

A GUIDE TO VIEWING RIVER HERRING IN COASTAL MASSACHUSETTS

What Happens?

Each spring, millions of river herring migrate into Massachusetts' coastal waters to begin their annual trek up dozens of our coastal streams and rivers. They are returning to the place of their birth, to spawn and create a new generation of river herring. These determined travelers face many challenges along their spawning runs. Dried up river beds and voracious predators like striped bass, bluefish, cormorants, and of course, humans, impede their progress and reduce their numbers. Dams and steep elevation changes completely block their passage in many streams. The river herring are helped around these barriers by man-made fish ladders. Fish congregate and cue up for a chance to fight the current, rush up the ladders, and continue on with their journey. This behavior creates an amazing spectacle that attracts thousands of visitors each year.



Marine Fisheries staff and local volunteers at fishway on the Charles River in Newton, MA, where Marine Fisheries repaired a fish ladder in time for the 2005 spring Herring run.

Take your friends and family out on the next beautiful spring day and enjoy this spectacle provided by Mother Nature! This pamphlet provides location and viewing dates for several of our most impressive and accessible river herring runs. Check the map on the back page of this publication for more information.



About River Herring

Two species of fish in coastal Massachusetts are collectively referred to as "river herring." They are the alewife (*Alosa pseudoharengus*) and the blueback herring (*Alosa aestivalis*). They are very similar in appearance and both species are anadromous, meaning they are born in freshwater, spend the majority of their lives in the ocean, and return to freshwater to spawn. Mature river herring undertake an upriver spawning migration in the spring. In Massachusetts waters, alewives spawn in late March to mid-May when water temperature reaches about 51°F. Blueback herring spawn later in the spring (late April through June), when water temperature reaches about 57°F.

River herring are an important component of a healthy coastal and riverine ecosystem. There are over 100 separate river herring runs throughout the Commonwealth. Many of these runs have seen a decline in the herring population in recent years. *Marine Fisheries* collects data on the population status in these key runs to guide management decisions regarding regulations. These regulations are important to help sustain the herring population in coastal Massachusetts.

Herring runs may be under the direct control of the Massachusetts Division of Marine Fisheries (*Marine Fisheries*), or they may be under the control of local town government (with *Marine Fisheries* oversight). Contact your town to find out if they are responsible for the management of the herring resource. If the town has control, they will be able to provide you with information regarding harvest regulations and permitting. Otherwise, contact *Marine Fisheries* for state regulations (<http://www.mass.gov/marinefisheries>).



How Can You Help?

The freshwater stage is the time in a river herring's life when humans can have a great impact. Obstructions to passage such as dams and road culverts can block the fish's upstream progress and prevent them from reaching suitable spawning habitat. Water withdrawals due to public water use and agricultural practices can have a negative impact on river herring, preventing upstream migration or stranding juveniles trying to get out of a system. Pollution is also an ongoing problem. Poor water quality affects river herring of all ages, from developing eggs to adults. Finally, over-harvesting the fishery or poaching can remove too many adults from a run, reducing the number of fish successfully reproducing.

There are a number of ways that the public can become involved in conserving the river herring populations. Fish ladders should be included in all dam structures that are located in herring streams. These ladders must then be kept clean and functioning so the fish can keep returning every spring. Dams that are old and outdated, are safety hazards, or that are no longer necessary should be removed. Agricultural practices should be required to allow for the passage of herring, both during the spring upstream migration and the late summer and fall juvenile out-migration. All water withdrawals should be managed with river herring in mind and water conservation should be practiced at all times. Concerned citizens can become involved by attending local government meetings, by advocating responsible stewardship of the river herring resource, and especially by educating themselves and others about the biology and requirements for a healthy river herring run. For more information and a survey of all anadromous fish passages in coastal

Massachusetts, visit www.mass.gov/dfwele/dmf/publications/technical.htm for the following technical reports, TR-15, 16, 17, and 18.

We urge you to report all poaching activity and vandalism to local town authorities and the Massachusetts Environmental Police (800-632-8075).



Massachusetts River Herring Viewing Opportunities



★ **Woolen Mill Dam and Fishway – Parker River – Newbury**
 This is a relatively small run (currently under 10,000 herring) but it is one of the few on the North Shore that is accessible for viewing. The fishway is located just a short distance off the side of Central Street at the Woolen Mill Dam. Parking is difficult so this site may not be ideal for large groups. The Woolen Mill Dam is the first of six dams on the Parker River and each one is provided with a fishway to provide passage to the headwaters in Pentucket Pond.
Location: Central Street at Parker River, near intersection with Orchard Street.
Viewing Dates: April 15 – May 15

★ **Watertown Dam and Fishway – Charles River – Watertown**
 The Charles River supports one of the largest blueback herring runs in the Commonwealth and is being used as a donor population for restoration efforts in the Neponset and Ipswich Rivers. The Watertown Dam is the second of numerous dams located along the length of the Charles River, and extensive efforts by *Marine Fisheries* and other agencies have been made to provide access to upstream spawning habitat. Fish passage is now provided at each dam up to river mile 20.
Location: Department of Conservation & Recreation – River Front Park off California Street
Viewing Dates: May 15 – June 15

★ **Jackson Square Dam and Fishway - Back River-Weymouth**
 Located in Weymouth's historic district (Jackson Square), the herring run has played an important role in the city's history as the herring was both a prized and protected resource. The new fishway is a weir-pool design built in the 1990's by *Marine Fisheries*. The run begins at Whitman's Pond, and flows through and under the Iron Hill area, passing under Commercial Square. It flows past the town incinerator, into Back River and out to sea.
Location: Intersection of High Street, Water Street and Pleasant Street, East Weymouth
Viewing Dates: April 20 – May 15

★ **Jenny Grist Mill Dam and Fishway – Town Brook – Plymouth**
 This stream has been the subject of an ongoing restoration effort involving local, state and Federal agencies. A notched weir-pool fishway, that operates at Jenny Grist Mill, facilitates the passage of river herring past the mill. To date this program has resulted in improvements to one fishway, adult stocking in the headwater pond and removal of an impassable dam. In addition to river herring, smelt and smelt eggs have been observed in the lower reaches of the brook.
Location: Spring Lane off Summer Street (Downtown Plymouth)
Viewing Dates: April 20 – May 20

★ **Wareham Street Dam and Fishway – Nemasket River – Middleboro**
 The Nemasket River supports the largest river herring run in Massachusetts. Estimates based on visual counts by volunteers have consistently exceeded one million fish per year. The primary reason for the large size of this run is the availability of over 5,000 acres of spawning and nursery habitat in the upper reaches of the Nemasket River. The fishway at Wareham Street is a large weir-pool ladder that was designed and constructed by *Marine Fisheries* 1996. The Nemasket River fishery is managed jointly by the towns of Lakeville and Middleborough through their herring committee.
Location: Wareham Street off Route 105 (Main Street) – downtown Middleboro
Viewing Dates: April 1 – May 2



★ **Mill Pond Dam and Fishway – Agawam River – Wareham**
 Since 1632, the Agawam system supports a very productive river herring fishery largely due to the more than 500 acres of spawning and nursery habitat available in its ponds and impoundments. In addition to the river herring, the Agawam River also supports a small rainbow smelt population, and in recent years numbers of gizzard shad have been observed. The smelt spawn below the first dam to above the head of the tide. American shad have also been taken at the catching station at Rt. 6 during operation of the herring fishery.
Location: The Elks Club lot off Route 6/28 West below Mill Pond
Viewing Dates: April 7 – May 20

★ **Monument River Fishway – Monument River – Bourne**
 This system supports one of the Commonwealth's most productive river herring populations. DMF has monitored this run for over 20 years using electronic and visual counts to estimate population size, which has ranged from 91,000 fish in 1980 to 672,000 in 2000. Because of its size and accessibility, this population is the primary source of mature adult alewives for *Marine Fisheries's* stocking program. The construction of the canal inhibited upstream access by intercepting the streams natural channel. A series of weir-pool and notched weir-pool fishways, which are integrated within the stream's artificial channel, allows river herring to migrate upriver to spawning sites in Bourne and Plymouth.
Location: Route 6/28 (Scenic Highway north side of Cape Cod Canal) at the Army Corps of Engineers comfort station
Viewing Dates: April 20 – May 30

★ **Lower Mill Pond Dam and Fishway – Stony Brook - Brewster**
 Stony Brook has long been one of the Commonwealth's most popular herring runs. The annual migration of river herring up this stream attracts numerous Cape Cod tourists every year. A series of connected weir-pool fishways and stone baffles allow the fish to surmount a natural elevation change and mill pond dam, enabling them to reach the 386 acres available in the headwater ponds. This run was described in great detail by John Hay in his book "The Run."
Location: Next to Thomas Prence Grist Mill (intersection of Stony Brook Road and Setucket Pond)
Viewing Dates: April 15 – May 20

★ **Alewife Brook – Essex**
 Alewife Brook flows from Chebacco Lake into the Essex River. Chebacco Lake provides 206 potential acres of spawning habitat for alewives. It is one of the few river herring runs in Massachusetts that is not impeded by man-made dams. However, in recent years, beavers have constructed dams near the outlet of Chebacco Lake, thus sometimes impeding access to this large potential spawning area. This run is best viewed from the bridge on Apple Street. Parking is limited so this site may not be appropriate for large groups.
Location: Apple Street bridge located just off Route 22 in Essex
Viewing Dates: April 15 – May 20

Division of Marine Fisheries
 251 Causeway Street, Suite 400
 Boston, MA 02114
 617.626.1520

Web site: www.mass.gov/dfwel/dmf/index.html



Who You Can Contact!

Many areas have dedicated volunteer groups whose members are very knowledgeable about the watershed and the local fisheries. These groups make many contributions to the conservation of anadromous fisheries by increasing public awareness of the resources and by conducting fish counts and other data gathering and restoration activities. Get involved with the activities of your local watershed and fish counting groups. The following is a list of herring counting groups in your local area:

North Shore

- Essex River – Eight Towns and a Bay (www.8th.org)
- Ipswich River – Ipswich River Watershed Association (www.ipswichriver.org)
- Little River – Massachusetts Audubon Society (www.massaudubon.org)
- Merrimack River – Lowell Land Trust (www.lowelllandtrust.org)
- Parker River – Parker River Clean Water Association (www.parker-river.org)

Boston Area

- Charles River – Charles River Watershed Association (www.charlesriver.org)
- Mystic River – Mystic River Watershed Association (www.mysticriver.org)
- Neponset River – Neponset River Watershed Association (www.neponset.org)
- Saugus River – Saugus River Watershed Council (www.saugusriver.org)

South Shore

- Buzzards Bay watershed – Coalition for Buzzards Bay (www.savebuzzardsbay.org)
- Jones River – Jones River Watershed Association (www.jonesriver.org)
- Mattapoisett & Sippican Rivers – Alewives Anonymous (www.plumblibrary.com/alewives.html)
- Nemasket River – Lakeville/Middleboro Herring Commission, Town Hall, 340 Bedford Street, Lakeville, MA 02347
- North & South Rivers – North and South Rivers Watershed Association (www.nsrwa.org)
- Taunton River – Taunton River Watershed Alliance (www.trwaonline.org)

Cape Cod

- Falmouth Fisherman's Association – ATTN: Mr. Lou Turner, 88 Oyster Pond Road, Falmouth, MA 02540



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