

Protecting Spawning Habitat

Disrupting spawning habitat is especially damaging to tiotià:kton populations in the fall. Wading or driving four-wheelers through nesting zones can destroy eggs. Fine sediment particles (sand, clay, dirt) churned up by wheels can clog up potential spawning beds. This sediment can also cover fertilized eggs and suffocate them.

Protecting the Next Generation of Tiotià:kton

Tips for the Fall Season:

- ♦ Avoid driving 4-wheelers through creeks and lakeshores.
- ♦ Take care to not disturb beavers or their dams near lakes.
- ♦ Watch for redds (nests) — cleaner circular gravel areas in creeks and shorelines. Avoid wading/driving through them.
- ♦ If fishing in the fall, try targeting other fish like oiahe:ta (perch) or bullhead (onawa'tsakón:ha).
- ♦ Consider releasing tiotià:kton (trout) -especially females. Handle them with wet hands and release them quickly.



Call for Volunteers!

KEPO and the caretakers are working with volunteer fishers to understand differences in tiotià:kton (trout) populations between different lakes and the creek. We are comparing growth rates using length and age of the fish. Age is estimated from fish fins and/or otoliths (inner-ear bones). Use your catch to help the community better understand the health of the tiotià:kton populations in Tioweró:ton. Only summarized results will be shared with the community — your fishing knowledge is private.

For more information on volunteering and for general inquiries about tiotià:kton in the territory, please contact:

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Tiotià:kton (brook trout) Spawning



Young tiotià:kton (brook trout) caught in Tioweró:ton

Kahnawà:ke Environment Protection Office
& Tioweró:ton Caretakers



October 2022



Tiotià:kton & Tsaní:to in Tioweró:ton

- **Tiotià:kton (brook trout)** are an important native species traditionally harvested in Tioweró:ton.
- Tiotià:kton need clean, clear, and cold water. They live in deeper lakes and cold shady streams like those in Tioweró:ton.
- **Tsaní:to (beaver) dams** maintain lakes at high levels. Without them, the lakes would not have many fish.
- Tiotià:kton populations can be stressed by:
 - Warming climate
 - Dropping water levels
 - Erosion
 - Loss of bank vegetation
 - Competing fish species
 - Heavy fishing pressure
- Evidence suggests that tiotià:kton reproduction is **low** in Lake Gagnon, Red Trout Lake, and the Creek.

Spawning

Tiotià:kton spawn (reproduce) in the fall between the end of August and end of November. They usually spawn in shallow gravel beds in streams and lakes. Tiotià:kton will also spawn where groundwater seeps into a lake. The water flow keeps the eggs oxygenated and removes waste.



*Female Tiotià:kton clearing nest while male (right) looks on.
Photo by Sean Landsman.*

Females dig small shallow nests (sometimes called redds) in the gravel with their tails. Eggs and milt (sperm) are released by mating partners over the nest. The female then lightly covers the fertilized eggs with gravel. She will often only deposit a few dozen eggs per nest before moving on to make a new one.

Larger trout (15"+) may lay over 1000 eggs across several nests, but smaller individuals may deposit fewer than 100 in total. *

Only around 1% of fertilized eggs develop and survive to maturity. Tiotià:kton typically mature within 2 years.

Protecting the Spawn

Tiotià:kton are vulnerable during the spawn. They become aggressive, and congregate in specific spawning areas.

Harvesting fish during the spawn (fall) may be easier than at other times of year, but disruptions to spawning may damage the fish population long-term. Even catch and release fishing during this time can be damaging, as the stress can disrupt spawning behaviours. Carefully handling and releasing trout—especially females—may reduce disruption to spawning.

Identifying Males & Females



Before and during the spawn **males** (top, testes removed) develop brighter orange colours on their bellies and fins. Males often also get a smeared black line along their bellies. **Females** (bottom, ovaries removed) are less colourful and do not get orange bellies or black smears. Large males also have longer mouths than females and have an upward hook at the end of their jaws.

* Adams, P, James C, & Speas C. 2008. "Brook Trout (*Salvelinus fontinalis*) Species and Conservation Assessment," US Forest Service.