Cowichan Watershed Board Meeting January 5, 2012





- Cowichan winter Steelhead are extremely dependent on freshwater rearing as juveniles (> 80% spend 2 full years in the river before smolting – ocean entry);
- Cowichan winter Steelhead are <u>not</u> subject to commercial, sport or FN fisheries in tidal waters, and are managed on a "catch & release" basis in the river;
- Cowichan Steelhead have exhibited cyclical abundance in relation to ocean and freshwater survival conditions – so are a good environmental "indicator" species





Correlation of steelhead fry abundance versus peak adult spawner counts from index reaches of the Salmon & Englishman rivers, Vancouver Island.

- Cowichan Steelhead fry are easily sampled by electrofishing in early September, each year;
- The Province has established a conservation target for Steelhead, based on scientific review of stream-specific stock productivity (recruits/spawner);
- For "routine management" purposes, that target is 30% (or better) of a river's estimated habitat capacity supporting Steelhead



- For Cowichan, estimated Steelhead fry capacity is ~300 per 100 m² of suitable habitat*, sampled in late summer;
 *One of the most productive stocks on VI
- So, the conservation target (or 30% of est. capacity) is ~100fry per 100 m²;
- If Cowichan Steelhead fry abundance is consistently >30% of est. capacity, the stock is judged to be healthy and capable of supporting a "catch & release" sport fishery with incidental spawner mortality





Standardized Steelhead fry counts for the Cowichan River by total removal electro-fishing in shallow habitats (100m² units) – from Ron Ptolemy, RPBio., Ministry of Environment, Victoria

- Conclusion from Sept. 2011 sampling is that fry recruitment was <u>exceptionally strong</u>, reflecting a very good return of spawning adults in the winter/late spring of 2011;
- 2011 fry abundance was well above the conservation threshold or target and, in fact, approached estimated habitat capacity for the Cowichan system as a whole

