



## **MEDIA FACT SHEET ---- Ryder Lake Amphibian Protection Program**

**Who is the Fraser Valley Conservancy?** The Fraser Valley Conservancy (FVC) is a Land Trust dedicated to placing lands in trust for our future. **For the past three years, the FVC team has been conducting an Amphibian Protection Program that includes night-time monitoring for adult amphibians and a migration event for Juvenile Western Toads.**

### **Where is the community of Ryder Lake?**

- Ryder Lake is a community located in the southern portion of the City of Chilliwack, British Columbia.
- The Ryder Lake area is relatively large (11,000 acres). It borders significant tracts of crown land providing it with significant connectivity to wild places.
- The Ryder Lake Western Toad population primarily breeds in one privately owned wetland.

### **What's happening in Ryder Lake?**

Because of Ryder Lakes' rural nature, rolling landscapes, wetlands, streams, fields and forest habitats, the area is home to many creatures. A wide variety of Salamanders, Newts, Frogs, and Toads are known to migrate to and from the area.

**There are three amphibian migrations per year, all of which result in road mortality for amphibians as they must cross at least one road to reach their destinations.**

1. First migration: Adult toads migrate to their natal wetland each year in the spring to breed during the first migration. Adult toads return to the same wetland every year to breed.
2. Second migration: Once they are finished breeding they return to their forest habitat during the second migration. Adult toads can migrate as far as 2 km from their breeding grounds.
3. Third Migration: Once developed, young toads (called toadlets) migrate to forest habitat around and beyond their birth place during the third migration of the year.

**Why is the FVC involved? With a 99% mortality rate in nature, Western Toads are facing further pressure on their remaining 1% from vehicular related deaths.** With three migrations across Ryder Lake Roads per year, the numbers of deaths are on the rise. **The FVC is raising community awareness of this issue, collecting data for the implementation of long term solutions like amphibian tunnels, and seeking support through government grants and donations.**

**Why be concerned?** The Western Toad, *Bufo boreas*, is listed Federally as Special Concern and Provincially was moved to the blue (threatened) list in 2011 as its population continues to



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decline. **Habitat fragmentation and human impacts to their habitat have the potential to create isolated populations which can decrease the genetic diversity needed to maintain strong and healthy populations. Currently, the Ryder Lake population is strong but many residents have noticed a sharp decline in the numbers of juveniles migrating in recent years.** The community and the FVC are concerned about the future of this population.

#### **What threats do Western Toads face?**

- In Ryder Lake, a predominant threat is habitat fragmentation including roads intersecting their habitat and/or their migration routes.
- Increased land conversion for human homes and farms changes the Toads habitat by clearing forest and draining wetlands.
- Climate change also presents a risk to the population through changes in weather patterns that can cause unpredictable migration patterns and timings.

**What are the biological characteristics of the Western Toad that make them vulnerable?** Just like salmon that return to their home streams, Western Toads return to the same breeding grounds (wetland) each year. Thus **they are site specific and most will attempt to return to their natal wetland each year to breed. Western Toad females can lay up to 16,000 eggs in one season and can live as long as ten years, being able to breed about six or seven years of their adulthood if they live that long and of course find a mate.** Over the course of their life, Western Toads use a variety of habitats other than wetlands including forested summer range and winter hibernation sites. Adult toads spend the majority of their life in moist forest habitats.

#### **How does a Western Toad develop?**

1. Eggs hatch into tadpoles in 3 to 12 days depending on water temperature
2. Tadpoles can take six to eight weeks to become toadlets depending on water temperature and other factors.
3. Western Toads may spend up to three years maturing into adults before they can breed
4. 99% of toads will not survive from egg to mature adulthood, but along the way they contribute greatly to the ecosystem as food for other species.

**Why are Amphibians an important part of the food chain?** Starting near to the bottom of the food chain, the tadpoles are very effective eaters of aquatic plant life and insect larva. When the tadpoles metamorphose into toadlets they convert themselves into tasty bite sized toadlets for birds, snakes and small mammals. Adult Western Toads have a diet made up of 95% flying insects like mosquitoes then become a food source themselves for larger birds and predators such as coyotes and raccoons.