

**RENFREW POWER
GENERATION SHARING
OF INFORMATION
AMERICAN EELS –
BONNECHERE RIVER
(2022)**



M. Lavictoire, 2019

AMERICAN EEL FACTS

Considered extirpated from Round Lake, Golden Lake & above Renfrew Generation on the Bonnechere River

Closer to the ocean, when eels are < 10 cm in length, they can climb damp vertical structures



<https://www.hww.ca/en/wildlife/fish-amphibians-and-reptiles/american-eel.html>

Breed in Sargasso Sea (Atlantic Ocean near the Caribbean)

The **American Eel** (*Anguilla rostrata*) was listed as Endangered prior to 2008 when the *Endangered Species Act* came into force, and received general habitat protection on June 30, 2013.

This important species to the Algonquins is referred to as the Kichissippi Pimisi.

Some return to the ocean or spend their entire life in salt water

Some travel into freshwater to grow and mature (~10-20 years)

Freshwater eels tend to grow larger and more fertile

Those maturing in Ontario tend to become female

This stage is most frequently encountered stage in the Ottawa River & its tributaries. Peak migration is assumed to be June-September

Eels “breathe” through their skin, allowing individuals to travel on land and around barriers.

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2015: Thomas Low Generating Station was Commissioned

Opportunities to **minimize harm** to this species were included in the design of this new facility

An inclined trash rack with tight spacing between the bars on the intake (25mm) to help discourage eels from going into the intake.

Reduced approach velocity at maximum capacity (typically only in April); on average, very slow velocities during the eel migration period (0.1-0.4m/s). These velocities allow eels the opportunity to swim away from the intake.

The design of the facility allows for the future installation of permanent bypasses for both upstream and downstream passage. This has been delayed until there is a population present. In the meantime, the temporary eel upstream passage is provided annually.



Upstream Temporary Eel Ladder

Other Actions:

- All staff at RPG stations have been educated on the importance of American Eel.
- Outside contractors receive sensitivity training.
- A member of staff was trained on proper handling by Ministry of Natural Resources and Forestry and Bowfin Environmental Consulting
- Qualified Professional involved in RPG projects on an annual basis (Bowfin/CIMA+)

RESEARCH

RPG has been collecting information on fish communities on the Bonnechere River and its tributaries (downstream of Renfrew) since **2006**, with a focused effort on American Eel beginning in **2012**

2006 & 2007

- Backpack electrofishing, seine netting, gill netting downstream of Renfrew
- Backpack electrofishing, Minnow Traps on tributaries between Renfrew & First Chute

2012-2015

- Boat electrofishing from boat launch to First Chute

2012 - ongoing

- Temporary upstream American Eel passes

2019-2021

- Tailwater monitoring



RESULTS

- **No American Eels** were found during the 2006-2015 inventories
- **No American Eels** have been found during trash rack cleaning or tailwater surveys
- One **upstream migrant captured in September 2015... but escaped the holding tank**, triggering changes to holding tank design!

Another eel (or the same escapee) was captured, tagged, and released upstream of Renfrew in July 2018.



REFERENCES

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