2537 acres of the Taunton River Corridor study area are currently reported as agricultural land, there has been a loss of over 1,200 acres (28%) of the agricultural land in the corridor since 1971. Land currently in agricultural production within the study area includes cropland, (predominantly vegetables, some fruits and berries and dairy) pastureland, cranberry bog, tree farm, orchard, and open land.

Economic Value

Objectives

1. **Protect Agricultural Landscapes and Working Farms** for future generations
2. **Promote and Support Local Farms and their Markets** to retain agriculture in the corridor.
3. **Promote Ecologically Sensitive Agricultural Practices** to manage runoff and conserve habitats.

The economic value of agriculture in Massachusetts cannot be overlooked or underestimated. Massachusetts ranks fourth in the U.S. for farmland value at $6,450 per acre. The state also ranks fourth for net farm income per acre at $327 per acre and has no fewer than 17 farm crops ranked in the top 20 nationally, many of which are found on farms within the corridor, including: cranberries (2), wild blueberries (3), pumpkins (12), strawberries (18), Christmas trees (16), sweet corn (18), and nursery stock/greenhouse product (19).

Supporting Agriculture in the Watershed

Massachusetts is also a leader in secondary school level agricultural education. Three of the nation's four agricultural high schools are located in Massachusetts. The Bristol County Agricultural High School is located within the Wild & Scenic River Corridor, along the banks of the Taunton River in Dighton. Southeastern Massachusetts is also the only

Farmers Market, Weir Village, Taunton *Marijoan Bull*

region in the state to have local Agricultural Commissions. These local commissions, one of which is located in the Town of Middleborough, are a model for other areas of the state and help to open up communication with town boards and land protection organizations for farmland protection.

Action Strategies

Protect Agricultural Landscapes and Working Farms

- Provide viable alternatives to farmers to keep their land in agricultural use.
- Protect the state-owned Old State Farm agricultural and forested lands on Summer Street and the North Hay Field area on Flagg Street in Bridgewater and preserve the land for continued agricultural use and passive recreation.
- Use the Community Preservation Act, Agricultural Preservation Restrictions and other state and federal programs to protect agricultural land as open space.
- Support Executive Order 193, which requires a no net loss of agriculture on public lands.

Promote and Support Local Farms and their markets

- Support the creation of local Agricultural Commissions.
- Train local boards, inspectors and zoning enforcement officers on agricultural exemptions and normal agricultural practices in order to better meet the needs of farmers.
- Stimulate interest among colleges in agricultural research, alternative farming practices and markets.
- Provide the community and local students with education on farming and agricultural practices so that they understand the importance and significance of these activities.

Threats to Agricultural Resources

- Development is the biggest threat to agricultural land and farming.
- Much of the prime agricultural land with deep topsoil has already been converted into residential developments.
- Farming remains a low profile activity in local communities and farms and farm businesses do not have a voice in town politics.
- There is a need to find a new generation of farmers to continue agricultural use of land.
- Farmers need better access to information about grant programs, assistance and business development.

- Provide farmers with access to information about the workings of local government and the advantages of having farmers serve on local boards.
- Create increased market demand and accessibility to locally grown products through the development and promotion of farmers markets and roadside stands (Middleborough Open Space Plan, 1998)
- Establish community supported agriculture (CSAs) and community farms within the watershed, working with local schools and colleges.
- Increase the use of signage to attract tourists to local agricultural products and activities.

Cows, Middleborough *Rachel Calabro*

- Work with supermarket chains to add more locally grown produce and value-added farm products to their shelves.
- Encourage partnerships with Bristol County Agricultural High School, the Future Farmers of America and 4H clubs to promote farming in the watershed.
- Develop a funding structure that will allow the Bristol County Agricultural High School to open its museum on a regular basis to the community and school children.

Promote Ecologically Sensitive Agricultural Practices

- Encourage agricultural best management practices at farms for waste management and runoff.
- Provide training and funding for Integrated Pest Management (IPM) and encourage its use.
- Encourage farms to participate in local, federal, and state farm planning and conservation programs.
- Promote education in organic farming at schools such as the Bristol County Agricultural High School.

State Programs: Massachusetts Department of Agricultural Resources

Agricultural Preservation Restriction (APR) Program: This is a voluntary program intended to offer a non-development alternative to farmers with important agricultural lands. The program offers to pay farmers the difference between the fair market value and the agricultural value of their farmland in exchange for a permanent deed restriction that precludes any use that will impact agricultural viability.

Southeastern Massachusetts Agricultural Partnership

The SEMAP helps agricultural enterprises by identifying grower needs, facilitating access to business management tools and support services and encouraging supporting entrepreneurship. It also provides technical assistance and support services to agricultural businesses for marketing and outreach, financial management and professional development. SEMAP has produced a buy local campaign and a Harvest Handbook with more than 200 retail farms listed, and has, in the past, organized a "Tours des Farms" bicycle tour of regional farms which included cooking demonstrations using local farm products.

Chapter 61A: This program allows agricultural land to be taxed at actual use value rather than its development potential. Landowners participate in this program for a fixed period of time, after which the land is taxed at the full value. If the property is sold while it is in Chapter 61A, the landowner must pay the full amount of taxes that would have been paid up to that time. The town also has the first right of refusal to acquire the property at market value.

Farm Viability Enhancement Program: This state technical assistance program that works with farmers to provide a business plan for their operation. Farmers that sign a short-term non-development covenant can receive from $20,000 for a 5-year covenant up to $60,000 for large farms with a 10-year covenant.

Agricultural Business Training Program: This program provides an opportunity for farmers to master basic business principles, with additional technical service.

Local Programs: Town Agricultural Commissions

Town Agricultural Commissions help town officials develop a working relationship with farmers and identify farmer's needs, issues and concerns. They are also designed to help farmers by informing them of state and federal programs, business planning support programs and opening communication with town boards and environmental organizations. Town Agricultural Commissions establish town funds for farmland protection, participate in town right of first refusal decisions when Chapter 61 properties become available, and develop relationships with land protection organizations to leverage funds for farmland protection. The Town of Middleborough has established an Agricultural Commission (the only other Agricultural Commissions in the Commonwealth are in Westport, Dartmouth, Plympton and Rehoboth).

Pumpkins, Bridgewater *Rachel Calabro*

Federal Programs: United States Department of Agriculture

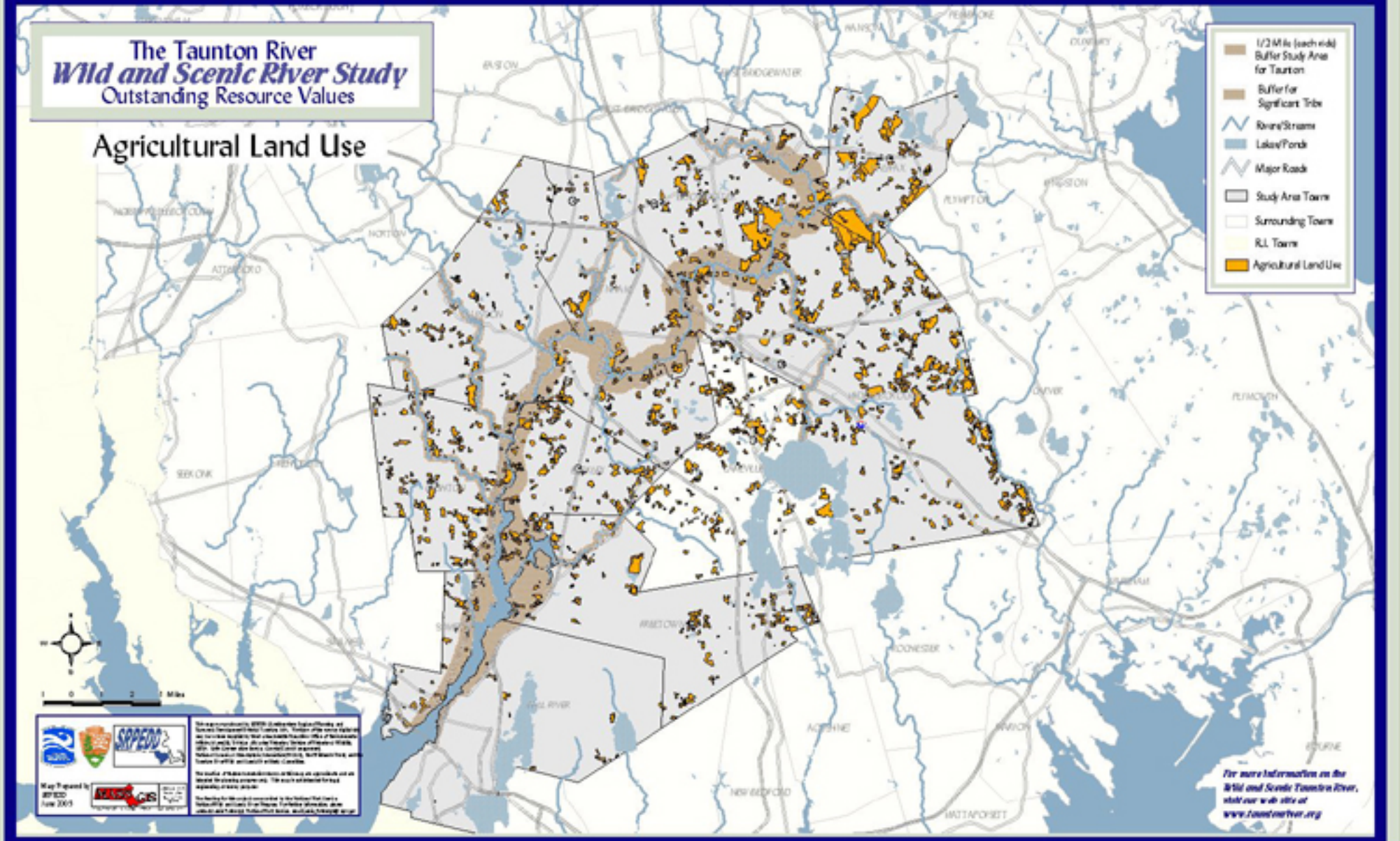
Environmental Quality Incentive Program (EQUIP): This program provides technical and financial assistance to landowners and operators of crop or livestock farms for planning and designing Best Management Practices that protect the soil, air and water, increase soil productivity, enable care for farm animals, and manage waste produced on the farm.

Wildlife Habitat Incentive Program (WHIP): Technical and financial assistance is provided through this program for landowners who want to voluntarily improve wildlife habitat or restore ecosystems on their property.

Wetland Reserve Program (WRP): This program provides assistance for the purchase of temporary or permanent easements on farmed wetlands for water supply protection and wildlife habitat and helps to restore farmed wetlands for wildlife habitat.

The Taunton River
Wild and Scenic River Study
Outstanding Resource Values

Agricultural Land Use



Ecology and Biological Diversity

The Taunton River is one of the most intact ecosystems in New England and many of its habitats and species are ranked as global conservation targets. This unfragmented habitat from headwaters to the bay is regionally significant and hosts species found nowhere else in Massachusetts.

Boyden Wildlife Refuge, Three Mile River, Taunton *Rachel Calabro*

Rare Habitats and Plants

The ecosystems of the Taunton River are rich and varied. The corridor supports 31 distinct wildlife habitats, and is inhabited by 3 globally rare plants. Rare natural communities include red maple and Atlantic white cedar swamps which often contain vernal pools, critical habitat for rare reptiles and amphibians. Hessel's hairstreak, a globally rare butterfly, lives only in white cedar swamps. This watershed is also home to the Water willow stem-borer moth, a species endemic to Southeastern Massachusetts' wetlands. This is the state's only species that is found nowhere else on earth.

Globally rare plants in the watershed include Long's bulrush, Long's bitter-cress and Eaton's beggar-ticks. State listed rare species include pale green orchis, variable sedge and Plymouth gentian. Large regionally significant examples of freshwater and brackish tidal marshes are located in the oxbow area in Raynham and at the confluence of the Three Mile and Taunton Rivers. These areas are a high priority for protection.

Winnetuxet River, Halifax *Rachel Calabro*

Reptiles and Amphibians

The corridor is home to seven rare reptiles and amphibians. Twenty eight species of reptiles and amphibians can be found along the river corridor, including several state listed rare species. The upper river supports one of the largest concentrations of spotted turtles in the state. Other rare species include the four-toed salamander, wood turtle, Blandings turtle, Eastern box turtle and Eastern diamondback terrapin. Vernal pools, specialized habitats for wood frogs, spotted salamanders and fairy shrimp are relatively common along the floodplains of the Taunton River and its tributaries.

Objectives:

1. **Increase Public Awareness** of the biological diversity and intact ecology of the Taunton River ecosystem**.**
2. **Protect Water Quality and Natural Flow** regimes critical to long-term viability of aquatic biodiversity.
3. **Prevent Fragmentation** of riparian corridors, floodplains, and contiguous upland habitat blocks.
4. **Prevent Invasive Species** from displacing native communities of plants and animals.

Birds

The corridor is home to 12 rare bird species. The marsh segments of the Taunton River support high concentrations of marsh nesting birds, including kingfishers, osprey and several species of herons. Endangered birds have been recorded including the American bittern, king rail and pied billed grebe. Agricultural areas along the river provide important grassland bird habitat that is declining across the state. Species that depend on this habitat include the endangered upland sandpiper and the endangered northern harrier. Two rare owls, barn owl (Special Concern) and long-eared owl (Special Concern), have been reported breeding in woods and open fields in Middleborough. In total, 154 species of birds were documented during the 1997 breeding season. Unbroken forest patches, also an important habitat along the Taunton River supports many common forest birds as well as sharp-shinned and Coopers hawk, both species of Special Concern.

Mammals

River otter, mink, gray fox and deer all are active along the river corridor. River otters are relatively large and secretive animals; their presence is an indicator of the extent and quality of riparian habitats. In addition, harbor seals are often seen in the Taunton River and its tributary streams, following herring and other prey species upriver.

Seal on the Nemasket River
Photo by Anne Dutra

Resident Aquatic Species and Freshwater Mussels

The river supports seven species of freshwater mussels, including three species listed as state species of Special Concern (Eastern pondmussel, tidewater mucket, and triangle floater). Rare mussels have been documented in Bridgewater and from 495 through Raynham. Mussels are also found on the tributaries, particularly in the Three Mile River. Rare dragonflies present in the Taunton River watershed include comet darner and Kennedy's emerald.

Action Strategy

Increase Public Awareness

- Work with Conservation Commissions, Planning and Zoning Boards, developers, watershed associations and Stream Teams to promote understanding of the importance of riparian buffers and ecological diversity.
- Educate landowners and the public about their roles in protecting the river; water conservation, pollution prevention, and habitat protection.
- Promote Biodiversity Days and other citizen-led ecology initiatives.

Threats to Ecological Resources

- Poorly planned development and transportation infrastructure within the Wild & Scenic corridor and the watershed as a whole is the greatest threat to the river ecosystem.
- Loss and fragmentation of forest habitats, as well as incremental degradation of riverfront areas threaten long-term ecosystem health.
- Increasing human demands for water will worsen flow alteration in tributary streams and ultimately impact the Taunton River itself, diminishing habitat quality for fish and other aquatic life.
- Point and nonpoint source pollution (runoff) degrade water quality in the tributaries and mainstem.
- Increasing areas of impervious surfaces such as roads and rooftops degrades stream habitat by increasing "flashy" flood events and sources of pollution and raising water temperatures.
- Invasive plant species threaten to reduce diversity in tidal marshes and other wetlands along the river.
- Industrial discharges and sediment toxicity from historic sources limit recovery of fisheries and shellfish habitats in the estuary.
- While not a direct threat, the public's limited awareness of the river's ecological value hinders the development of a comprehensive and coordinated protection and management effort.

Protect Water Quality and Natural Flow

- Create a comprehensive water management plan for the Taunton River watershed.
- Create a water budget for the Taunton River watershed that takes in to account human and ecosystem needs.
- Create an implementation plan for water use and distribution in the watershed.
- Use water conservation strategies as the first line of defense in protecting flow
    - Promote yard care practices that increase use of native plantings, decrease use of chemical pesticides and fertilizers, and reduce demand for summer lawn watering.
    - Protect existing wells through zoning, land purchase and other techniques to reduce or avoid new withdrawals from rivers and streams.

Protect Riparian Corridors, Rare and Endangered species and Prevent Habitat Fragmentation

- Create a comprehensive growth management plan for the Taunton River watershed.
    - Develop a coordinated regional conservation strategy to identify and protect priority parcels
- Enforce the Wetlands Protection Act and the River Protection Act, to protect the riparian corridor
- Encourage passage of the Community Preservation Act to raise funds for protection of key ecological priorities.
- Encourage passage of local growth management bylaws such as transfers of development rights, cluster zoning, and other innovative approaches
- Encourage the designation of targeted growth areas and protection areas within the watershed
    - Integrate Living Waters, Biomap, and other biodiversity information into municipal Master Plans and Open Space Plans.

Prevent Invasive Species

- Increase and/or maintain tidal flushing to salt marsh habitats in the Assonet River and other tributaries and coves in the Taunton River estuary.
- Prevent runoff from altering salinity in sensitive salt marsh habitats.
- Prevent erosion and other disturbance of banks.

Purple Loosestrife *Photo by www.Invasivespecies.gov*

Local Programs: Land Acquisition Funds

The Town of Somerset established a land acquisition fund by town vote after the sale of a town property to a grocery store chain. It has enabled the town to act quickly when opportunities to preserve land become available. Dighton has also established a fund for land purchases.

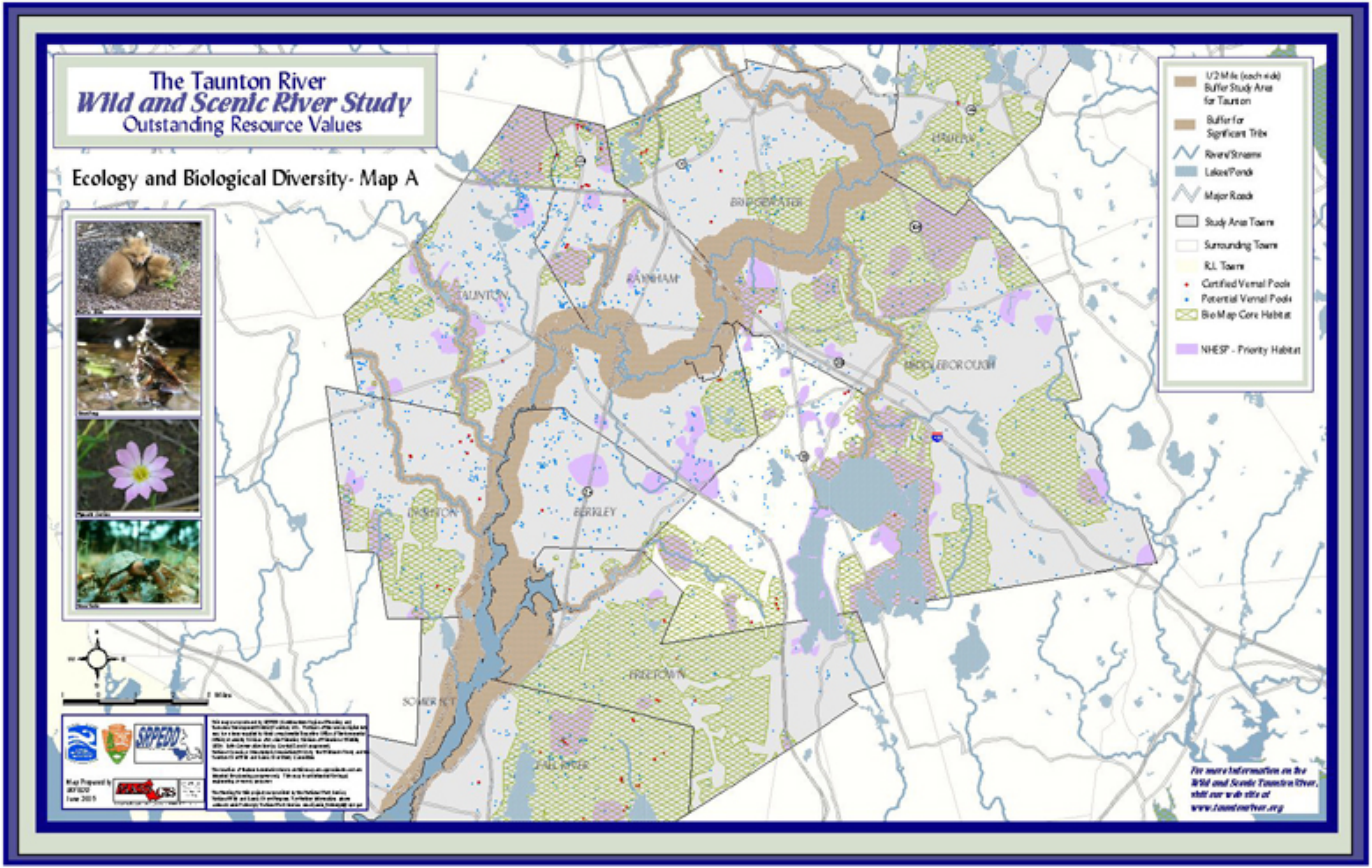
State Programs: Areas of Critical Environmental Concern

Areas of Critical Environmental Concern (ACECs) are designated by the Massachusetts Department of Conservation and Recreation (DCR) for their unique and significant resources. All federal, state and local agencies as well as private parties must submit development plans to the DCR to ensure that activities that would impact the ACEC are carried out in a way that would protect natural resources. A section of the Three Mile River is being proposed as an ACEC because of its habitat values as well as historical resources. The Three Mile River has one of the state's largest Silver Maple floodplain forests and the only sizeable example in the area. The river and its corridor provide habitat for a variety of wildlife and several rare and endangered species. It is also an important warm water fishery and is rich in culture and history. There are sites of early industrial and Native People located within the proposed ACEC, and three of them are included on the National Register of Historic Places. Portions of the Hockomock Swamp ACEC are also located within the study corridor.

National Programs: The Nature Conservancy

The Taunton River watershed lies within the North Atlantic Coast (NAC) ecoregion, which encompasses the coastal areas of nine states from Delaware to Maine. The Taunton River and six tributaries were chosen by the Conservancy during the NAC aquatic ecoregional planning process in 2002 for their remarkable condition and concentration of ecoregional target species and communities. Ecoregional plans identify *portfolio sites* that need to be protected to conserve the native biodiversity of the region. The objective of the freshwater analysis was to identify the most intact and functional stream networks to represent the full variety of freshwater diversity present.

The Taunton River is a unique geomorphic type, based on modeling of geology, gradient, elevation, and landforms. The longest undammed coastal river in New England, the Taunton River supports large, high quality examples of globally rare brackish and freshwater tidal marshes. Hockomock Swamp is the largest freshwater wetland complex in southern New England, providing high quality habitat for numerous rare birds, reptiles, amphibians, invertebrates, and wetland plants. In total, the watershed is home to forty-two ecoregional target species (species that are declining, disjunct, or otherwise vulnerable at the ecoregional scale). This area is important not only for its rarities, but also for the quality and quantity of habitat it provides to more common species such as river otter and alewife.

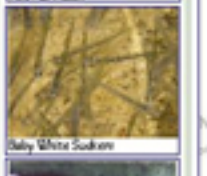

The Taunton River
Wild and Scenic River Study
Outstanding Resource Values
Ecology and Biological Diversity- Map A
1/2 Mile (each side) Buffer Study Area for Taunton
Buffer for Significant Tribs
Rivers/Streams
Lakes/Ponds
Major Roads
Study Area Towns
Surrounding Towns
R.I. Towns
Certified Vernal Pools
Potential Vernal Pools
Bio Map Core Habitat
NHESP - Priority Habitat
TAUNTON
RAYNHAM
BRIDGEWATER
MIDDLEBOROUGH
BERKLEY
DIGHTON
FREETOWN
SOMERSET
FALL RIVER
SRPEDD
Map Prepared by SRPEDD
June 2005
For more information on the Wild and Scenic Taunton River, visit our web site at www.tauntonriver.org

The Taunton River
Wild and Scenic River Study
Outstanding Resource Values

Ecology and Biological Diversity - Map B


Fresh water mussell


Bird of Hawk


Baby White Sucker


Harbor Seal

1/2 Mile (each side) Buffer Study Area for Taunton
Buffer for Significant Tribs
Rivers/Streams
Lakes/Ponds
Major Roads
Study Area Towns
Surrounding Towns
R.I. Towns
NHESP
Living Waters Habitats critical supporting watershed
Living Waters core habitat

BRIDGEWATER
PLYMPTON
NORTON
ATTLEBORO
MIDDLEBOROUGH
CARVER
DIGHTON
FREETOWN
ROCHESTER
FALL RIVER
ACUSHNET

For more information on the Wild and Scenic Taunton River, visit our web site at www.tauntonriver.org

Estuary

Taunton River Estuary, Somerset *Greg Guimond*

The Taunton River estuary is regionally important for its recreational, scenic and ecological values. It is a remarkably healthy and intact coastal ecosystem, with tidal influence extending through Dighton and into Taunton, 18 miles from Mount Hope Bay. The extensive estuary resources of the Taunton River system make it significant as nursery habitat for juvenile fish and shellfish, and as habitat for anadromous fish (fish that spend their adult life in the ocean and migrate into rivers to spawn). The Taunton River is part of the larger Narragansett Bay watershed and it contributes a significant portion of the Bay's fresh water. Narragansett Bay is a nationally significant resource, designated under EPA's National Estuary Program as well as the National Estuarine Research Reserve Program.

Objectives

1. **Promote a Bi-State Narragansett Bay Vision** that works to preserve the Taunton River as the most ecologically intact subwatershed of Narragansett Bay.
2. **Protect Intact Estuary Habitats** of the Taunton River and Mt. Hope Bay, including freshwater and brackish tidal marshes, salt marshes and riparian habitats.
3. **Restore Degraded Habitats and Species Communities** including eelgrass beds, saltmarshes, shellfish beds, nursery and spawning areas.
4. **Promote Recreational Access and Waterfront Revitalization** in concert with community goals and habitat sustainability.

Marsh Habitats

The Taunton River is unique in Massachusetts because it is free of dams along its entire mainstem. The natural flow regime of this river allows tidal influence to extend well beyond the reach of salt water, creating globally rare freshwater tidal marshes. The size and quality of the salt marsh system in the Taunton River Estuary is also regionally important.

The Assonet River in Freetown and Berkley has one of the largest contiguous areas of salt marsh in the entire Narragansett Bay estuary. Tidal restrictions, fresh water runoff and sedimentation have changed the composition of some of the Taunton's salt marshes, favoring invasive plants. *Phragmites* has increasingly spread through marshes where tidal flushing is limited and where fresh water runoff has decreased salinity.

Fishery Habitats

The Taunton River estuary also contains critical fisheries habitats, especially shellfish habitat and nursery habitat for winter flounder and tautog. The estuary is designated Essential Fish Habitat by the National Marine Fisheries Service for 14 species of fish and shellfish. Winter flounder larvae are threatened by entrainment in the intake systems of industrial facilities and by activities such as dredging that disturb sediment on the bottom of the river. Eel grass habitats, also important for juvenile fish, have been lost in the estuary largely due to excess nutrient pollution.

Paynes Cove, Assonet Bay Shores, Freetown
Rachel Calabro

Anadromous fish also use the Taunton River estuary and freshwater resources for spawning and juvenile development. The rare Atlantic sturgeon has been documented in the lower river, but it is unclear whether reproduction is taking place. Rainbow smelt, listed by NOAA as a "species of concern" in 2004, spawn in both the Assonet and Segreganset Rivers. Multiple tributaries support millions of river herring that make their way through the estuary each spring to spawn in freshwater.

The Taunton River once hosted an American shad fishery as well, but numbers have remained low despite restoration efforts. Habitat for shad is present in the upper tributaries of the Taunton River, especially in the Matfield River, where a shad weir was located until the early part of the 20th century. The lower Taunton River supported a commercial shad fishery for over 200 years, until the fish

became commercially extinct by 1913. Flow stress and water quality impacts such as low dissolved oxygen, thermal pollution and nutrients are most likely limiting the restoration of the shad fishery. Restoration success for anadromous fish has also been limited by dams and other obstructions that restrict fish from their native tributary habitats.

Shellfish

The excellent habitat and abundant shellfish resources of the lower Taunton River once supported a thriving industry. The river was the mainstay of the Commonwealth's oyster fishery from the mid 1800s until its closure in 1907. Before its closure, 38,000 bushels of oysters per year were harvested along with countless bushels of quahogs and soft shelled clams.

Too contaminated for human consumption today, these shellfish beds still support abundant oysters and quahogs that are a seed source for other areas of the Bay. In 1985, the Division of Marine Fisheries permitted the relay of nearly 12,000 bushels of oysters to other towns for depuration. Based on recent observations by the Division, the oyster population is estimated to be more than 20,000 bushels.

Scallops were also harvested in the past, but they have since disappeared from the river, likely due to a combination of pollution and loss of eelgrass beds.

The Division of Marine Fisheries has designated this area as "Significant Shellfish Habitat", which is protected under the state Wetlands Protection Act.

Threats to Estuary Resources

- Industrial uses in the estuary, especially power plants, are causing failure of groundfish stocks through heated discharges and entrainment (trapping) of larval fish and other organisms.
- Further development of energy facilities, shipping and other port development without consideration for the resources of the Taunton River estuary will continue to cause environmental and safety hazards.
- High nutrient (nitrogen and phosphorus) and bacteria levels in the estuary lead to water quality and habitat degradation, diminishing the fishery and biodiversity resources.
- Freshwater allocation and management upstream may prevent adequate inputs into the estuary.
- Runoff from polluted sites is causing water quality and habitat degradation in the estuary.
- Tidal restrictions and freshwater runoff degrade saltmarsh habitat and encourage invasive species.

Blue crabs are also abundant in the estuary, as are fiddler crabs and other crustaceans. Other shellfish resources include horseshoe crabs, channeled whelk and mussels. Horseshoe crabs, whose eggs provide a critical food source for migrating shore birds, are believed to be declining region wide. Save the Bay has begun an effort to count and monitor these ancient creatures to document the condition of the local population.

Action Strategies

Promote a Bi-State Narragansett Bay Vision

- Continue to work closely with Rhode Island to provide funding and resources recognizing the importance of the Taunton River to the health of Narragansett Bay.
- Incorporate the Narragansett Bay Estuary Program into restoration and education strategies.

Bi-State Projects: Narragansett Bay Watershed Action Grants

An interstate Narragansett Bay Watershed Action Grant Program was established in 2002. In the first round, $122,600 was awarded and an additional $77,000 in local matching funds was leveraged. A total of four projects were funded including GIS mapping for communities in the Taunton River Basin and synthesis and dissemination of sediment data from across the Bay and up into the estuary.

Protect Intact Estuary Habitats

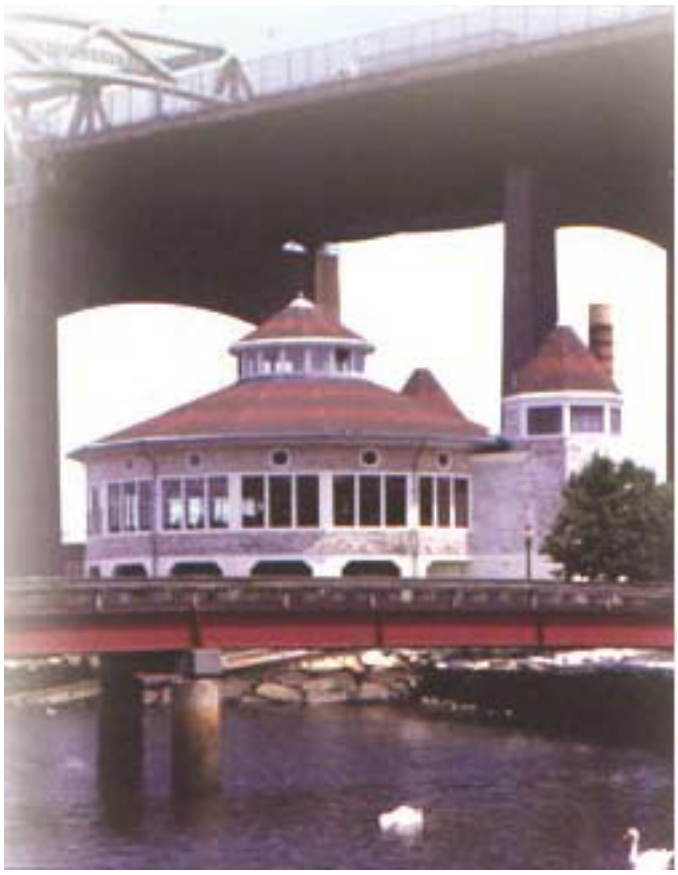
- Preserve and restore salt marsh systems in the estuary through maintenance of shoreline buffers and by limiting runoff.
- Educate homeowners about shoreline buffer restoration and proper buffer maintenance.
- Educate the public about the importance of horseshoe crabs so that they are not destroyed or prevented from laying eggs.
- Educate the public about important estuary species such as anadromous fish, shellfish and harbor seals so that they will work for their preservation.

Restore Degraded Habitats and Ecological Communities

- Support strengthening the NPDES permit for Brayton Point power plant to prevent thermal pollution and entrainment of larval fish.
- Monitor nutrient levels in the estuary and support remediation of point source and non-point source pollution.
- Address priority stormwater improvements on a municipal level and educate residents about pollution prevention.
- Address septic system pollution issues in the Assonet River estuary.
- Pursue recommendations listed in the Division of Marine Fisheries anadromous fisheries report for restoration of anadromous fish runs (see fisheries section).
- Restore tidal flushing to degraded salt marshes through elimination of tidal restrictions (see sidebar).

Promote Recreational Access and Waterfront Revitalization

- Encourage and support public participation on all plans to place added industrial infrastructure along the shores of the lower Taunton River.
- Support recreation by emphasizing community boating, canoeing and fishing on the lower river.
- Protect and restore the commercial and recreational fishery by restoring water quality, limiting thermal pollution and protecting adequate fresh water contributions to the estuary.



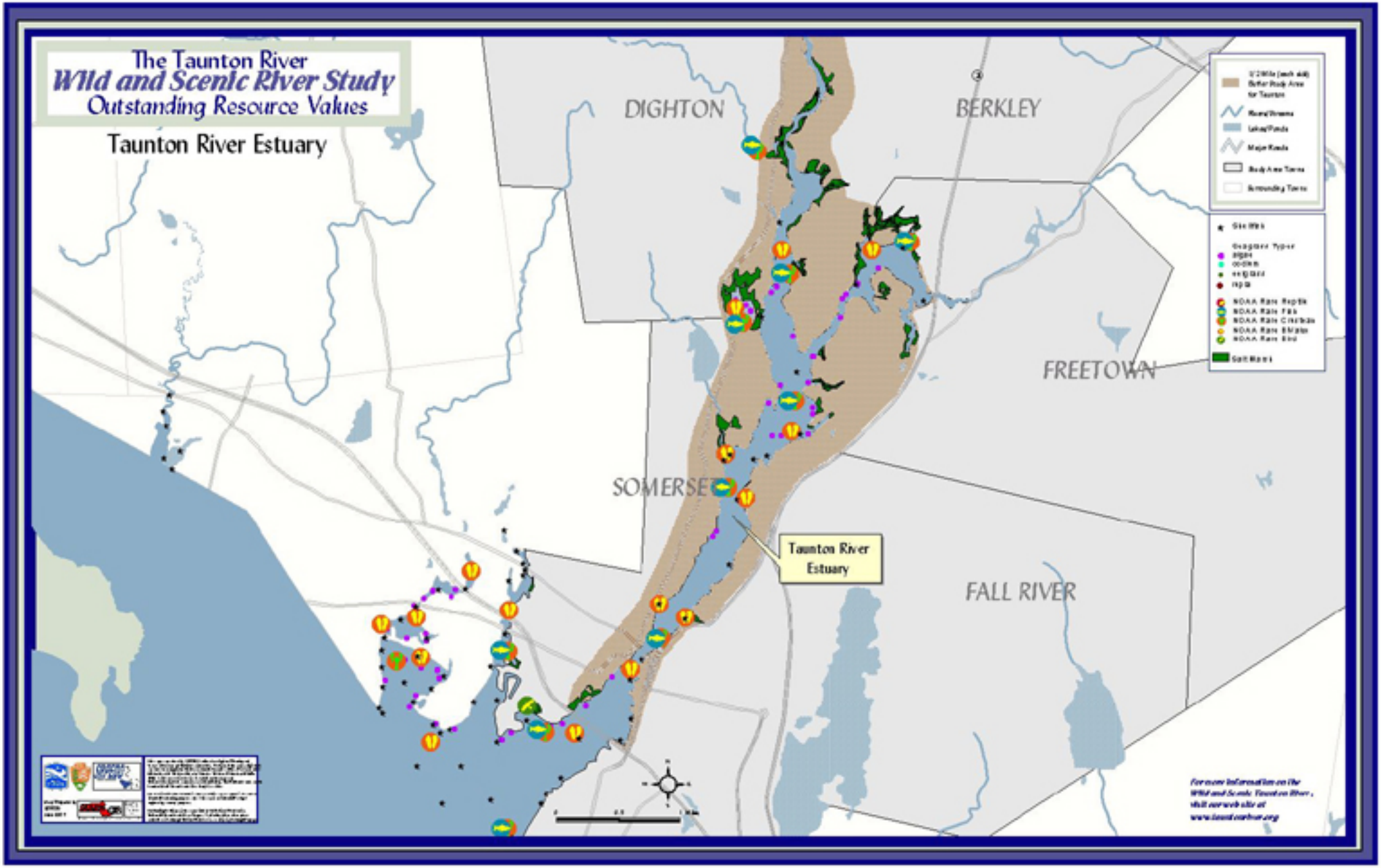
Carousel at Fall River Heritage State Park, Fall River
Greg Guimond

- Oppose new industrial activities that would damage natural resources of national significance or interfere with recreational uses of the river.
- Create waterfront plans that would stimulate recreation, tourism and local economic activity.

Local Projects: Labor in Vain Brook Salt Marsh Restoration

The Town of Somerset in partnership with the Massachusetts Riverways Program and the Office of Coastal Zone Management Wetlands Restoration Program is working on a project to eliminate tidal restrictions along Labor in Vain Brook in Somerset. This project will help to restore the tidal creek and salt marsh habitat. Stormwater inputs to the marsh and to the upper watershed will also be assessed during the project. This project was identified as a priority by the Southeastern Regional Planning and Economical Development District through roadway and stormwater assessments and by the town in their recently completed Open Space and Recreation Plan. Labor in Vain Brook is also listed in the Mount Hope Bay Tidal Restriction Atlas.

Culvert over Labor in Vain Brook, Somerset Brian Graber


The Taunton River
Wild and Scenic River Study
Outstanding Resource Values
Taunton River Estuary
DIGHTON
BERKLEY
FREETOWN
SOMERSET
FALL RIVER
Taunton River Estuary

Fisheries

The Taunton River is the longest undammed coastal river in New England and provides excellent habitat for all life stages of fish. The estuary is particularly valued for its nursery habitat for fish such as winter flounder and tautog, as well as for its large anadromous fish runs, particularly river herring.

Alewife Swimming Upstream *Tim Watts*

Currently, dams limit or eliminate access to spawning habitats on some tributaries, but there is huge potential for restoration of species such as herring, shad and rainbow smelt through selective dam removal. Coldwater fishery habitats are also present on some Taunton River tributaries, providing rare habitat niches in this low gradient watershed. Other important fisheries habitats include riffles, oxbows, fresh and salt water marshes and native aquatic vegetation beds. The Taunton River supports about 45 species of fish and many species of shellfish.

Anadromous Fisheries

Within the Taunton River corridor and its significant tributaries, 17 streams contain anadromous and catadromous fish including alewife, blueback herring, American eel, American shad, hickory shad, gizzard shad, rainbow smelt, white perch, striped bass and the endangered Atlantic sturgeon. The Taunton River is the second largest watershed in Massachusetts and is home to the region's largest herring run. Fish from the herring run on the Nemasket River are used for restoration projects in other parts of the state and have been shipped as far away as Michigan. The herring fishery is managed locally by herring commissions in Middleborough and Bridgewater/West Bridgewater. These commissions manage fish ladders that provide passage around the dams on the Nemasket and Town Rivers and manage permits for taking fish.

Many species of migratory fish have shown evidence of decline regionwide, and in some cases rangewide, in recent years. American eels, catadromous fish that spawn in the Sargasso Sea and migrate into rivers to feed and grow for 20 years or more, show evidence of severe declines. Exclusion from large areas of

freshwater habitats by dams, and excessive mortality caused by passage through turbines at hydroelectric dams, over-fishing, and parasitic infections are believed to be responsible for this trend. Tim Watts of Middleborough and his brother Doug Watts researched the eel's plight and submitted a petition in November 2004 to add American eels to the Federal Endangered Species list. The petition is currently under review.

Atlantic sturgeon received a Federal status review in 1998; that review concluded that listing under the Endangered Species Act was not warranted at the time, but the species was retained on the candidate list and is listed by NMFS as a species of concern. Rainbow smelt was listed as a species of concern in 2004 in response to data indicating that numbers are down significantly, at least in southern New England. The quantity of accessible freshwater habitat and the absence of deadly hydroelectric dams from the entire watershed make the Taunton River critical habitat for these threatened migratory fish.

Objectives

1. **Ensure Natural Flow Regimes** to support the full life cycle of both resident and anadromous fish.
2. **Ensure Healthy Water Quality** and protect temperature and dissolved oxygen regimes, and remediate pollution sources such as excess nutrients, pathogens, turbidity, and contaminated sediments
3. **Restore Anadromous Fish Populations** in tributary systems currently blocked to fish migration by dams and/or poor water quality
4. **Protect Rare Coldwater Habitats** on tributary streams.
5. **Protect and Restore Rare Species Populations** such as rainbow smelt, Atlantic sturgeon and Eastern pond mussel.

Warmwater Fisheries

In addition to anadromous fish, the watershed hosts many species of riverine fish (those that require flowing conditions all or part of their lives), habitat generalists, (those fish that can live in either rivers or ponds) and "estuarine wanderers" that move back and forth between the estuary and freshwater habitats. Striped bass, bluefish, weakfish, white perch, Atlantic menhaden, tautog, winter flounder, American eel, northern kingfish, northern scup, and Atlantic tomcod are the species often caught in the estuary. Threatened with extinction 25 years ago, striped bass are now abundant and popular with anglers. The most popular spots for striper fishing are under the Brightman Street

Bridge, at the former site of the Slades Ferry Bridge and at various wharves along the river.

Coldwater Fisheries

The Taunton River watershed is also home to several coldwater fishery streams, inhabited by native brook trout and other coldwater species. Trout are also among a large number of species that have historically been stocked into Taunton River tributaries and ponds in the watershed.

Coldwater Tributary to the Taunton River, Berkley *Rachel Calabro*

Foraging and Nursery Habitat

The Taunton River is extremely important in providing foraging, nursery and migratory habitat for many species of fish, which are a vital link in the food web. The huge river herring run on the Nemasket River represents a particular bounty for other animals. Striped bass travel far upriver after the herring, which are also eaten by birds such as ospreys, bald eagles, cormorants and great blue herons that rely on the spring fish runs to feed their chicks. Harbor seals, mink and river otters also feast during the spring and fall migrations.

Threats to Fisheries Resources

- Low flow in tributaries is resulting in low dissolved oxygen, dry reaches and temperature stress for many fish species.
- Loss of buffers on the river and its tributaries endanger habitat for fish and shellfish.
- Increasing development of the watershed is resulting in a decrease in water quality in the tributaries and mainstem and siltation of spawning habitat.
- Dams on several tributaries prevent fish from reaching spawning areas.
- Industrial activity and contaminated sediments have polluted shellfish beds in the lower estuary.
- Heated discharges and entrainment from power plants have reduced populations of winter flounder and other groundfish.

In addition to spawning habitat for anadromous species, extensive wetlands and oxbows provide nursery and foraging habitat for resident species. The estuary is highly valued for its nursery habitat for winter flounder and for shellfish.

Shellfish

Shellfish resources in the river include quahogs, soft-shelled clams, channeled whelk, oysters and mussels. Blue crabs and horseshoe crabs are also common in the estuary. The river supports seven types of freshwater mussels (the second largest number and concentration in the state) and oysters renowned for their size and quality. Although the beds are currently closed to harvest, the oyster population is estimated at over 20,000 bushels.

Action Strategies:

Ensure Natural Flow Regimes

- Water conservation, reduced impervious surfaces, reduced inflow and infiltration into wastewater systems and local groundwater recharge are the major tools to use to preserve water supply and avoid new water withdrawals.
- Promote water conservation and stormwater recharge including minimizing lawn watering and planting native species.
- Conduct field studies to determine flow rates in tributary systems (currently being conducted with Stream Teams and the River Instream Flow Stewards).
- Create a comprehensive water management plan for the Taunton River watershed (see ecology section).

Ensure Healthy Water Quality

- Whenever possible use techniques to reduce impervious surfaces and stormwater discharges by promoting low impact development techniques (see water quality section).
- Protect and restore streamside buffers and bordering wetlands to combat non point source pollution including nutrients, sediment and heated runoff.
- Support limits on discharges of nutrients (phosphorus and nitrogen) to the river from sewage treatment plants and other permitted discharges.
- Enact and enforce bylaws to keep stormwater onsite so that post construction runoff does not exceed pre-construction runoff.
- Control excess sedimentation by enforcing best management practices at construction sites and controlling runoff of road sand.

Restore Anadromous Fish Populations

- Protect habitats including instream flow for all the life stages of fish – spawning, juvenile stages, migration, feeding, etc.
- Evaluate a sustainable water level and flow for the Nemasket River with emphasis on the anadromous fish run and work toward restoring summer flow. (Middleborough Open Space Plan, 1998)
- Restore connections to spawning areas by removing barriers to fish passage such as unwanted dams or improperly sized culverts or by installing fish ladders on tributary streams (work with Massachusetts Riverways Program to inventory and evaluate culverts and other barriers to fish passage).

Alewives Entering the Nemasket River Fish Ladder
Tim Watts

- Pursue recommendations listed in the Division of Marine Fisheries anadromous fisheries report, including the following:
    - Investigate the feasibility of removing the remaining portion of the Plymouth Street Dam in Bridgewater to facilitate fish passage into the Town and Matfield Rivers and to remove hazards to recreational paddling.

- Investigate feasibility of the removal of the remains of the Cotton Carver Gin Mill Dam below Route 106 on the Satucket River and restore a natural stream channel.
- Reassess the dams on the Assonet River to restore natural stream habitat and to facilitate spawning of anadromous fish including rainbow smelt.
- Finalize installation of the fish ladders on the Three Mile River.

Fishladder at Oliver Mills Park, Middleborough *Rachel Calabro*

Protect Coldwater Habitats

- Create an inventory of coldwater streams in the watershed.
- Protect flow to small spring fed headwater streams.
- Protect forested buffers to provide shading and temperature control to small tributary streams.
- Protect priority parcels in coldwater watersheds to support overall watershed functions.
- Selectively remove unnecessary dams where impoundments are warming temperatures in potential cold-water habitats to maintain connectivity with habitat for different life stages.

Protect and Restore Rare Species Populations

- Integrate maps of core habitats and supporting landscape areas from the Natural Heritage and Endangered Species Program's ***Living Waters*** and ***Biomap*** into municipal Master Plans and Open Space and Recreation plans.
- Continue to document and study the habitat needs of rare and endangered species.

Local Programs:
Middleborough-Lakeville Herring Fishery Commission

Today, the Nemasket River is one of the most productive warm water fisheries in southeastern Massachusetts and part of what fisheries experts consider the region's most significant alewife run. Since official counts began in 1996, an average of over one million fish per year have made the run. This is a remarkable number, particularly in light of the fact that the run was commercially exploited almost to depletion in the late 1950's. Local naturalists and environmental groups have worked with the Middleborough-Lakeville Herring Fishery Commission and the Division of Marine Fisheries to monitor the spawning run, manage fish ladders (which assist the movement of the fish), and monitor stream levels and flows (this is particularly important in periods of drought as the fry can become trapped in Assawompset Pond due low water levels in the shoreline and stream areas).

The Taunton River
Wild and Scenic River Study
Outstanding Resource Values

Fisheries Resources Map A:
Anadromous Fisheries


Alewives


Blue Back Herring


American Eel

For more information on the Wild and Scenic Taunton River, visit our web site at www.tauntonriver.org

The Taunton River *Wild and Scenic River Study* *Outstanding Resource Values*

Fisheries Resources Map B
Rare and Endangered Species


Crayfish


Atlantic Sturgeon


Blue Heron

Rare Fish -
- Bridal Shiner
- Sturgeon
- Rare & Sensitive Crustacean
- Rare & Sensitive Reptile
- Rare Freshwater Mussels
- Shad Fisheries
- Cold Water Fisheries
- NHESP - Living Waters * critical supporting watersheds
- NHESP - Living Waters * core habitat
- River/Streams
- Lake/Ponds
- 1/2 Mile (each side) Buffer Study Area for Taunton
- Major Roads
- Study Area Towns
- Surrounding Towns

1/2 Mile Buffer Study Area

TAUNTON
RAYNHAM
MIDDLEBOROUGH
DIGHTON
FREETOWN
SOMERSET
FALL RIVER

0 0.5 1 Miles

For more information on the Wild and Scenic Taunton River, visit our web site at www.tauntonriver.org

History and Archaeology

Historic Shipbuilding Site at Titicut, Bridgewater
Marijoan Bull

The Taunton River supports rich and diverse historical and archaeological resources spanning more than 10,000 years. Of particular significance are the following types of resources:

Use and Culture by Native People

Bifurcante Spear Points from the Early Archaic Period (9000 to 8000 B.P.) found in the Titicut Area of Middleborough *Bill Taylor*

Archaeologists have long known of the heavy use made of the "Great River" called Tetequet by Native People. The Taunton River and its environs provided a wide range of rich natural resources to support a sizeable prehistoric population. Some of the most important sites are in the Bridgewater and Middleborough area of the Taunton River, where a number of large, multi- component sites containing a high volume of artifacts and a diversity of features have been found. These sites include the Titicut, Fort Hill, Taylor Farm, and Seaver Farm sites. The Assawompset Pond cluster of archeological sites located at Wapanucket in Middleborough is the location of one of the most significant Paleo Indian (12,000-8000 B.P.) sites known in southern New England. This site has an archaic village component including post mold patterns of dwelling houses and ceremonial lodges.

Objectives

1. **Increase Public Awareness** of the historical and archaeological resources of the Taunton River and its tributaries.
2. **Inventory and Document** historical and archaeological resources of the Taunton River and its tributaries.
3. **Seek Protection** for threatened sites and areas of highest archeological sensitivity.
4. **Support Local Planning** efforts to manage development in a way that is compatible with resource identification, preservation and public education objectives.

Along the lower reaches of the Taunton River in later prehistoric times, the Pocassets were the dominant Wampanoag tribe. Their territory included Freetown, Fall River, Somerset, Swansea and Tiverton Rhode Island. Campsites of Native People have been discovered near the Brightman Street Bridge, along the Quequechan River, on the shore of South Watuppa Pond, and at Assonet Neck. The principal village site was in Somerset, at the village of Shawomet. The camps would have been used for fishing, hunting and shellfish gathering.

Historical evidence of the culture of Native People and use of the river includes records and examples of stone and wooden fish weirs. Historical records indicate that the first settlers were taught about the use of these fishing places by Native People, and both herring and shad were harvested in great quantity from the beginning of colonial settlement. One large fish weir was set up at the site of present day Weir Village in Taunton, and annual harvests were carried out on the Mill River as well. There are historical records of a shad weir on the Matfield River, along with weirs on the Nemasket River. Fish were dried and preserved for the coming year, and were used as fertilizer during spring planting.

Colonial & Early Industrial Development of Tributaries

Tributaries of the Taunton River were ideally suited to colonial and early industrial development, as the streams and rivers provided power sources for mills, forges and other industrial pursuits and the Taunton River itself provided excellent opportunity to transport goods to market. The Mill River in Taunton, The Quequechan River in Fall River and the Forge River

State Programs: Community Preservation Act

The Community Preservation Act allows towns and cities to place a surcharge of up to 3% on the property tax levy for the purposes of historic preservation, affordable housing and open space protection. The state provides a matching fund for money raised through local taxes. While establishment of this fund will cost the average homeowner less than $50/year, it will bring in significant amounts of state funding to help preserve important town resources including historical and archaeological sites.

in Raynham are only a few examples of this early mill development which pervaded nearly all major Taunton tributaries. Generally, each community set up a grist mill to grind grain and corn, a saw mill to cut lumber, a fulling mill to process cloth, and a blacksmith or iron forge that provided the parts for tools, plows and other household implements. In the 1650's, bog iron was discovered in the local riverbeds. Throughout the 17th, 18th and 19th centuries, iron related industries grew prosperous in the Taunton area including: shovels, nails, tacks, rivets, eyelets, stoves, tools, locomotives, anchors and textile machinery. Other metal related industries began to appear as more metal smiths arrived with 19th century immigration. Copper, brass and bronze works prospered in Taunton. Jewelry began to be manufactured locally; the first silversmith appeared in the 1760's, and Taunton was known for a time as "Silver City".

Local Example: Taunton Weir Village Redevelopment

The Weir Economic Industrial Revitalization (WEIR) Corporation, a local Community Development Corporation (CDC) which started out as a community group, has partnered with the City of Taunton to revitalize the Weir Village area of Taunton. The project will redevelop historic mill buildings on the banks of the Taunton for mixed-use housing and commerce. The project will increase access to the Taunton River and provide open space for the community. The Weir Village is 72% low and moderate income and 15% minority. The building rehabilitation is being handled by a limited partnership formed by the WEIR Corporation, which has secured low-income and historic building tax credits; as well as brownfield cleanup money. Money is also being contributed by the City of Taunton from a pilot grant awarded by the U.S. EPA.

The Fall River Textile Industry

The Quequechan River provided power for mills and with a stream bed of granite, consistent flow and several natural falls, mills lined the banks and were often built right over the stream with the water wheels set in the stream bed. The water rights for the river were owned by descendents of the Borden family, who had gained ownership of the entire stream by 1714. This combination, along with Fall River's location on the Taunton River and its moderate climate, made the river perfect for textile manufacturing.

The first textile mills in the city were created with local capital from families in surrounding towns which had made their fortune in the shipping business and in trade with the West Indies and Southern colonies. Fall River had an advantage in its location because it was below Cape Cod and therefore was

convenient to cloth markets in New York. Also, coal could be delivered by water directly to the mills. Fall River's mild temperatures and high humidity also contributed to the fine quality of cloth produced in the mills. In 1860, Fall River surpassed Lowell as the largest textile producing center in the United States.

Historical Development Patterns: The Village Structure

The towns and cities in the low-lying Taunton River corridor formed small village clusters centered on upland areas surrounded by wetlands. These villages were connected by a network of roads and became centers of farming, commercial and residential activity. Each village had its own name and many are preserved today. Protecting this historic village structure is an important element to future land use planning. Village greens, historic buildings and crossroads often identify these village centers.

Threats to Historical Resources

- There is a lack of knowledge and recognition of historical sites along the river and the tributaries.
- Many archaeological resources are not well identified and could be compromised by large projects, soil removal, disturbance, as well as by small projects and disturbances such as sign posts, benches and trampling.
- Local village centers may lose their specific character without specific zoning changes that allow for mixed uses.
- Loss of such structures as the Berkley-Dighton Bridge will mean loss of historical identity.

Shipbuilding & Commerce

Historic Post Card of Pottersville Wharf on the Taunton River in Somerset

Between 1700 and 1900, more money was invested in shipping than in any other industry on the Taunton. The first four-masted schooner ever built was registered in Taunton; the first five-masted schooner was designed by a Tauntonian in 1898. The first six-masted schooner, built in 1900, was of Taunton registry.

In 1902, the first and only seven-masted schooner to exist was built, with a captain from Taunton. Between 1870 and 1900, over 100 vessels were registered in Taunton. Many of them were large and could not navigate all the way up the river to the piers at Weir Village. They anchored at Somerset or Dighton, and their cargos were loaded onto barges that were towed upriver. Somerset was also a center for shipbuilding. After the Revolutionary War, 97 vessels were registered in Somerset and 48 of them were built there. Shipbuilding reached its peak in the 1850s when 171 ships named Somerset as a home port. So much trade occurred on the river that Dighton had its own Customs House.

Traveling on the Taunton River

In early days of settlement, colonists also used the river for transportation and crossed the river using local ferry services. Henry Brightman and William Slade both ferried passengers between Fall River and Somerset near the current site of the Brightman Street Bridge. In 1828, the first steamboat was used on the river to travel between Newport, Rhode Island and Fall River. The Fall River Line began in 1846 with two steamboats that ran from Fall River to New York City.

Historic Photo of Slades Ferry Bridge with Trolly

The Taunton as a Victorian Resort Destination

The Taunton River was home to major resorts in Dighton and Assonet at the turn of the 19th century. These resorts featured amusement rides, picnic areas, dance pavilions and clambakes. In the later part of that century, the Taunton River hosted canoe houses and yacht clubs in Dighton, Fall River and Taunton.

Action Strategies

Increase Public Awareness of Historical and Archaeological Resources

- Promote local river history and events that celebrate town character.
- Build a local river history curriculum in the schools at all grade levels.
- Develop a "local history week" or other regional celebration of local history that includes the Taunton River.
- Continue using the historic markers of the Taunton Heritage River Program to interpret historical sites along the river.
- Participate in powow's and support programs that celebrate the culture of Native People.

Inventory and Document Historical and Archaeological Resources

- Identify areas of significant and moderate sensitivity for archaeological artifacts.
- Identify historic resources along the river through local survey efforts and participation in the Heritage Landscape Program (ongoing)

Seek Protection of Areas with High Significance

- Work with land trusts and Historic Commissions to preserve key lands and landscapes.
- Encourage passage of the Community Preservation Act to raise funds for protection of key parcels and historic areas.
- Work with the National Park Service to ensure that historic and scenic bridge features are replicated during repair or redesign and ensure that unnecessary bridge construction is avoided (including the Berkley-Dighton Bridge which was built in 1986 and is the oldest of two remaining swing bridges in the state.)
- Use a demolition delay by-law to allow extra time to determine alternatives for preservation of historic properties, and educate the public about its use and application (this is in use in Middleborough and Somerset).
- Work regionally to protect historic resources through preservation and tourism strategies.

Support Local Planning Efforts

- Ensure that zoning bylaws protect areas of significant and moderate archaeological sensitivity and require no-build areas and due diligence.
- Develop a model by-law for earth removal that includes a depth trigger for archaeology.
- Involve earth removal boards and historical commissions in development decisions.

Local Example: Middleborough Historic Preservation Planning Efforts

Priority sites for protection were identified in the 1989 Middleborough Historic Preservation Plan. In addition, the Historic Commission has prepared an inventory of the town's historic resources, including about 400 properties and numerous archaeological sites. The Commission has also prepared a predictive map showing the sensitivity for archaeological and historical artifacts within town.

Middleborough Town Hall, Middleborough
Greg Guimond

- Create Residential/Business zoning for village centers to match current conditions using mixed commercial/residential uses including second floor residential units and multi-family dwellings (Middleborough Master Plan, 2001.
- Develop local historic districts to add protection to village centers and landscapes (The City of Taunton has 2 historic districts)

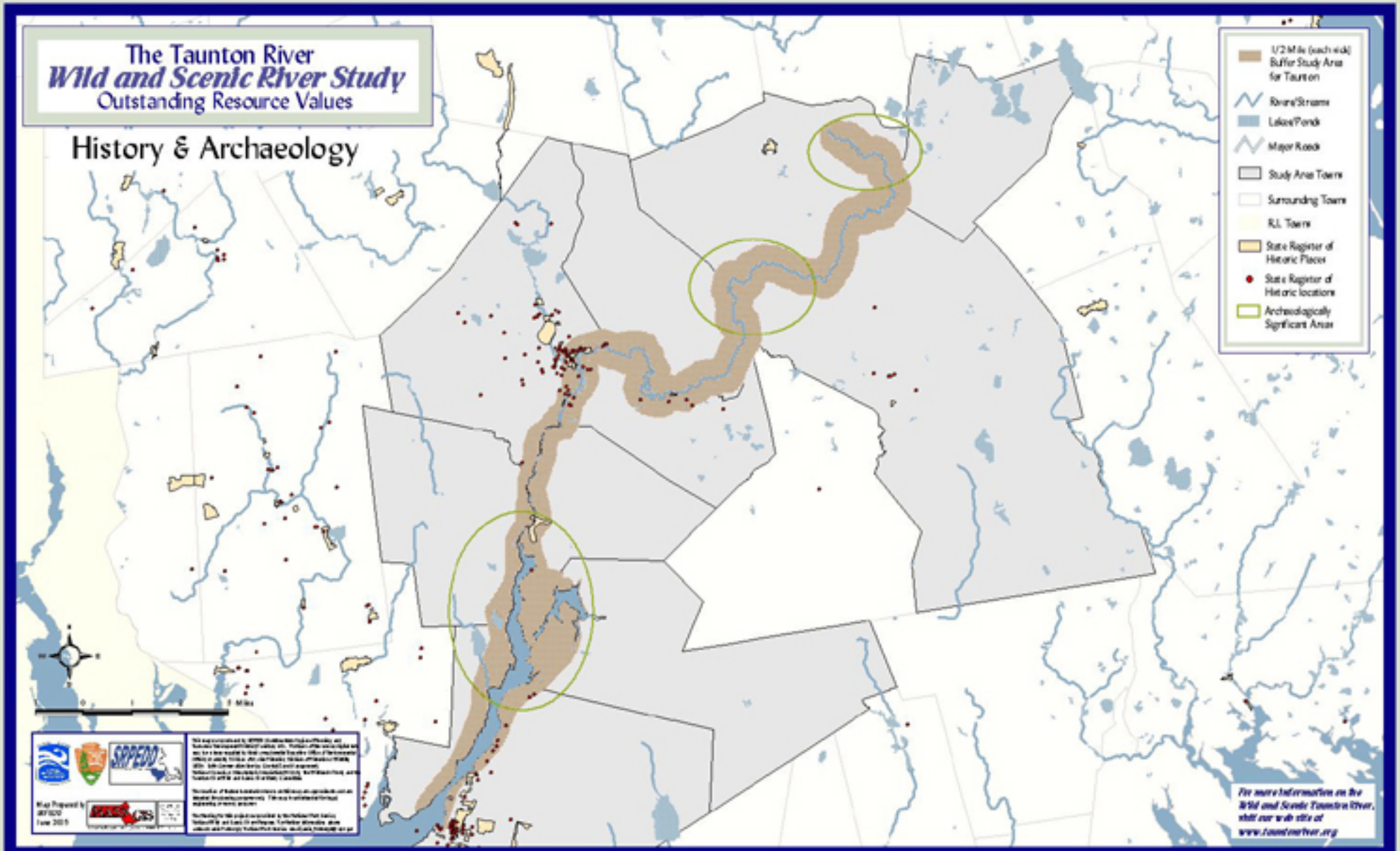
State Programs: Self Help

Self Help funding is available through the State's Division of Conservation Services for municipalities that have an approved and up to date Open Space and Recreation Plan. The Self-Help program was established in 1961 to assist municipal conservation commissions acquiring land for natural resource and passive outdoor recreation purposes. Access by the public for passive recreational purposes is required. This program will pay for the purchase of property or for a conservation restriction. Towns apply for funding through a yearly grant round. This program has been used successfully by towns in the corridor including most recently the Town of Bridgewater which used Self Help funds to protect several historical sites including the Titicut Conservation Area on the Taunton River as well as sites on the Town River. The Natural Resources Trust of Bridgewater used a grant from the Taunton Heritage River program to commission management plans for these properties.

http://www.state.ma.us/envir/dcs/selfhelp/default.htm

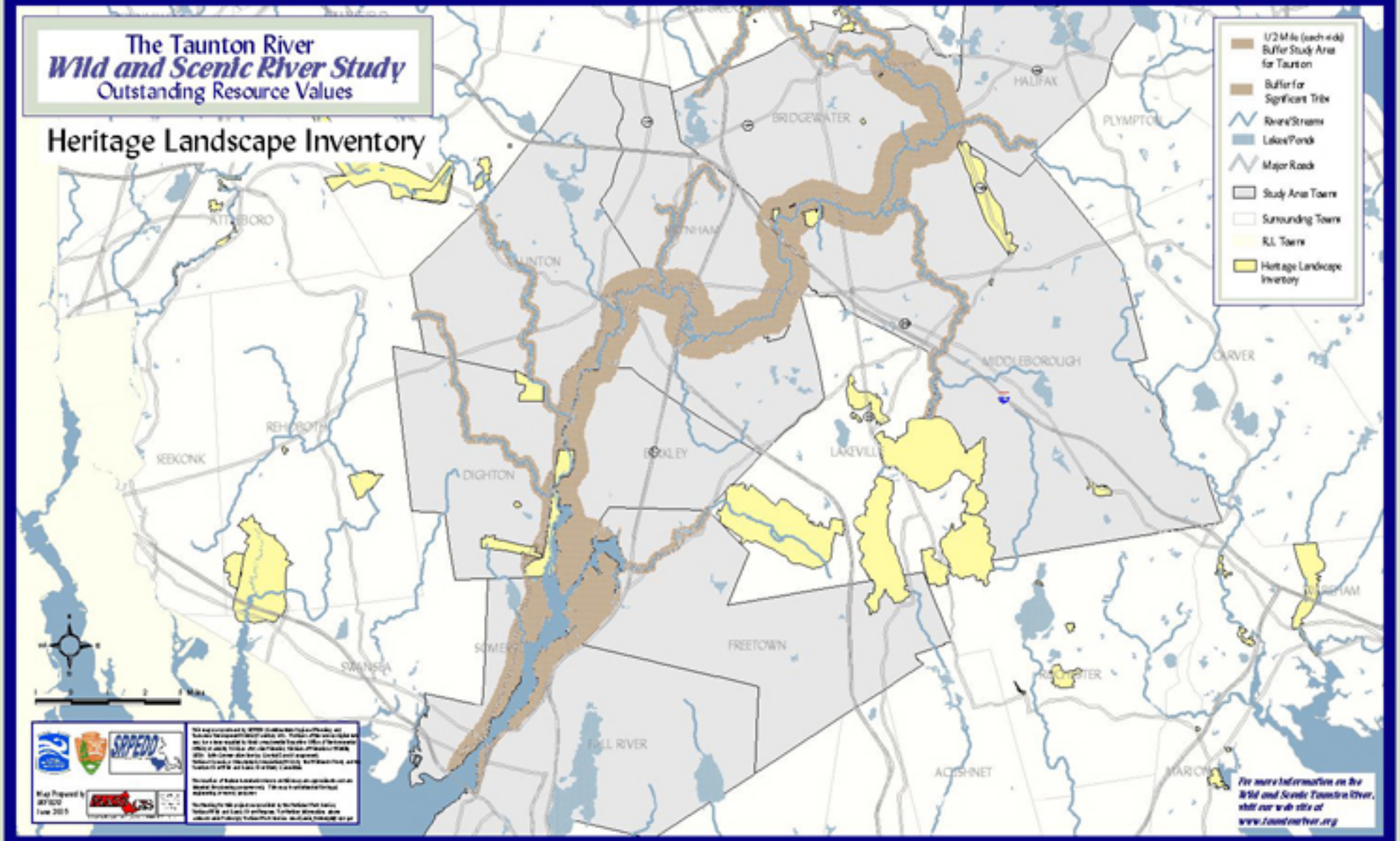
The Taunton River
Wild and Scenic River Study
Outstanding Resource Values

History & Archaeology



The Taunton River
Wild and Scenic River Study
Outstanding Resource Values

Heritage Landscape Inventory



Recreation and Scenery

The Taunton River and its tributaries offer outstanding recreational opportunities, both on the water and along the shoreline where trails and parks allow for enjoyment of the scenic and natural beauty of the river. Access to and awareness of these resources and opportunities is still relatively limited, and is a major focus of the Taunton River Stewardship Plan.

Paddling on the Taunton River, Dighton
Rachel Calabro

Citizens throughout the watershed take pride in this resource. It is where they go for an afternoon of hiking, bird watching or canoeing, to show off their towns to visiting guests, for family picnics and outings, and simply to "get away from it all." The following are major recreational themes/opportunities characteristic of the Taunton and its major tributaries:

Sailing on the Taunton River, Somerset
Greg Guimond

Boating and Swimming

Above the city of Taunton, the river meanders through a narrow corridor and offers excellent opportunities for paddlers. Paddlers are able to put in and take out boats at several points along the river, although some of these sites present difficult access (narrow paths, steep slopes and parking issues). The most commonly used access points are located next to bridges. Day-trippers

have opportunities to rent canoes and kayaks in several locations. Larger boats are seen on the wider tidal sections of the river including sailboats and all sizes of motor boats. Private yacht clubs are located in several communities, and a public community sailing center is located at Heritage State Park in Fall River where students can learn to sail and race small boats. Beaches such as Pierce's Beach in Somerset offer swimming opportunities, and many people swim along the shores of the lower Taunton River and in the Assonet River estuary. Boat ramps are located in Dighton at Pleasant Street and in Somerset at Village Waterfront Park. This park also offers handicapped accessibility.

Fishing & Shellfishing

Objectives

1. **Preserve the Scenic Beauty** of the Taunton River and its tributaries
2. **Ensure Stream Flow and Water Quality** sufficient to support fishing, swimming, boating and related recreational opportunities (see Stream Flow and Water Quality Chapter for details and action strategies)
3. **Protect Connected Open Spaces** in the Taunton River corridor as an opportunity for diverse recreational activities
4. **Provide Quality Access** to the Taunton River and related tributary and corridor resources
5. **Increase Public Awareness** and appreciation of the Taunton and tributaries through access, field based education, and interpretation programs.

On the lower river, sportfishing is a popular activity. Boats can be launched at several boat ramps and fishing is also popular from many of the wharves along the river as well as under the Brightman Street Bridge. On the lower river, the primary sportfish are striped bass and bluefish, while in the middle and upper river largemouth bass is popular. Winter flounder was once one of the most popular species for anglers, but taking this fish from the river is now prohibited, due to its extremely low population level.

Experiencing Natural Heritage and Biological Diversity

As paddlers travel down the Taunton River, they are likely to see large areas of intact flood plain forest, an unusual habitat type in Massachusetts. Otters, great blue herons, osprey, bald eagles, songbirds and an occasional great horned owl can be spotted along the river, signs that the water quality is improving and the vegetative habitat is healthy and intact. Harbor seals spend much of the winter on the river, and are spotted along many local beaches and rocky shores.

Historic Berkley-Dighton Bridge, Berkely/Dighton
Joan Kimball

Scenic Beauty

The riverbanks of the upper Taunton River have remained naturally vegetated with a wide buffer in many places. Through a coordinated effort by the Commonwealth, local towns, private landowners and local and regional land trusts, the riverfront and a dense buffer of vegetation (up to 2,000 ft. deep in areas) have been preserved. Paddlers enjoy seeing several working farms along the river that have been protected forever through the Commonwealth's Agricultural Preservation Restriction program. The wide tidal estuary provides beautiful scenic vistas over saltmarsh and open water and can be seen from

Threats to Recreational Resources

- Water quality and stream flow are threatened by increasing development in the watershed, water withdrawals, and a variety of pollution sources.
- Polluted sediments and depletion of fisheries have led to closing of fishing opportunities (winter flounder) and shellfish beds.
- Lack of quality access sites to the river and tributaries reduces the availability of river resources for public enjoyment.
- Lack of public awareness of the special values, sites and opportunities associated with the river threatens those resources as development and planning moves forward.
- Lack of funding for open space and special site protection may result in the loss of key scenic vistas, cultural resource sites, and dispersed recreational opportunities in the corridor.

trails, parks, local roads and scenic bridges such as the beautiful Berkley-Dighton Bridge, the oldest swing bridge in the state.

Cultural & Recreational Sites

Signs and kiosks along the river and tributaries invite travelers to stop at key points to enjoy the river's beauty and learn about the region's rich history. Several of these signs were designed for the Taunton Heritage River Program, which works to provide interpretation of the many historic, cultural and ecological features in the watershed. Several recreational sites have been preserved along the tributaries, the mainstem river and the in the estuary. These town and state owned conservation and recreation areas provide riverfront trails, camping, recreational opportunities and scenic views. Some of the areas include Tuckerwood Conservation Area, Wyman Meadow Conservation Area and Camp Titicut in Bridgewater, Taunton River Wildlife Management Area and Fort Hill in Middleborough, the Taunton Conservation Commission's Boyden Wildlife Refuge, Dighton Rock State Park in Berkley, Village Waterfront Park and Pierce's Beach in Somerset, and Heritage State Park in Fall River which hosts the Battleship Massachusetts and is a major tourist draw.

Action Strategies

Preserve Scenic Beauty

- Maintain the natural beauty of river views through enforcement of the Wetlands Protection Act's riverfront protection standards and educational efforts.
- Strengthen Open Space Residential bylaws to support protection of open field and vistas through preservation of trees, stone walls and fields. (Currently Bridgewater, Dighton, Fall River, Middleborough, Raynham, Somerset and Taunton have open space or cluster provisions, but these could be strengthened).
- On the lower river, work with commercial and industrial users to develop public access and scenic vista areas on their properties (for example J&J Marina was required to offer a scenic viewing area through Chapter 91).
- Use the Heritage Landscape Inventory to identify and protect critical viewsheds, both from the river and adjacent roads.

- Designate Scenic Roads and Byways along the river (Summer Street where it crosses the Taunton River at Wooded Bridge along the Bridgewater/Middleborough line is a designated Scenic Road).

Protect Connected Open Spaces

- Encourage appropriate public access to existing and future protected open space as a means of continuing and improving public recreational opportunities.
- Acquire easements, conservation restrictions, or transfers of land that will provide opportunities for the public to walk the shoreline, and that will preserve the intact ecological qualities of the corridor.

Provide Quality Access

- Develop/improve canoe and car top launches where appropriate and provide safe launching areas with parking and controls against erosion and runoff to the river (see Appendix C for an inventory and evaluation of potential access sites on the mainstem Taunton completed for the Wild and Scenic Study by the Public Access Board).

State Programs: Taunton Heritage River Program

The Taunton River was designated as the first Massachusetts Heritage River for its prominent role in the history, culture, recreation and economy of its corridor communities. A recreational map of the Taunton River corridor was created by the Taunton Heritage River Program to highlight parks, boat launch areas, museums and other recreational opportunities. A grants program funded informational kiosks throughout the watershed, as well as a park plan for the town of Bridgewater's public parks.

- Include the lower river in the Public Access Board inventory and assessment of potential access sites.
- Utilize the local, state and federal coalition of the Taunton River Stewardship Council to ensure that access and scenic issues are incorporated into bridge and roadway projects in the corridor.
- Develop suitable areas for fishing and boating access that are wheel chair accessible (such as Waterfront Park in Somerset). Not all sites will be suitable for this sort of access.

- Provide multi-use trails for hiking, horseback riding and skiing, including use of the abandoned Conrail Line (see the Broad Cove example below).
- Encourage municipalities to undertake a high profile land protection or recreation projects such as a town park, bike path or trail to generate excitement about river protection and recreation (for example, the Taunton Heritage River Program funded a Parks Plan for the Town of Bridgewater).

Increase Public Awareness

- Partner with local groups such as Green Futures in Fall River and Save the Bay in Rhode Island to offer tour boat rides of the Taunton River that include information on history, archeology and ecology.
- Work with Fall River Heritage State Park to offer interpretive programs about the Taunton River.

Taunton River Heritage Kiosks at Weir Village, Taunton *Tim Lockett*

- Promote public displays of local river history within permanent spaces such as museums and historical society libraries.
- Develop a funding structure that will allow the Natural History Center at Bristol County Agricultural High School to again offer interpretive programs to the public and to increase use of the museum as an interpretive center.

State Programs: Dighton Rock State Park

Dighton Rock is a large boulder that has mysterious markings engraved on its surface. The rock was raised out of the river and now has a building over it, housing Dighton Rock Museum. The engravings are most likely from several time periods and have not been deciphered, remaining a mystery. This park offers picnic areas along the river as well as hiking trails. There is also a boat launch at this park, which is being added to the Massachusetts Public Access Board program. Access to the rock and to the park are limited, and more can be done to publicize this recreational opportunity.

- Work with Bristol County Agricultural School to develop programs that integrate tourism and hospitality with agriculture, river recreation and other rural activities through continued use of their Natural History Center.
- Work with the Department of Conservation and Recreation and the Friends of Dighton Rock to provide better access to Dighton Rock State Park and museum (see inset above).

Dighton Rock State Park, Berkley
Greg Guimond

- Support and continue the Taunton Heritage River Program (see inset above).
- Develop kiosks at town parks that provide education material and recreation information about the Taunton River (the Wild & Scenic Committee supported creation of a kiosk at Johnson's Pond in Raynham which was built by an Eagle Scout and Boy Scout Troup – a direct result of the Forge River Shoreline Stream Team).

Local Projects: Broad Cove Trail

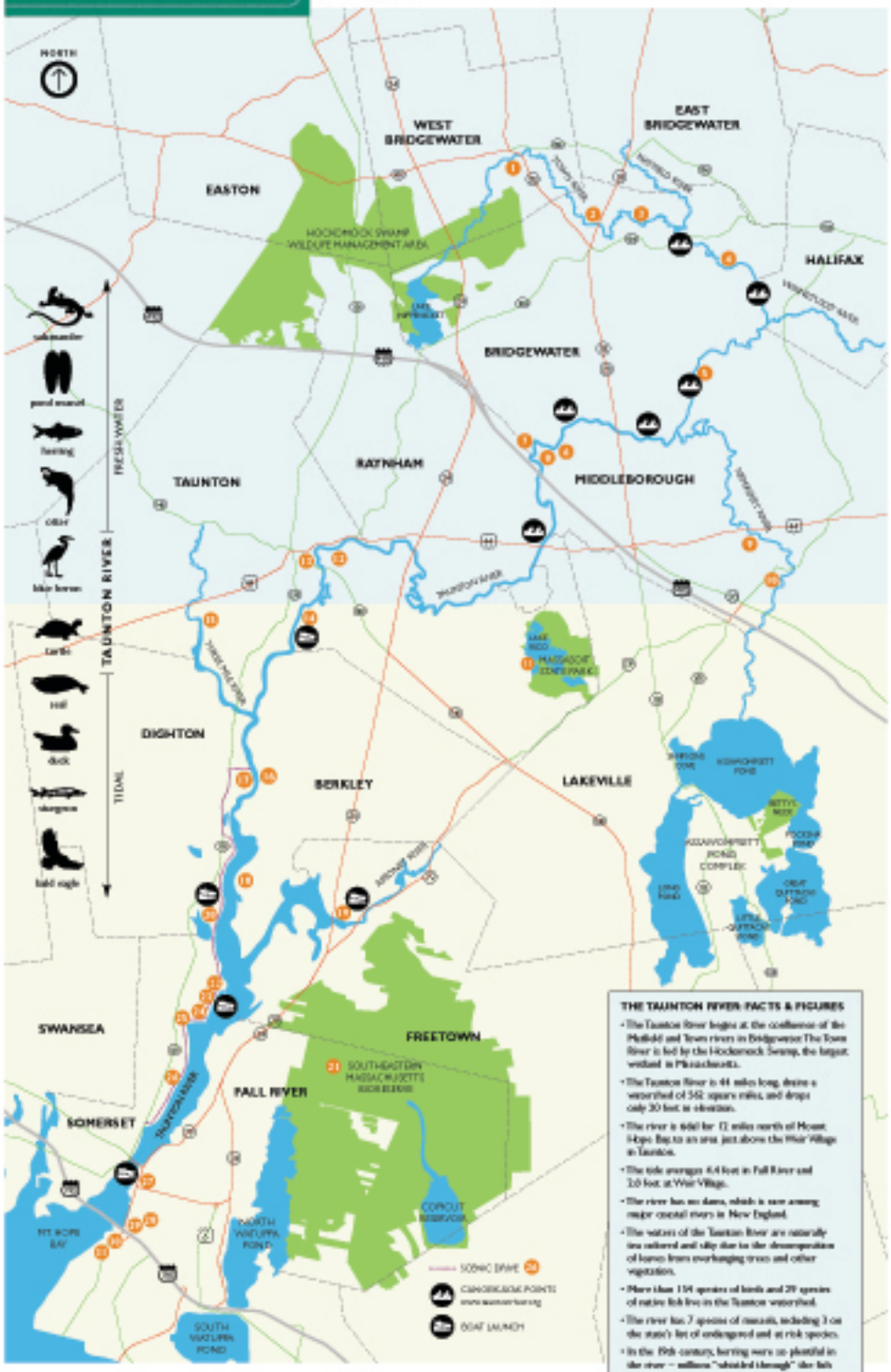
The Somerset Conservation Agent has been working with the Massachusetts Greenways and Trails Planning Program and the Somerset Highway Department to develop a trail link from the old Somerset-Swansea on-road bikeway system to a proposed walkway at Broad Cove. The proposed walkway design was funded through a DCR Greenways and Trails grant. Plans call for a parking lot off of the local road (that is part of the on-road bike system) and a boardwalk extending for one-half mile around Broad Cove. When complete, this walkway will provide a point of destination for bicyclists and pedestrians throughout the region. Somerset is seeking Transportation Enhancement funds in order to complete the project.

Rail Line Right of Way at Broad Cove, Dighton/Somerset Line *Rachel Calabro*

TAUNTON HERITAGE RIVER

Welcome to the *Taunton Heritage River.* With this map, you can find city and state riverfront parks, discover quiet spots of natural beauty, and trace the history of human activity on the Taunton River. By car, canoe, foot or bike, you can explore interesting sites—all selected by area residents—from the forested headwaters to the broad estuary of the first Massachusetts Heritage River.

For more information contact:
Environmental Programs, SMRPDD (508) 824-1367 or Riverways Program, DFW/ELE (617) 626-1544
www.tauntonriver.org



THE TAUNTON RIVER: FACTS & FIGURES

- The Taunton River begins at the confluence of the Matfield and Town rivers in Bridgewater. The Town River is fed by the Hockomock Swamp, the largest wetland in Massachusetts.
- The Taunton River is 44 miles long, drains a watershed of 562 square miles, and drops only 20 feet in elevation.
- The river is tidal for 12 miles north of Mount Hope Bay, to an area just above the Weir Village in Taunton.
- The tide averages 6.4 feet in Fall River and 2.0 feet at Weir Village.
- The river has no dams, which is rare among major coastal rivers in New England.
- The waters of the Taunton River are naturally tea colored and silty due to the decomposition of leaves from overhanging trees and other vegetation.
- More than 134 species of birds and 29 species of native fish live in the Taunton watershed.
- The river has 7 species of mussels, including 3 on the state's list of endangered and at risk species.
- In the 19th century, herring were so plentiful in the river — millions "shoaled through" the fish weirs — that they were known as "Taunton Turkey."
- River otters and harbor seals have returned to the river, indicating that both water quality and habitat have improved.
- The lower Taunton River contains the very rare Atlantic sturgeon, which can grow to 14 feet long.

THE TAUNTON HERITAGE RIVER

For its prominent role in the history, culture, recreation, and economy of its thirteen communities, the Taunton River has earned its designation as the first Massachusetts Heritage River. A journey downstream reveals the river's varied character. In the upper reaches are large tracts of undisturbed land and agricultural fields, with abundant native wildlife along the scenic, winding, and slow-paced river. A local coalition is seeking to protect this natural landscape through a federal Wild & Scenic River designation. At Raynham the river's role as a workhorse for colonial settlements and backbone to the industrial revolution emerges. Below Berkley the river widens with a dramatic sweep into an estuary. For the rest of the route to the sea, fish and wildlife share the river with commerce and industry.

Today recreational boats follow the historical paths of Native Americans, who traveled by canoe from Plymouth Bay to Mount Hope Bay. In these boats are echoes of the river's early heritage and the legacy of clipper ships, whalemen, and barges. During the river's industrial heyday, goods and raw materials traveled back and forth on its waters, transforming the region's economy and linking southeastern Massachusetts to the larger world.

The Taunton River remains a vital part of southeastern Massachusetts. Preserving its resources will ensure that future generations can also enjoy the history, natural beauty, wildlife, and recreation of the Taunton Heritage River.

The Taunton Heritage River Program
A Massachusetts Heritage River
A collaboration between local Taunton River watershed partners, the Executive Office of Environmental Affairs, DEM/DFW/ELE, and the Riverways Program.

Jane Swift, Governor
Commonwealth of Massachusetts
Bob Durand, Secretary
Executive Office of Environmental Affairs

TAUNTON HERITAGE RIVER