FACT SHEET: Marin County Coho Salmon and Drought

In times of drought the already endangered Marin County coho salmon face even more obstacles to survival including:

- Less water
  - This year there is less water in the Lagunitas Creek and its tributaries
  - San Geronimo Creek, the most important undammed creek (above the Inkwell waterfalls) in the Lagunitas Watershed current flows are 0.3 cubic feet per second (cfs), flow levels normally seen at the end of summer dry season
  - This winter San Geronimo Creek saw flows as low as 1/3 cfs (less than one inch of water). This is typical of summer water levels, but not winter levels. During rainstorms the creek flows at 7,000 cfs.
  - Due to low flows the fish are unable to get over the waterfalls, and are blocked from their primary spawning area

- More exposure to predators
  - Stuck in pools awaiting high enough flows to reach spawning grounds, fish are exposed for longer periods to predators during the spawning migration
  - Fish are more exposed and less able to hide from predators while spawning
  - Predators include: herons, egrets, hawks, osprey, raccoons, coyotes, river otters, and invasive fish like largemouth bass and bluegill

In response to these threats, Turtle Island Restoration Network’s Salmon Protection and Action Network’s (SPAWN) program (and other organizations and agencies) has developed ways to support the coho salmon’s survival even in times of drought through:

- Habitat improvement
  - SPAWN creates woody debris structures (manmade log jams) in waterways that shelter fish in times of drought and provide resting and hiding places from predators
  - Native plant restoration work
  - Native plants provide food and shelter for young salmon and stabilize creek banks preventing salmon-killing sediment from reaching creeks.
  - Native plants are naturally drought-resistant and do not need on-going irrigation to survive and thrive.

- Rain-harvesting cisterns
  - SPAWN is offering residents an opportunity to purchase cisterns at a discounted bulk price
  - Cisterns, which are primarily used for outdoor irrigation, release water slowly through a drip irrigation system
    - This allows water to collect in the ground and raise the water table, which continually feeds river systems throughout the year – even in times of drought

- Summer Fish Rescue
  - SPAWN rescues baby salmon from drying pools in the summer. To date, SPAWN has rescued more than 14,000 baby coho salmon and steelhead from certain death.

Turtle Island Restoration Network works to mobilize people and communities around the world to protect marine wildlife, the oceans and the inland waterways that sustain them. The Salmon Protection And Watershed Network (SPAWN) is a project of Turtle Island that works to protect endangered salmon and their habitat in the Lagunitas Watershed.