

Notes on Status of Weymouth Back River Herring Run

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The Weymouth Back River herring run is one of the most productive in Massachusetts. Since 1986, herring run counts in the Back River have ranged from 65,800 in 1998 to 859,000 in 1995. The average count during this 26-year period was 276,331, with a median of 239,850. The high average is driven by several peak years (1990, 1991, 1992, 1995) in which counts were above 400,000. Counts have not exceeded 400,000 since 1995. In the past ten years (2002 – 2011), counts have been below the 26-year average for each year except one (2002), and have been below the 26-year median in all years except three (2002, 2003, 2008).

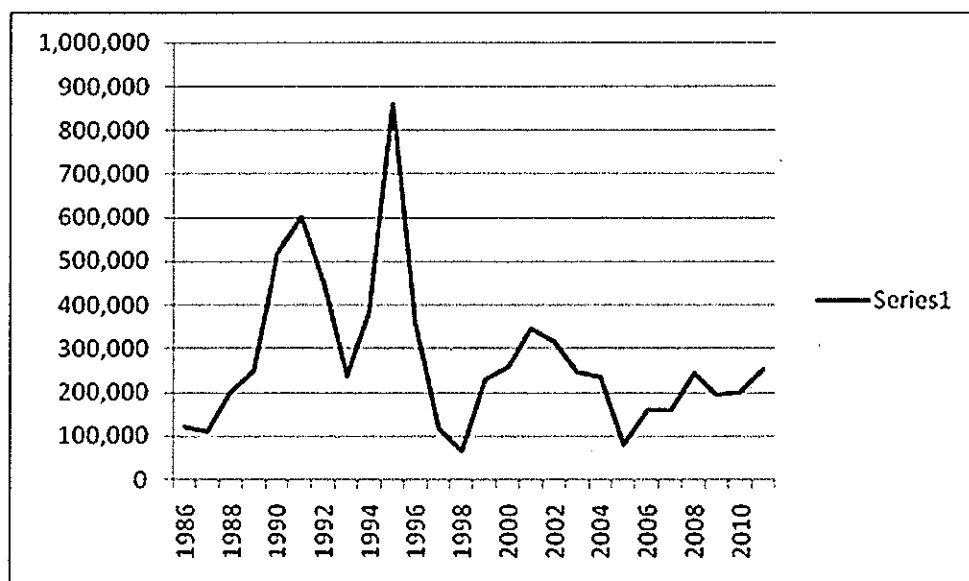


Table 1 Back River Herring run annual fish counts

Obstructions to fish passage are not a major concern in the Back River run. We are lucky to have committed Herring Wardens, volunteers, and town government that work together to ensure that the river is passable for migrating adults and juveniles.

The major concerns for the Back River herring run are related to conditions in the spawning grounds and migratory corridor. The area is heavily urbanized and the pond and river suffer from degraded water quality typical of urbanized areas. Whitman's Pond, the spawning ground, is hypereutrophic, with high nutrient levels, low dissolved oxygen levels, and a serious infestation of invasive and nuisance vegetation which adversely affects water quality and habitat. Competing uses for the spawning pond include recreation (boating and fishing) and an active water supply.

There are concerns that the degraded conditions in the spawning pond may decrease productivity and annual yield. Poor environmental conditions can have a negative impact on the final stages of egg and sperm formation in broodstock that are under stress. These stressors will likely result in a decreased fertilization rate, and smaller, less robust larvae. The continuing decline of the conditions in Whitman's Pond are likely to have a substantial impact on annual production.

Although the herring run migration numbers remain reasonably healthy at this time, the degradation of the spawning ground could severely compromise the population if trends are not reversed. The future health of the run may well be determined by the ability to properly manage the complex threats to and competing uses for the pond.

The Town of Weymouth is working with local stakeholders as well as specialists in the field of pond restoration to develop a detailed plan to restore Whitman's Pond to a healthy state and maximize river herring productivity.