

## **“Asian Swamp Eel Management Activities: 2010”**

The Asian swamp eel was first collected by the NJ Division of Fish and Wildlife Biologists in June 2008. Based on the size range of those individuals collected, the swamp eels were present prior to 2008 and had successfully reproduced in Silver Lake.

Swamp eels were first introduced to the United States in Hawaii some time around 1990. It was first identified as being present in the continental United States in 1994 based on specimens collected in ponds at the Chattahoochee Nature Center, located north of Atlanta, Georgia. They were first found in Florida in 1997. Three populations are known.

In 2010 the Bureau of Freshwater Fisheries sampled Silver Lake via backpack electrofishing 10 times during the period of June 26<sup>th</sup> through September 26<sup>th</sup>. A total of 224 Asian swamp eels were collected and removed from the lake. The swamp eel population appears to be growing based on CPUE (catch per unit effort). CPUE has overall decreased since sampling began in 2008 however we noted an 81% increase in CPUE from 2009 to 2010. This increase could be the result of an increasing population or increased sampler catch proficiency. The actual number of swamp eels collected increased 18% from 2009. A reduction in sampling days may have attributed to higher catch per unit effort.

In addition to Silver Lake, the Asian swamp eel has also been found in the waters directly upstream and downstream of Silver Lake, in Hilliards Creek. Locations sampled were the vicinity of Alton Ave. (upstream) and Foster Ave (downstream). These locations were each sampled three times. A total of five swamp eels were collected at the upstream location of Hilliards Creek. There were no swamp eels collected downstream of the spillway in 2010 however past sampling efforts have resulted in the collection of swamp eels which have escaped from the lake.

Monitoring and control of the Asian Swamp eel has been limited to back pack electrofishing removal methods. Additional methods of removal are still being investigated to determine the feasibility of a large scale eradication project. The complexity of the habitat and physiological adaptability of the Asian Swamp eel significantly hinders a successful eradication.”