

Protocol for Patrols for Spawning Salmon on Byrne Creek

Byrne Creek Streamkeepers Society, Burnaby, BC

Local Protocol Differs From Streamkeepers Handbook: Because the spawning reach in Byrne Creek can be covered on foot in less than an hour, and because returns are typically <100 combined chum and coho annually, we do not estimate spawner numbers on Byrne Creek as per *The Streamkeepers Handbook*. We note every live fish, and process every dead carcass that we find. Volunteers typically patrol the creek at least three days per week during the spawning season, which runs from mid-October to mid-December.

Buddy System & Safety: We encourage you to go in pairs or groups for safety. If going alone, try to let someone know. Avoid entering high/fast water. Avoid entering pools in the spawning channel, as the bottom can be soft and muddy. Use sticks, walking poles, or the long gaff in the habitat to reach deep carcasses.

For Newbies: If you'd like to learn how we patrol for spawners, and how to “process” dead fish for species, sex, length, spawned/unspawned, etc., please arrange to go out with a veteran.

Visible Presence: Please wear a streamkeeper safety vest on patrol. If you don't have one, let us know. We want to be visible to the public. We often interact with curious passersby when on spawner patrol, so these are opportunities to let folks know there are fish in the creek, that we are part of a DFO-authorized activity, and that it is illegal to interfere with spawning salmon.

Report Results to the BCSS list serve: Please report all results to the mail list, along with volunteer hours.

Tools:

- Gaff - Hook on long pole (beside sediment pond for retrieving carcasses in deep water)
- Measuring tape
- Knife
- Rubber boots/gloves
- Notebook/pencil
- Polarizing sunglasses
- Thermometer
- PH Kit?

Technique:

Walk both sides of channels where possible looking for fish, dead or alive. **Note live fish location** in relation to the nearest BCSS tag (you will find these blue tags on trees at every pool in the spawning habitat, and spaced out more widely in the lower ravine), and species and size estimate where possible.

If dead fish found get fish out of water, measure length (Eye to end of flesh where it becomes tail fin), identify species. Confirm sex by cutting open belly.

Note whether spawned or not. (No or few eggs in females indicates spawned. Lots of eggs or eggs still in firm sac, not spawned. Males are more difficult to be sure about, but if milt is loose and runny, likely spawned. If milt firm, not spawned) Record all of the above and location information, and presence or absence of adipose fin on coho.

If possible, retain head from coho that are absent adipose fin. While we do not release clipped coho in the creek, we do get occasional clipped strays. The clip can indicate that there is a tag in the fish's head, and such heads should be taken to a DFO head depot. (For more info Google "DFO salmon sport head recovery program").

Cut processed carcasses in half and return to creek where found. Try to cut the carcass at its thickest point, so it is easier to determine from a distance if a carcass has been processed as it deteriorates. If the water is shallow enough to enter safely, you can try to weigh down or stake carcasses so that hopefully they won't be washed away as readily when it rains. Please use natural materials such as local stones and woody debris for weighing/staking.

Also **note signs of fish activity in the gravel.** Note locations of redds in relation to tags. Redds are the nests of eggs, and are usually easy to spot when they are fresh. Look for gravel/cobble in patches/mounds that appear clean and bright in relation to surrounding gravel/cobble.

Collect other data as time/gear allows, such as water/air temps, pH, etc.

Send all data to the list serve. No fish found or water too dirty to see is also important information.

Area Covered: We usually patrol from Byrne Bridge, to Meadow Bridge, through the spawning channel, the sediment pond, and up the ravine as high as the base of the stairs. If pressed for time, it's OK to cover shorter areas, just note that in your data collection.

Typical Patrol Report:

Date & Time, General weather conditions

Water visibility on a simple scale: zero, poor, good

Area covered

Live fish seen (numbers in relation to tags and any other interesting observations such as distinguishing marks, injuries, erratic behaviour...)

Dead fish processed (species, sex, length, spawned/unspawned, coho adipose, any other interesting or unusual observations such as injuries, etc.)