



Acknowledgements

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- Lance Lilley, Fraser Valley Regional District/Fraser Valley Regional Watersheds Coalition
- Linda Stevens, Fisheries and Oceans Recreational Fisheries Manager
- Mark Johnson, Fisheries and Oceans Canada Community Advisor (Project Lead)
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Chilliwack River Watershed Strategy Issues & Alternatives:

SPORT ANGLING BEHAVIOUR

1.0 General Description of the Issue

In recent years, there has been increased concern about some angling behaviours and techniques used on the Chilliwack River and the impact of these behaviours on the fishery, the environment, and on other users of the watershed (e.g., other anglers). Some of these behaviours are illegal (i.e., as defined in the sport fishing regulations), while others are considered ‘unethical’ by some, but may not be explicitly illegal.¹ These behaviours include:

- A growing number of anglers who show no respect for the fish they catch and land (e.g., fish are often handled very roughly prior to release).
- An increase in ‘flossing’ or ‘snagging’ angling techniques or willfully attempting to foul hook fish (i.e., obvious snagging with gear that would not be effective via standard sport angling methods).
- Retaining foul hooked fish.
- An increase in the amount of litter, such as fishing line, weights and other gear, and general disrespect for the environment.
- Fishing with prohibited gear, such as barbed hooks.
- Catching and retaining more than the daily limit or possession limit of salmon. This charge is common with people who "party fish" (where one person catches fish for several licensed people and/or children who are at the river but are not actively fishing) or with people who catch their limit and then drop fish off at home before returning to the river.
- Fishing without an angling licence or failing to produce an angling licence.
- Failing to record adult Chinook salmon or Steelhead caught.

The prevalence of anglers who fish illegally or using techniques that some anglers consider ‘unethical’ is a watershed concern because these behaviours are believed to have a negative impact on the fishery resource (e.g., they cause a conservation concern), the angling community, and the environment in general. For example, some of the potential impacts of concern include:

- Increased mortality or decreased reproductive success of fish that are handled roughly or foul-hooked. Research has shown that angling duration, handling time, air exposure, handling techniques, and hook release techniques can greatly influence both the immediate mortality rate and the delayed mortality rate for fish caught and released², resulting in angling mortality rates between 20-30% for some studies³, and as high as 87% for others⁴. Foul hooking and/or using

¹ For the purposes of this document, ethical fishing refers to the use of angling techniques that minimize the impact of angling on the fisheries resource and maximize the potential to conserve the resource over the long term.

² Lewin et al, 2006

³ DFO, 2000

prohibited gear may leave hooks and wounds in fish that impede their ability to reproduce.

- An increase in the incidental catch of species at risk, such as endangered Cultus Lake sockeye salmon or wild steelhead, due to the prevalent use of non-specific fishing techniques like flossing.
- Difficulty in estimating/managing the actual fishing effort/levels because of the high numbers of individuals who fish without a license, retain more than their possession limit, or fail to record all retained chinook or steelhead caught.
- Increased conflict between anglers who floss and more traditional anglers who feel these angling techniques are unethical.
- Increased threats to other wildlife and users of the watershed from garbage left behind by anglers (e.g., American dippers and other birds may swallow plastic worms/eggs or become tangled in fishing line).
- Magnification of these impacts over time due to increased use of illegal or unethical fishing behaviours by new, experienced, and foreign anglers who learn from anglers using these techniques, often with success.
- Loss of anglers who fish legally/ethically from the watershed, which could further deter ethical anglers from angling all together.
- Loss of revenue that could be used towards improving fisheries management due to the increased prevalence of fishing without an angling licence.

2.0 Specific Locations/Examples

Many long time local anglers believe that illegal and unethical fishing behavior has become more prevalent in the lower mainland since the early 1990s, roughly corresponding with the opening of the Fraser River sockeye fishery, and that it will continue to get worse. Most consider the primary catalyst of the increased prevalence of what is often perceived as “unethical” or poor behaviour to be an angling technique referred to as ‘flossing’ (see Appendix A for background information about flossing and definitions). This method of angling is not based on the same principles as traditional sport angling techniques (e.g., using methods that entice a fish to bite the hook by choice).

Illegal and unethical fishing behaviour is a concern throughout the Chilliwack-Vedder system. The ‘flossing’ method of fishing is most evident in places where the river bottom is uniform and the fish tend to collect in pools while waiting to ascend the river to their chosen spawning area. The lower Vedder River has become an area where fishers using this technique have tended to concentrate. However, the flossing method is also being employed in the rapid, white water areas created around large boulders found in the upper Chilliwack River.

⁴ Bartholomew and Bohnsack, 2005

3.0 Contributing Factors/Causes

The following factors have been noted as contributing to this problem:

- Sockeye sport fishery: The relatively new sockeye sport fishery on the Fraser River attracted a large number of novice anglers which are not steeped in the traditional ethics and etiquette of sport fishing which many long time anglers take great pride in. This fishery leads to a gold rush mentality amongst fishers.
- Lack of education/awareness: Education in the handling of fish, recognition of fish species or angler ethics has not kept pace with the increase in the number of anglers, despite the fact that information is available in many formats (e.g., signs, wallet cards, kiosks, internet, and regulations).
- Expectation or perception of no consequences: Growing lack of respect for enforcement authorities and perceptions or expectations that there are not consequences to actions, results in increased unethical or illegal fishing practices.
- Lack of legislation/resources: Lack of legislation to enforce illegal activities and/or resources to implement legislation properly, partly due to the difficulty in distinguishing between legal and illegal angling techniques, may contribute to the problem.
- Lack of respect/understanding: A lack of respect for the watershed and the fisheries resource and a lack of understanding of how illegal and unethical fishing impacts the resource may also be a contributing factor.
- Hatchery production: Large numbers of native and non-native fish produced from the Chilliwack River Hatchery provide for a bountiful fishery and a higher than average chance of an angler taking a fish home, but it may also contribute to a mentality of some individuals that hatchery fish are worth less than wild fish (and it is therefore acceptable to treat them less respectfully), which may contribute to unethical fishing in these cases.
- Lack of consensus on ethics: There appears to be no consensus within the representative angling community about the ethics of using the ‘flossing’ technique. Also, people are often simply unwilling to talk about the pros and cons of this technique. Some anglers realize this method of snagging salmon is unethical but feel justified in doing so and refer to these harvest opportunities as a ‘food fishery’.
- Availability/cost of gear: Anglers are able to obtain and legally use gear that enables flossing to be a successful form of angling; inexpensive gear enables untrained anglers to begin the sport very easily.
- Pressures on fishing guides: Some fishing guides employed by clients to sport fish on the rivers promote the ‘flossing’ method, especially when the fish are not biting and the client is not skilled enough to lure a fish to bite.
- Benefits to local businesses: Many local businesses, especially the tackle shops, may benefit from anglers purchasing their services or products. Therefore, many support and encourage all type of fishing techniques and may strongly object to any proposed changes or restrictions to the fishery.

- High expectations: A growing expectation of anglers to take a fish home, and the greater likelihood of capturing a fish when using the flossing method, especially for less skilled individuals, has led to increased pressure on the fishing community to adopt certain fishing techniques.
- Foreign visitors: Large numbers of foreign (e.g. American) visitors are using the flossing method as their primary method of capture to ensure their success of catching a fish while visiting the area.
- Management/allocation of fishery: conflicts or disagreements over fisheries allocations and management may lead to increased prevalence of illegal and unethical behaviours.

4.0 Overall Level of Community Concern

This issue is of high and growing importance to members of the fishing community and to those interested in the health and preservation of fish populations in the Chilliwack River Watershed.

5.0 Past/Current Actions or Strategies to Address the Issue

5.1 Fisheries Notices to Temporarily Restrict Gear

Restricting leader lengths to 1 metre has been used in the lower mainland in the past, apparently with some success (see Appendix A). This restriction request was made to help curb the incidental snagging of sockeye stocks which were of conservation concern, while allowing anglers the opportunity to continue to fish for abundant chinook stocks migrating upstream. A shorter leader length makes it more difficult to hook salmon with the bottom bouncing method of angling.

5.2 Code of Conduct adopted by the Sport Fishing Advisory Board (SFAB)⁵

Code of Conduct for Sport Fishing in BC – Fishing responsibly not only means protecting the environment and the resource, but also practicing safe fishing habits and respect towards others.

- i. Handle all fish with care.
- ii. Limit your catch to ensure fish for the future.
- iii. Leave your fishing spot cleaner than you found it.
- iv. Respect the rights of property owners and other outdoor enthusiasts.
- v. Use the proper tackle and methods for the species targeted.
- vi. Promote the sport by teaching children and new participants how to fish.
- vii. Become informed about your fishery and participate in its management.
- viii. Report all illegal fishing activities to the proper authorities.
- ix. Respect the space of others. Leave enough room for everyone to fish.
- x. Learn the fishing and boating laws and abide by them.

⁵ From *The Evolution of Recreational Salmon Fisheries in British Columbia*, Report to the Pacific Fisheries Resource Conservation Council, Gerry Kristianson and Deane Strongitharm, June 2006

5.3 River Watch, Guardian and Ambassador Programs⁶

A group of concerned anglers started a **riverwatch program** on the Coquihalla River in 2006. This program was initiated in response to decreasing compliance with regulations, poor angling ethics, and an undesirable angling experience on the river (e.g., garbage such as bait containers left behind and evidence of fish taken where only catch and release was permitted). Once approached, some non-compliant anglers indicated that they were not familiar with the current regulations on the river.

After contacting the BC Wildlife Federation (BCWF), this concerned group of anglers started a riverwatch program. The program is more oriented towards recording, reporting, educating, and informing (i.e., a non-confrontational approach). Two different 8.5" x11" signs were developed; one about the riverwatch program, and one about the current regulations (Figure 1). These signs were printed on yellow card stock, laminated, and zap strapped to trees throughout the watershed (Figure 2).

The group intended to also have formal "patrols" of anglers throughout the watershed. While on patrol, volunteers would record observations and approach other anglers in a non-confrontational way to converse about their angling experience and educate or inform where appropriate. No formal "patrols" were conducted in the first year of the program. However, positive informal encounters did occur between anglers in the group and other anglers on the river. In addition, although no formal records or data was captured during group activities, the group felt that compliance on the river did improve as a consequence of the activities, and that the angling experience also improved.

This project is a good example of cost-effective, grass-root activities conducted by a group of volunteers to help protect natural resources and their angling experiences.

In addition to the Coquihalla program, there are **River Guardian** programs in other parts of BC (not locally). These programs are funded by the Habitat Conservation Trust Fund (HCTF). River Guardians collect creel information and talk to people in a non-confrontational manner.

The BC Ministry of Environment (MOE) has a program called the **BC Conservation Corps**, which provides an opportunity for young people to enter the environmental workforce. One of the main components of the program includes compliance and education or outreach. There is a potential for MOE regional staff to apply for a pilot project to initiate a staff position that would conduct activities on Lower Mainland rivers similar to that described in Section 5.3. This person, together with the assistance of volunteers from groups such as the Coquihalla anglers, and resources to install simple signs, could make a difference towards educating and informing river anglers in the region.

⁶ Information provided by Erin Stoddard, BC Ministry of Environment, on December 5, 2006.



FISHING REGULATIONS	WILDERNESS WATCH 
<p>ANGLERS ARE RESPONSIBLE FOR CHECKING CURRENT REGULATIONS TO OBTAIN COMPLETE INFORMATION ON RULES AND RESTRICTIONS BEFORE FISHING. USERS SHOULD RELY ON THE INFORMATION BELOW ONLY AS A GUIDE.</p>	<p>This area is patrolled regularly by members of the Coquihalla Riverwatchers. We record and report all suspicious or illegal activities. This includes recording license numbers of vehicles in the area.</p> <p>The Coquihalla Riverwatchers is a volunteer organization made up of concerned citizens seeking to help protect this river as a valuable resource to be enjoyed by all.</p> <p>To volunteer or for more information please visit our website : www.coquihalla-riverwatchers.com</p>
<i>As of September 2006 :</i>	<p>In Partnership With CRIME STOPPERS </p> <p>To report, call: 1-800-663-9453 or 1-800-222-TIPS</p> <p>POACHERS ARE THIEVES Report Them!</p>
<p>For sections of the Coquihalla River ABOVE the entrance to lower railway tunnel (Othello Tunnels):</p> <ul style="list-style-type: none"> ● Fishing permitted ONLY until October 14, 2006. ● This section of the river is CLOSED TO ALL FISHING AFTER OCTOBER 14, 2006. ● CATCH AND RELEASE ONLY. No retention of trout / char (including steelhead). ● FLYFISHING ONLY. No floats or sinkers attached to line. 	
<p>For Sections of the Coquihalla River BELOW the entrance to lower railway tunnel (Othello Tunnels):</p> <ul style="list-style-type: none"> ● CLOSED TO FISHING April 1 to October 31. ● CATCH AND RELEASE ONLY. No retention of trout / char (including steelhead). ● BAIT BAN - ARTIFICIAL LURES AND FLIES ONLY 	

Figure 1 Signs developed for the Coquihalla Riverwatch Program



Figure 2 Signs posted along the Coquihalla River

5.4 Learn to Fish Programs & Events

A pilot **FishSmart program** was developed in 1999 in co-operation with members of the BC Wildlife Federation, BC Federation of Drift Fishers, Fraser Valley Salmon Society, Sport Fishing Institute of BC, bait and tackle shops, independent anglers, BC Hydro, Fisheries and Oceans Canada, and the BC Ministry of Environment, Lands and Parks.⁷ This program was piloted in a few schools throughout BC during the 1999/2000 school year.⁸ FishSMART's volunteers, who are dedicated anglers committed to sharing their love of the sport with children, are viewed as the strength of the program. These volunteers help teachers decide when and where to go for the class field trip and take the children through hands-on classroom and streamside activities such as:

- Angler etiquette,
- Streamside safety,
- Good catch and release practices,
- Using a spin-casting reel, and
- Fresh and saltwater fishing techniques.

The FishSMART Children's Angler Education Program is for children in grades 4-6 and covers such subjects as being a responsible angler and citizen, why people go sport fishing, fish and their habitat, and fishy careers.

In cooperation with the BC [Ministry of Environment](#), [BC Conservation Corps](#) and [ActNow BC](#), the **Family Fishing Society of BC (FFSBC)** implemented a **Learn to Fish Program** for youth and their families in 2006.⁹ Learn to Fish instructors gave basic angling skills to youth with no or little angling experience. The daily sessions included learn-to-fish tips, environmental awareness, angling ethics and just plain, old-fashioned fun.

An "**All About Fishing**" event, coordinated by the Fraser Valley Salmon Society, is usually held in April, in Chilliwack. Note that it is not being held in 2007 due to lack of a volunteer coordinator.

The **American Fisheries Society** has a committee called the "**Human Dimensions of Recreational Fisheries Committee.**"¹⁰ The Committee was established in 1993 in order to promote networking among those interested in this topic. Formed under the auspices of the Fisheries Management Section of the [American Fisheries Society](#), the Committee has the following goals:

- Emphasize applied and methodological aspects of recreational fishing studies (i.e., clientele identification, preference assessment techniques, angler survey design and techniques, sampling issues, study costs, case study experiences, etc.);

⁷ Website: http://www.pac.dfo-mpo.gc.ca/ops/fm/selective/project_list2001-2_e.htm#8; accessed April 18, 2007.

⁸ The Fraser River Sport Fish Advisory Board, Communications Working Group (1999)

⁹ Website: www.gofishbc.com; accessed January 30, 2007

¹⁰ Website: <http://lutra.tamu.edu/hdcom/>; accessed January 30, 2007

- Focus on important issues such as urban fishing programs, demographic implications, recreational fishing/ tourism interactions, catch and release trends, and resource allocation among others;
- Develop human dimensions materials and programs that meet the needs of fisheries managers;
- Provide opportunities for managers and social science researchers to dialogue on recreational fishing topics; and
- Focus on freshwater and marine recreational fisheries.

Many other events and programs throughout North America discuss and promote sport fishing ethics; only a few are listed here.

5.5 *Habitat Conservation Agencies*

Many conservation agencies have programs aimed at educating children and adults about the importance of the environment, natural habitat, and wild creatures. Some of these organizations also have interests in property along the Fraser River and in the Chilliwack area, such as:

- Ducks Unlimited Canada
- Nature Conservancy of Canada
- Nature Trust of BC
- Fraser Valley Conservancy
- Heart of the Fraser

These agencies may also have an interest in the issues raised in this document.

6.0 Relevant Jurisdictions and Legislation

6.1 *Federal Legislation*

Fisheries Act (R.S., 1985, c. F-14)

Fisheries and Oceans Canada is charged under Section 91 (12) of the constitution with responsibility for “Inland and Sea Coast Fisheries” and is therefore responsible for the conservation of salmon and regulation of salmon fishers. Fisheries Officers are responsible for enforcing the *Fisheries Act*.

Regulations

The *Fishery (General) Regulations, 1993* (SOR/93-53) give the Minister the authority to make conditions of licence. The *British Columbia Sport Fishing Regulations, 1996* (SOR/96-137) (BCSFR) made under the *Fisheries Act* set out provisions for sport fishing, including prohibited methods, quotas, possession limits, size limits, close times, gear restrictions and the requirement to have a fishing licence. The regulations apply to salmon as well as other fin fish in tidal and non-tidal waters of BC.

The BCSFR defines "foul hook" as hooking a fish in any part of its body other than the mouth. Section 10 of the BCSFR states that:

(1) No person shall willfully foul hook or attempt to foul hook any fish other than herring, northern anchovy, Pacific sand lance and squid.

(2) No person who accidentally foul hooks a fish in a lake or stream shall retain the fish.

A complete summary of the various federal offenses and charges are listed in Appendix B.

Enforcement Summary

Currently, there are nine Fishery Officers in the Fraser Valley East. The eight field positions are split evenly between the Mission & Chilliwack field offices. Three additional Fishery Officers are expected to begin in April 2007 (two for Chilliwack, one for Mission).

When anglers are caught violating a regulation, Fisheries Officers write a ticket on the spot (see Appendix B for a list of offenses and fines). Most tickets (90%) are paid without dispute. On occasion, a ticket will be disputed and the judge may lower the fine, but this is rare. For example, of the 10% of tickets that are disputed, approximately 25% end up with reduced fines.¹¹ These fine reductions are usually in response to a plea of poverty.

6.2 Provincial Legislation

Fisheries Act [RSBC 1996] Chapter 149

Under Section 8(1), the *BC Fisheries Act* specifies that "a person must not fish or take fish, or attempt to take fish, within British Columbia or its coastal waters, unless the person holds a valid license issued for that purpose and has paid the fee prescribed by the Lieutenant Governor in Council." The Act exempts persons under 16 years of age from requiring a license.

Wildlife Act [RSBC 1996] Chapter 488

Under section 12 of the *BC Wildlife Act*, a person commits an offence if the person angles in the non-tidal waters of British Columbia unless the person is the holder of an angling license or any other license or permit that is required by regulation, is an Indian residing in British Columbia, or is exempt by regulation. Under section 49 (1) of the *Wildlife Act*, a person commits an offence if the person acts as a guide for fish, or offers to act as a guide for fish, unless the person holds an angling guide license, or holds an assistant angling guide license. Section 53 of the *Wildlife Act* enables the Lieutenant Governor in Council, by regulation, to place restrictions on guiding for fish and angling.

¹¹ Statistics provided by Mike Fraser, DFO Fishery Officer, Chilliwack, November 30, 2006.

Regulations

Regulations that pertain to fishing include the Angling and Scientific Collection Regulation (B.C. Reg. 125/90), the Freshwater Fish Regulation (B.C. Reg. 261/83), and the Wildlife Act General Regulation (B.C. Reg. 340/82). The BC fishing regulations are summarized in the BC Freshwater Fishing Synopsis (2006)¹², which is published yearly and made available to anglers on the internet and anyplace where fishing licenses are sold. The regulations for salmon fishing in fresh water are not included in this Synopsis, but are available from any DFO Office or through the on-line Freshwater Salmon Supplement at DFO's website (www.pac.dfo-mpo.gc.ca/recfish). However, when fresh waters are closed to fishing or have gear restrictions outlined in this Freshwater Fishing Synopsis (2006), these regulations apply to fishing for salmon as well as for non-salmon species.

According to the Freshwater Fishing Synopsis (2006), it is currently unlawful to:

- Use barbed hooks or a hook with more than one point in any stream in B.C.
- Angle with a fishing line to which more than one artificial fly is attached (i.e. use “dropper flies”).
- Use a light in any manner to attract fish, unless the light is submerged and attached to the fishing line within 1 m of the hook.
- Fish with nets, including dip nets, minnow nets, gill nets or cast nets.
- Snag (foul hook)¹³ fish. Any fish willfully or accidentally snagged must be released immediately.
- Use more than one fishing line, EXCEPT when alone in a boat on a lake (two lines are allowed).
- Place any fishing gear in any water during a closed time (a “no fishing” period).
- Angle with a fishing line to which more than 1 kg of weight is attached (this does not apply to downrigger weights).
- Waste any caught fish. If a caught fish is not suitable for eating or if possession is illegal because of quotas, size limits or closed seasons, the fish must be returned quickly and gently to the water.
- Release fish in a harmful manner if it is not retained. Catch & release tips are outlined in the synopsis.
- Buy, sell or barter or attempt to buy, sell or barter any fish caught by sport fishing.
- Have any live fish in possession in the wild, or move any live fish or live aquatic invertebrates around the province or transplant them into any waters of B.C.
- Enter or cross cultivated land, posted land, private land or Indian Reserve land without proper permission.

¹² Available from: <http://www.env.gov.bc.ca/fw/fish/recreational.html>; accessed January 16, 2007.

¹³ Snagging (foul hooking) means hooking a fish in any other part of its body than the mouth. Attempting to snag fish of any species is prohibited. Any fish willfully or accidentally snagged must be released immediately.

- Exceed the daily catch, possession, monthly or annual catch quotas.
- Retain fish outside of the minimum or maximum size limit.
- Fish for or catch and then keep a fish that is protected under the regulations.
- Fish using prohibited bait/gear/method.
- Fish in Ecological Reserves in B.C. (note that fishing in Provincial Parks or Recreation Areas is allowed but the *Park Act* and its regulations apply)

Fines for these infractions are listed in Appendix B.

All anglers over the age of 16 are required to carry their license while sport fishing and, if asked, produce it for inspection by a Conservation Officer, Fishery Officer, RCMP constable, Park Ranger in a park, or an Officer under the *Wildlife Act*. Currently, a basic license must be validated with a conservation surcharge stamp for anglers wishing to fish for steelhead anywhere in B.C. (regardless of whether the intent is to keep the catch). A conservation stamp must also be obtained to keep a salmon of any legal size or species other than kokanee from non-tidal waters. All adult Chinook salmon retained must be recorded on the back of a basic angling license.

Enforcement Summary

The Conservation Officer Service has four officers that patrol the Fraser Valley (e.g. Abbotsford Langley Border to the East Gate of Manning Park to the border with the USA to Lytton in the Fraser Canyon). As with the Fisheries Officers, Conservation Officers work year-round, but they do have the ability to flex and to work evenings/weekends if needed. Work plans are developed based on past history and current trends, and the efforts of the conservation officers tend to be reactive rather than proactive. However, some proactive patrol blitzes have occurred in the past.¹⁴

7.0 Vision and Goals

7.1 VISION:

The Chilliwack River Watershed provides enjoyable angling opportunities that continue to be supported by strong and productive fish populations and healthy riparian and aquatic habitats.

7.2 GOALS:

The following are some general goals that highlight how workshop participants and the Project Team would like angling to be on the Chilliwack-Vedder River in the future and how progress towards these goals might be measured:

¹⁴ Information provided by Paul McFadden, BC Conservation Officer Service on December 19, 2006.

Goal #1: To have techniques and behaviours utilized by anglers on the Chilliwack-Vedder River result in minimal impacts on the fishery resource, especially stocks of concern.

Potential measure(s): injury and mortality caused by angling techniques and behaviors, number of fishery violations

Goal #2: To have all anglers fishing on the Chilliwack River be respectful of private property, the environment, other anglers and users of the river, fishing regulations and authorities, and the fish (e.g., demonstrated by proper treatment and release of fish).

Potential measure(s): amount of trespassing on private property, amount of garbage left by or environmental damage caused by fishers on the river, percent of fishers treating fish respectfully (e.g., when releasing fish), number of fishery violations

Goal #3: To have new anglers fishing on the Chilliwack-Vedder River learn about fishing regulations and ethics from experienced, knowledgeable, and ethical anglers who model behaviours that promote conservation of the resource.

Potential measure(s): number of family oriented fishing events and level of participation in these events, number of families (e.g. women/children) fishing on the River, percentage of new anglers utilizing guide services, prevalence of river ambassadors/guardians

Goal #4: To ensure angling on the Chilliwack-Vedder River is a pleasant experience for all involved.

Potential measure(s): number of conflicts between users on the river, overall rating of the experience of fishing on the Chilliwack-Vedder River by anglers in BC

8.0 Possible Options and Solutions

Table 1 summarizes a broad list of options for addressing fishing behaviour issues that were suggested by participants involved in workshops held to define and discuss this issue in fall-winter 2006/2007 and Project Team members. For each option, the advantages and disadvantages, challenges, relative cost of implementation, time required for implementation, feasibility of implementation from both a public and agency perspective, and potential champion(s) that could implement each option are listed. A complete summary of individual responses from the workshop participants is contained in Appendix C.

Table 1 Summary of options

Description	Advantages	Disadvantages	Challenges	Relative Cost*	Time-frame**	Feasi-bility	Potential Champion
EDUCATION CAMPAIGN: Develop education campaign (signs, articles in publications and newspapers, radio interviews, etc)	Non-confrontational, positive, anyone can educate, long term, good for new anglers, peer pressure effective	Not everyone is willing to be educated, difficult to reach everyone, won't address the issue alone, preaching to converted	Developing a program (e.g. determining appropriate messages, finding teachers, etc)	Low – High to do it right	Short - medium term	High	Province Federal Gov't Angler User Groups
RIVERWATCH: Develop a volunteer-driven Angler Ambassadors program (e.g. Riverwatch)	Non-confrontational, a way to collect data, report incidents, disseminate info & get anglers involved, make a good public image	A perception of interfering with personal space and rights, potential risk to ambassadors	Would require lots of volunteers & appropriate training, potential union and insurance issues, resources to coordinate and operate a program	Low-Medium	Short-medium	High	Province MOE Federal Gov't RCMP & DFO Anglers
RESEARCH: Research the impacts of illegal and unethical angling	Help support/justify actions, provide info needed to make actions effective	Requires significant time before action	Cost of doing research, public and agency support for studies, challenge with bias	Moderate – High	Medium-long	Mod-High	Province MOE Federal DFO Academic institutions
RESEARCH: Study the impacts of the sockeye fishery to determine the level of resource abuse attributed to this fishery.	May help indicate origin and cause of issue in Chilliwack. If convincing, could lead to required actions to remedy issue.	If results do suggest a benefit to closing sockeye fishery, would be confrontational and have economic impacts on local businesses.	Cost of doing research, public and agency support for studies, challenge with bias, outcome could be politically challenging due to history	Moderate to High	Medium-long	Mod-High	Province MOE Federal DFO Academic institutions
ENFORCEMENT: Request that DFO/MOE	Makes anglers more conscious of their	Confrontational, may not change attitudes	Sufficient resources, low penalties or lack of	High	Medium-Long	Mod?	Province MOE Federal DFO

Description	Advantages	Disadvantages	Challenges	Relative Cost*	Time-frame**	Feasibility	Potential Champion
increase enforcement of sport fishing	actions & the consequences		priority in courts could lower effectiveness				
INCREASE FINES: Request that DFO/MOE increase fines for angling infractions	Will help deter illegal activities, compensate for lack of officers, doesn't add burden to the courts	Confrontational, potentially more court challenges – which would tie up officers in court	Getting support from over-stressed justice system. Increased effort for enforcement and tickets required.	Low	Medium	Mod?	Province MOE Federal DFO Angler User Groups
DEDICATE JUDGE: Seek the installation of a judge familiar with environmental issues to handle environmental infractions in BC	Judge has more familiarity with environmental violations and understands what appropriate deterrents should be imposed	If judge turned out to be a lenient one, violators would become aware and not take the deterrents seriously	Convincing the Attorney General this type of judge is necessary to help address environmental abuse	Low (number of court appearances would not change)	Long	Low	All BC environmental organizations
RESTOR. JUSTICE: Implement restorative justice practices to bring offenders into long term willing compliance.	May be more effective than fines because it can create buy-in and awareness	Requires a shift in thinking about how to deal with offenders	Resources to implement, fitting new form of justice into our existing legal structure.	Low	Medium	Mod	Province MOE Federal DFO Angler User Groups
LEADER LENGTH: Request DFO/MOE to change regulations to restrict leader length	Easy to enforce, tangible, effective for all fishing types, may reduce fishing garbage left on the river	Confrontational, doesn't change attitudes, requires more enforcement, may negatively affect fly fishing, won't work alone	Getting support from all anglers, having enough enforcement resources	Low (high for more enforcement)	Medium	Low-Mod	Province MOE Federal DFO Angler User Groups
CIRCLE HOOKS: Request DFO/ MOE to change regs to only allow circle hooks with size restriction	Easy to enforce, makes it difficult to snag a fish, promotes more ethical fishing techniques	Confrontational, doesn't change attitudes, requires more enforcement, may reduce the effectiveness of ethical/legal fishing	Getting support from all anglers, defending the need without relevant data, having enough enforcement resources. Enforcement required	Low (high for more enforcement)	Medium	Low-Mod	Province MOE Federal DFO Angler User Groups
REDEFINE SNAG: Request DFO/ MOE to change the definition of snagging to state that flossing is snagging (and therefore illegal)	Help enforcement officers make clear distinctions between violators and anglers fishing legally	Officers may still be required to make a judgment call which may lead to an increase in tickets being challenged	Getting the change made in the regulations. Enforcement still required to be effective.	Low (time consuming for DFO/MOE staff)	Medium	Low - Mod	Angler User Groups Province MOE Federal DFO
ANNUAL LIMIT:	May reduce the abuse	Confrontational, more	Quite political, hard to	High	Medium	Mod	Province MOE

Description	Advantages	Disadvantages	Challenges	Relative Cost*	Time-frame**	Feasibility	Potential Champion
Request DFO/MOE to place an annual limit on the catch for all salmon using a punch card or tags for fish	of seasonal/daily limits – limit total angler take	paperwork for anglers, large expense for unknown gain	determine an appropriate limit that is adaptable to conditions yet simple, resources and support to change license system				Federal DFO
SPOT CLOSURES: Request DFO/MOE to implement spot closures to address temporary issues that arise because of local conditions	Can be targeted to address specific problems at specific times/locations – very flexible and theoretically targeted	Getting the word out to anglers about spot closures	Using them very carefully	Low	Medium	High	Province MOE Federal DFO
MAND. LICENCE: Mandatory licensing for all residents of BC	A way to track involvement of children, who would still fish for free	Benefit may not outweigh the cost, more paperwork	Justifying the need	Low	Medium	Mod	Province MOE Federal DFO
MAND. TRAINING: Mandatory training or test (like CORE for hunting)	Ensures anglers are taught fish ID, ethics and regulations	Very costly and resource intensive to develop and manage, increased expense for anglers	Government support for new legislation, merging old and new systems, affordability for fishers, developing appropriate course content, resources	High	Medium-Long	Mod	Province MOE Federal DFO Angler User Groups

***Relative Cost:**

Low = volunteer, staff or student time only

Moderate = Excessive staff time and/or up to \$5,000 additional funding required

High = More than \$5,000 additional funding required

****Timeframe:**

Short = within 1 year

Medium = within 2-5 years

Long = more than 5 years

9.0 Analysis

Numerous options were suggested to address problems associated with unethical and illegal fishing on the Chilliwack River (Table 1). With a few exceptions, most of these options were well supported by concerned anglers and representatives of regulatory agencies involved in workshops held to discuss this issue (Table 2). However, most options require additional analysis and dialogue with appropriate agencies and stakeholders before they could be implemented. This document provides a good starting point for that analysis and dialogue.

Many of the options that were suggested to address fishing behaviours were regulatory in nature (e.g. gear restrictions, closures, fines & enforcement). It should be noted that all federal regulatory changes currently take 3-5 years to take effect and no new changes are likely to be considered until the new *Fisheries Act* has been approved. In addition, any changes to the *Fisheries Act* have to be considered for their potential impact on the commercial fishery and all fisheries across Canada.

Ironically, some local anglers question the likely effectiveness of the one regulatory change that is currently before Ottawa, which would allow local fisheries authorities to implement an order to require the use of circle hooks when warranted by local conditions. Due to their shape, circle hooks are believed to reduce the incidence of accidental snagging, especially under certain conditions (e.g. low flows, large stock abundance). Another gear restriction, reducing leader length to 3 ft (1 m), is considered by some local anglers to be a more effective option. If pursued, fly fishers would need to be reassured that this restriction would not impede their ability to fish using flies, which is considered by some anglers to be one of the most ethical forms of fishing.

Another regulatory change that was considered appropriate by some local anglers was to implement spot closures where necessary to protect the resource. Spot closures could be used to temporarily close down certain fisheries in certain locations if warranted by local conditions (e.g. during extreme low flows when flossing is expected to have a higher than usual impact on the resource).

A more significant closure of an entire fishery, the sockeye fishery on the Fraser River, was suggested in response to the belief that the sockeye fishery is one of the key contributing factors to the problems surrounding unethical and illegal fishing. The sockeye fishery is distinct from other fisheries because sockeye do not bite at lures/bait/flyes and therefore cannot be caught in a 'sporting' way (e.g., where the fish chooses whether to bite the hook). Some anglers believe that closing this fishery will help reduce the use of flossing and eliminate the gold rush mentality that leads to unethical fishing behaviour on the Fraser and other rivers in BC. While there is some support for this option amongst local anglers, such a significant change requires additional analysis of its potential impact and discussion with many other stakeholders.

Implementing an annual catch for all species of salmon, in addition to chinook and steelhead, was suggested because it would help ensure that these stocks are not being abused (e.g. address problems with people cheating on daily and possession quotas). These quotas could be set at a level appropriate for each species and would be tracked using a card (e.g. similar to the current chinook and steelhead system) or a tag system.

It should be noted that any regulatory changes that are made will face the existing challenges associated with a limited enforcement capability. This is partly due to limited resources for enforcement and partly due to the inherent problem that there is limited means to punish individuals

who do not pay their fines (and most fines are too low to be worthwhile for a collections agency to pursue). While some regulatory changes and increased enforcement would likely improve the situation, regulatory changes are not necessarily a quick fix to this problem and may need to be augmented by other initiatives in the short and long term.

There is also a potential to deal with offenders using alternatives to the western legal system, such as restorative justice. A variety of restorative justice programs and approaches have emerged in thousands of communities and many countries throughout the world since the 1970s.¹⁵ Restorative justice approaches crime as “an injury or wrong done to another person rather than solely as a matter of breaking the law or offending against the state.”¹⁶ As a result, this method not only determines appropriate responses to criminal behavior, but also attempts to repair the damage caused by the crime, either materially or symbolically. This technique attempts to address concerns that the western justice system deepens societal wounds and conflicts rather than contributing to healing or peace. Often restorative justice programs are offered as choices within or alongside the existing legal system. Restorative justice programs (e.g. Qwi-qwelstom) implemented locally by the Sto:lo Nation and the District of Mission have met with some success and may be models for expanding this technique to other areas and issues.

Suggestions that fall under the heading of education and awareness are likely to be part of the solution. There are many existing initiatives that seek to educate young and new anglers on legal angling techniques and ethics (see section 5.0). These initiatives could be supported and expanded in the Chilliwack area. Many anglers feel that a strong presence of anglers on the river who model legal and ethical behaviours that promote conservation of the fishery would be valuable. In addition, a volunteer-based riverwatch or ambassador program for the Chilliwack River could be an effective way to get information to established anglers. While some anglers would prefer that ambassadors be given the capability to enforce regulations, this would not be allowed due to safety and liability issues. The authorities would require such a program to take a non-confrontational approach, such as observing, recording, reporting, and informing.

A mandatory training course would be another effective means to ensure anglers understand the fishing regulations. Such a course could also include information about ethical fishing. Similar to the BC Wildlife Federation’s Conservation and Outdoor Recreation Education (CORE) Program for hunting in BC, the course would likely be offered by a non-profit organization such as the BC Wildlife Federation. However, the course would have to be made mandatory by the BC Ministry of Environment and Fisheries and Oceans Canada.

Mandatory licensing of all ages in the freshwater fishery was another suggestion. Mandatory licenses are already required for all ages in the saltwater fishery. Therefore, this change would make the two regulations consistent and would help address the issue of anglers who increase their daily harvest quota by catching fish for their children.

Interestingly, some concerned anglers and agencies do not feel that collecting information on the impacts of “unethical” fishing to the resource is not a priority at this time. A larger priority for them would be to survey anglers to determine whether they think that fishing ethics have changed over time, how they feel about unethical fishing, and when/how they think the problem began. This information

¹⁵ Zehr, 2002

¹⁶ Department of Justice Canada, 2000

would help agencies/organizations better understand the human aspect of the problem and justify and target action appropriately, but would not adequately quantify the impacts on the resource.

It is clear that the problem of sport angling infractions and “unethical” behaviour on the large Fraser Valley rivers, including the Chilliwack River, has deteriorated to a level where no single small change in regulation or awareness will solve the entire problem. As shown by the matrix in Table 2, no single option effectively addresses all of the factors believed to be contributing to this problem. It will take a concentrated effort using a combination of initiatives and all government agencies, community interests, businesses, and non-profit organizations working together to create the desired change that will in the long term ensure a sustainable, respectful fishery that everyone can enjoy.

Table 2 Analysis Matrix

Option	Contributing Factors Addressed by the Options											3 parts to a solution ¹⁷			Support from Workshop Participants ¹⁸
	Sockeye sport fishery	No consensus on ethics	Availability/cost of gear	Lack of education	Lack of respect/underst.	Pressures on guides	Benefits local business	High expectations	Expect. no consequence	Lack of legislation/res.	Foreign visitors	Structural	Technical	Cognitive	
Education campaign		Y		Y	Y	Y		Y	Y	Y			X	X	Full High Low- Moderate Full Full Full High Moderate Full Full High High Full
Riverwatch		Y		Y	Y			Y		Y			X	X	
Research fishing trends		Y			Y								X		
Research sockeye fishery	Y					Y		Y					X		
Increased enforcement				Y	Y				Y	Y	X				
Increased fines					?				Y	Y	X				
Restrict leader length			Y					Y		Y	X				
Circle hooks only			Y					Y		Y	X				
Redefine snag		?							Y	Y	X				
Annual catch	Y									Y	X				
Mandatory licensing										Y	X				
Mandatory training		Y		Y	Y	Y		Y	Y	Y	X	X	X		
Spot closures			Y			Y		Y			X				

¹⁷ Three-parts-to-a-solution explanation:

Structural responses – Ask the question: Do we need government legislation, rules, guidelines, or policies?

Technical response (includes traditional knowledge) – Ask the question: Do we know enough?

Cognitive response – Ask the question: How can we create knowledge and buy in?

¹⁸ Rating explanation:

Full = all participants agree that this option should be pursued

High = certain aspects of this option was met with some hesitation by one or two individuals, but it is generally supported in concept

Moderate = certain aspects of this option was met with some hesitation by most individuals, but it is considered worthy of exploring further

Low = most individuals expressed hesitation or opposition to this option or certain aspects of the option

10.0 Recommendations

The following recommendations represent the subset of options that the fishing behaviour workshop participants and the Project Team for the Chilliwack River Watershed Strategy feel are the best options for addressing negative impacts of fishing behaviour in the watershed at this time. In generating this list of recommendations, the feasibility of each option, how well each option addressed the contributing factors, ways to support and build on existing initiatives, and anticipated support for the options were considered.

1. **EDUCATION AND AWARENESS:** CRWS Project Team **strongly recommends** local sport fishing organizations such as the Fraser Valley Salmon Society, Chilliwack Fish and Game Protective Association, and Sport Fish Advisory Committee work in collaboration with the key responsible government agencies, Fisheries and Oceans Canada and BC Ministry of Environment, to (a) develop and implement a targeted education campaign, and (b) organize and implement an Angler Ambassador program to help address the issues identified in the Chilliwack River Watershed.
2. **RESEARCH:** CRWS Project Team **strongly recommends** the key responsible agencies, Fisheries and Oceans Canada and BC Ministry of Environment, and academic institutions undertake studies to evaluate:
 - a) trends in fishing behaviours in the Chilliwack River Watershed and resulting socio-economic impacts;
 - b) negative impacts to salmon and salmon habitat from illegal and unethical fishing behaviours in the Chilliwack River watershed;
 - c) whether fishing strategies and behaviours arising from the Fraser River sockeye fishery are being misapplied to other fisheries in the Chilliwack River watershed with detrimental effects (i.e. determine whether the Fraser River sockeye fishery is the source of undesirable fishing behaviour in the Chilliwack); and,
 - d) options for addressing problems associated with illegal or unethical fishing behaviours in the Chilliwack River watershed.
3. **ENFORCEMENT:** CRWS Project Team **strongly recommends** the key responsible government agencies, Fisheries and Oceans Canada and BC Ministry of Environment, develop and implement an enforcement strategy to target sport fishing violations on the Chilliwack River.

Local experience suggests that the following actions may be beneficial for the Chilliwack River. They may also benefit other locations throughout the region or elsewhere, but further research and consultation would be necessary to determine their applicability and effectiveness elsewhere.

4. **FINES:** CRWS Project Team **recommends** the key responsible government agencies, Fisheries and Oceans Canada and BC Ministry of Environment, immediately review the possibility of increasing fines for angling violations and if found to be feasible, to implement the change on the Chilliwack River as soon as possible.

5. **DEDICATED JUDGE:** CRWS Project Team **recommends** local sport fishing organizations and other environmental organizations request that the attorney general appoint an environmental judge to review angling and other environmental infractions in BC.
6. **RESTORATIVE JUSTICE:** CRWS Project Team **recommends** responsible agencies investigate the potential of expanding the use of restorative justice practices to help bring fishery offenders into long-term willing compliance.
7. **LICENSING:** CRWS Project Team **recommends** the key responsible government agencies, Fisheries and Oceans Canada and BC Ministry of Environment, investigate the value of implementing a mandatory licensing system for all ages in the freshwater fishery (e.g. similar to the saltwater fishery) to help address angling infractions associated with catch limits.
8. **TRAINING:** CRWS Project Team **strongly recommends** that Fisheries and Oceans Canada and BC Ministry of Environment require training to be a mandatory prerequisite for obtaining a fishing license and support the development and implementation of a mandatory training course and/or exam that would be delivered by an external agency (e.g., similar to the core program).
9. **REGULATIONS:** CRWS Project Team **recommends** the key responsible government agencies, Fisheries and Oceans Canada and BC Ministry of Environment, after appropriate research and consultation with sport fishing organizations, anglers, and other stakeholders, consider regulatory changes and gear restrictions that may assist with effective conservation and enforcement measures. Possible changes to the existing fishing regulations that were discussed during this process that may help to alleviate some of the concerns associated with “unethical” fishing practices on the Chilliwack River include:
 - a) Restricting leader length to 3 feet (1 m) to help reduce the high incidence of snagging in the mouth.
 - b) Implementing a circle hook restriction to help address the high incidence of snagging
 - c) Making changes/additions to the definitions for snagging, flossing, and foul-hooking to help enforcement officers make clear distinctions between violators and anglers fishing legally.
 - d) Implementing spot closures to address specific angling problems at specific times/locations.
 - e) Implementing a card or tag system to limit the annual catch of all species of salmon to sustainable numbers, similar to the chinook and steelhead fisheries.

11.0 References

Bartholomew, A., Bohnsack, J.A., 2005. A review of catch-and-release angling mortality with implications for no-take reserves. *Reviews in Fish Biology and Fisheries* (2005) 15: 129-154.

DFO, 2000. Catch-and-Release Mortality of Coho Salmon in the Fraser River, British Columbia – Summary, March 2, 2000. Department of Fisheries and Oceans Canada, Pacific Region. Available: http://www.pac.dfo-mpo.gc.ca/fraserriver/recreational/recfishery99sprtcatch_e.htm; accessed January 16, 2007.

Department of Justice Canada. 2000. Restorative justice in Canada: A consultation paper. Available: <http://canada.justice.gc.ca/en/ps/voc/rjpap.html>; accessed February 23, 2007.

Lewin, W.C., Arlinghaus, R., Mehner, T., 2006. Documented and potential biological impacts of recreational fishing: insights for management and conservation. *Reviews in Fisheries Science* (2006) 14: 305-367.

Kristianson, G., Strongitharm, D. 2006. The Evolution of Recreational Salmon Fisheries in British Columbia. Vancouver, BC: Prepared for the Pacific Fisheries Resource Conservation Council.

Zehr, H. 2002. Little book of restorative justice. Intercourse, PA: Good Books.

Appendix A: Background Information on Flossing and Definitions

Background information:

The practice of ‘flossing’ began in earnest in BC when the abundant sockeye runs of the Fraser River were opened to sport fishing in the mid 1990’s. Anglers who were using long leaders found that because there were so many fish in preferred fishing areas, fish were often getting hooked this way by accident. Soon many anglers used the ‘flossing’ method **intentionally** to harvest their daily quota of sockeye. Most flossing is done by bottom bouncing but it can also be done while fishing with a float. Fly fishing can also be an effective flossing technique.

Over the past few years there is ample evidence that this method of angling has been employed actively on the Chilliwack River, especially when large runs of Chinook, coho, chum and steelhead pass through certain sections of the river.

It appears a number of commonly accepted ‘sport fishing ethics’ are not being honoured by anglers who employ the flossing method of capture.

Definitions¹⁹:

Sport Fishing

Sport fishing is defined as “fishing for recreation and not for sale or barter” in the BC Freshwater Fishing Synopsis (2006)²⁰ and fishing for recreational purposes in the *British Columbia Sport Fishing Regulations (1996)*.²¹ Under this definition, sport fishing includes angling, spear fishing, set lining and crayfish trapping.

Amongst some anglers, sport fishing means fishing in a way that allows the fish to choose whether to bite or not.

Angling

Angling is defined in the BC Freshwater Fishing Synopsis (2006) as fishing “(with or without a rod) with one fishing line to which only one hook, one artificial lure OR one artificial fly is attached.” *British Columbia Sport Fishing Regulations (1996)* defines angling as “fishing with a hook and line, with or without a rod,” but does not include fishing with a set line.

Set lining

According to the BC Freshwater Fishing Synopsis (2006), fishing with a set line (an unattended line left in the water) is only allowed in lakes of Region 6 & in lakes of Zone A of Region 7. Only one line with one hook (no smaller than 3 cm from point to shank) is allowed. Any game fish caught other than burbot must be released. Set lines must be marked with angler’s name, address and telephone number.

¹⁹ Unless otherwise specified, definitions were provided by David Barnes, Fisheries and Oceans Canada, on December 4, 2006.

²⁰ Available from: <http://www.env.gov.bc.ca/fw/fish/recreational.html>; accessed January 16, 2007.

²¹ Available from: <http://198.103.98.49/en/showtdm/cr/SOR-96-137//?showtoc=&instrumentnumber=SOR-96-137>; accessed January 17, 2007.

Spear Fishing

As defined by the BC Freshwater Fishing Synopsis (2006) and the *British Columbia Sport Fishing Regulations (1996)*, spear fishing means to fish with a spear or an arrow that is propelled by a spring, an elastic band, compressed air, a bow or by hand. No spear fishing for “game fish” or salmon, except burbot, is allowed in Regions 3, 5, 6, 7 and 8. No spear fishing of any kind is allowed in Region 1.

Crayfish Trapping

According to the BC Freshwater Fishing Synopsis (2006), it is legal to trap crayfish with any number or size of traps for personal consumption. All fin fish caught in traps must be released. To help sustain crayfish populations, it is required that crayfish less than 9 cm in total length be released as well as those bearing eggs or young.

Fly fishing

Fly fishing is defined in the *British Columbia Sport Fishing Regulations (1996)* and the BC Freshwater Fishing Synopsis (2006) as “angling with a line to which only an artificial fly is attached (floats and sinkers may not be attached to the line).” Fly fishing is a very popular method of angling in lakes and rivers and is probably considered the most skilful and sporting method of angling. The lure is an artificial "fly" that, in most cases, is tied (designed) to resemble a live insect, invertebrate, fish, or other food item that is commonly eaten by your intended quarry (i.e.. trout, bass, salt water salmon). Flies are typically made from feathers, animal fur, yarn and more recently, any number of artificial materials (plastic, mylar, etc). Some flies are tied so realistically it is difficult to distinguish them from the real thing. Other flies, like those typically used on the Vedder-Chilliwack system for steelhead and salmon, are not tied to resemble a food item (remember, salmon and steelhead do not feed during their spawning migration) but instead are meant to attract fish. These flies are typically large, bright gaudy affairs that seem to goad fish into striking. Unlike other methods of fishing, weights are not attached to the line when fly-fishing. The fly is cast using the weight of the fly line and the action of the rod to propel the fly out into the lake or river. The distance of the cast is directly related to the skill of the caster - a good single handed flyrodder can cast app. 60-70 feet while some spey casters (a form of fly-fishing using a 2-handed rod) can cast almost twice that distance. Fly lines are either floating or sinking or a combination of the two (i.e. sink tip), depending on the prey item you are trying to imitate. For example, if trout are feeding on the surface a floating line would probably be best to impart the right action for the chosen fly. On the Vedder-Chilliwack, most fly anglers use sinking or sinking tip fly lines.

Float fishing

Not including fly fishing, there are two main methods of river fishing: float fishing and bottom bouncing. Float fishing was and still is the most popular style of river angling and is self explanatory – a float is attached to the line and is adjusted for the depth of water. An example: if the water fished was 6 feet deep, you would adjust your float to about 5 feet deep. The idea is to keep your lure or bait off the bottom to stop hang-ups on the river bottom. When done right, if your float goes down you know it is a fish. It is very effective and is recognized as an honourable, sporting method of angling.

Bottom bouncing

Bottom bouncing describes a style of angling that does not use a float and is practiced more in U.S. rivers than here in BC but can be very successful in deep pools or runs. This method of angling uses a weight (a 2-3 inch piece of lead roughly the diameter of a pencil) attached to the line, typically 18-24 inches above the lure or bait. The lure is cast upstream and the weight is slowly bounced along the bottom as the current takes the line downstream. A fish may take the lure thinking it is an injured prey. This method of angling is not used much on the Vedder-Chilliwack (mainly because snags or hang-ups are common), but can be effective in very deep or swift water where float fishing is not as successful. Snagging can be a problem because as the fish are sitting in the pools operculating (breathing, opening and closing their mouths), the line will pass through their mouths. When an angler feels the line hit the fish he/she will often pull the line until it securely hooks the fish, usually on the outside of the mouth. A long leader maintains the line in a straighter position which allows for greater likelihood of a fish becoming snagged in this way. Bottom bouncing with a short leader (18-24") is considered by most as sporting and ethical but a leader longer than about 3 feet is not due to the increased chance of accidentally snagging a fish.

Flossing

This term started when fishing for sockeye became so popular on the Fraser River and anglers learned that sockeye could not be caught using regular, sporting methods (see above). Flossing is only successful when there are many, many fish migrating upstream (or holding in known pools or runs). Flossing requires a leader length of 6-20 feet to be really effective. This outfit is cast across stream and allowed to bounce downstream (hence the name of the weights used - Bouncing Betties). If there are enough fish in the system, one is eventually snagged as the line is dragged through the fish's mouth as it swims upstream, operculating. One usually hooks the fish on the outside of the mouth. The fish has not been enticed to bite; indeed a bare hook is all that is needed. There are still people who believe the fish are biting but invariably you will find the hook caught in the outside of the mouth. The fish does not make an active choice to bite at the lure but is effectively being 'snagged'. Since the fish is hooked 'in the mouth' it is a very difficult snagging method to enforce.

Snagging

Snagging is defined by the BC Freshwater Fishing Synopsis (2006) as "hooking a fish in any other part of its body than the mouth." Attempting to snag fish of any species is prohibited. Any fish willfully or accidentally snagged must be released immediately.

Amongst anglers, this term also describes the deliberate attempt to impale a fish, anywhere on its body, with a hook. Most times treble hooks are used but fish can definitely be snagged using single hooks.

Foul hooking

Under the BC Freshwater Fishing Synopsis (2006) and the *British Columbia Sport Fishing Regulations (1996)*, the definition of foul hooking is the same as snagging (above).

Unfortunately, foul hooking can occur, even when practicing ethical methods. Most times the snagged fish are not the intended target (e.g. foul hooking chum salmon when angling for coho or steelhead).

Appendix B: Fishery Notice on “Flossing”

Fishery notice on "flossing"

2003-07-14

Source: Fisheries and Oceans (DFO)

RECREATIONAL - Salmon

Subject: FN0420-Salmon: Non-tidal Waters of Fraser River - Region 2 -
Salmon Fishing Methods

Monitoring information collected by Fisheries and Oceans indicates that numerous anglers are continuing to use fishing techniques which are known to intercept sockeye salmon. Fishing for Sockeye salmon is closed (including catch & release) to sport fishing due to extremely low returns of Early Stuart sockeye.

Effective immediately, anglers using the bottom bouncing (flossing) method are requested to stop using leader lengths greater than one metre (3 ft).

Fisheries and Oceans will be monitoring the fishery for compliance over the next 48 hours. If compliance is not forthcoming immediately, then further measures will be taken. These measures could include salmon closures or a complete salmon closure until a sockeye salmon surplus is identified.

The objective of this action is to focus fishing effort on abundant chinook stocks and minimize impacts on co-migrating sockeye.

This reflects a change to the BC Freshwater Salmon Supplement. The online version of this guide will be updated within 24 hours of this notice, please browse:

<http://www-comm.pac.dfo-mpo.gc.ca/english/recreation/>

FOR MORE INFORMATION:

Contact the nearest DFO Office or consult the DFO website at:

<http://www.pac.dfo-mpo.gc.ca>

Fisheries & Oceans Operations Center - FN0420

Sent July 14, 2003 at 16:12:43

Appendix C: Potential Non-tidal Sportfish Charges

GENERAL OFFENSES

FISHERIES ACT 1985 (R.S., 1985, c. F-14) (Federal)

32	Destroy Fish (shoot seals)	A/N(COURT)
33	Unlawful Purchase/Sell/Possess Fish	A/N
62	Obstruct Fishery Officer	A/N
63(1)	Provide false/misleading statement to FO	A/N

BC SPORTFISH REGULATIONS 1996 (SOR/96-137) (Federal)

General

4	Molest/Injure fish	\$250
6(1)(a)	Fish with more than one line	\$150
8(1)	Fish with more than one hook attached to line	\$150
9	Fish with Illegal dipnet	\$150
10(1)(c)	Attempt to/Willfully foulhook fish (snag)	\$150
10(2)	Retain foul hooked fish	\$150
13(1)	Posses more than twice the daily quota of fish (not halibut)	\$100+\$50<\$1000

Salmon Non-Tidal

43	Fish for salmon during closed time	\$250
44	Catch + retain salmon in excess of daily quota (Pinks, Sockeye, Chum)	\$100+\$50<\$1000
45(1)(a-f)	see blue book	
45(2)	Catch and retain more than four salmon/day	\$100+\$50<\$1000
47(e)	Catch and retain more than the aggregate annual quota for chinook salmon (10)	\$100+\$50<\$1000
48	Catch and retain undersized salmon	\$100+\$50<\$1000
49	Fish for salmon by prohibited bait/gear/method	\$150
50	Fish for salmon other than by angling	\$150

Finfish other than Salmon

52	Fish for finfish other than by angling	\$150
55(1)	Fish during close time/Catch and retain...	\$250
56(1)	Catch and retain more than the daily quota (Possess wild steelhead, undersize trout)	\$100+\$50<\$1000
56(2)	Fishing after catching and retaining daily quota of steelhead	\$250
57	Exceed daily quotas of various spp. see blue book	\$100+\$50<\$1000
57(b)	Exceed daily quota of steelhead	\$100+\$50<\$1000
60(a)	Exceed annual quota steelhead (10)	\$100+\$50<\$1000
60(b)	Exceed annual quota white sturgeon	\$100+\$50<\$1000
63	Fish by prohibited bait/gear/method (Set lines, barbed hooks, closed time, etc)	\$150

FISHERY (GENERAL) REGULATIONS 1993 (SOR/93-53) (Federal)

33(2)(b)	Fail to release fish in least harmful manner	\$50
36(1)(a)	Possess species not readily determined	\$50
36(1)(b)	Possess # not readily determined	\$50
36(1)(c)	Possess weight not readily determined	\$50
36(1)(d)	Possess size not readily determined	\$50

BC WILDLIFE ACT [RSBC 1996] Chapter 488 (Provincial)**Angling**

12(a)(i)	Angle without license	\$115
12(a)(ii)	Angle W/O license or permit req'd. by reg. (Conservation Stamp)	\$115
24(7)(d)	Angle while license cancelled	A/N
24(14)(b)(iii)	Angle while prohibited	A/N
38	Fail to state location and date of fish were killed/taken/caught	\$115
82(3)	Alter a license or permit	A/N
95(a)	Fail to stop for officer	\$230
95(b)	Fail to identify himself to officer	\$115
95(c)	Refuse to give information to officer	\$115
97(a)	Fail to produce license or permit to officer	\$115
97(b)	Fail or refuse to state name and address	\$115

Guiding

49(1)(a)	Guide for fish w/o guide license	\$575
49(1)(b)	Guide for fish w/o license (assistant guide)	\$575
49(2)	Guide employs unlicensed assistant guide	\$575
49(3)	Angling guide not present	\$115
49(5)	Guide for fish in un-authorized area (guide)	\$115
49(6)	Guide for fish in un-authorized area (assistant guide)	\$115

WILDLIFE ACT GENERAL REGULATION (BC reg. 340/82)

16.01(e)	Fail to comply with condition of angling license	\$115
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ANGLING AND SCIENTIFIC COLLECTION REGULATION (BC reg. 125/90)

14(1)	Sell/Barter fish caught by angling	\$575
15(1)	Possess salmon or trout roe in excess of 1 kg.	\$230
17(a)	Fail to properly record Steelhead from non-tidal waters	\$115
17(d)	Fail to properly record Adult Chinook from non-tidal waters (Record other than in ink or at all)	\$115

POSSIBLE ABORIGINAL CHARGES

FISHERIES ACT 1985 (R.S., 1985, c. F-14) (Federal)

25(1)	Set fishing gear during closed time	A/N
27(a)	Obstruct fishway	A/N
(b)	Stop/Impede/Hinder fish from entering/passing fishway	A/N
(c)	Fish within 25 yards downstream of lower entrance to fishway	A/N
29(1)	Erect/Use/Maintain any Net/Weir/Device unduly obstructs the passage of fish	A/N
33	Purchase/Sell/Possess fish caught in contravention of Act or Regs	A/N
62	Obstruct Fishery Officer	A/N
63(1)	Make or give a False/Misleading Statement to Fishery Officer	A/N

FISHERY (GENERAL) REGULATIONS 1993 (SOR/93-53) (Federal)

11	Fail to produce license or fishers designation card	\$35
15(1)(c)	Use or produce a document under pretence of being the holder	\$75
34(3)	Waste fish suitable for human consumption while foodfishing	A/N
35(2)	Buy/Sell/Barter offer to Buy/Sell/Barter fish not authorized by licence	A/N

ABORIGINAL COMMUNAL FISHING LICENCES REGULATIONS (SOR/93-332)

7	Contravene or fail to comply with any condition of license	A/N
8	Person other than designated person unlawfully fish under authority of license	A/N

FIREARMS OFFENCES

FISHERIES ACT 1985 (R.S., 1985, c. F-14) (Federal)

32	Destroy Fish eg (shoot seals)	A/N
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BC WILDLIFE ACT [RSBC 1996] Chapter 488 (Provincial)

11(1)	Carry firearm without a license	\$230
11(1)(a)(i)	Hunt w/o license	\$230
24(14)(b)(ii)	Carry firearm while prohibited from carrying	A/N
26(1)(c)	Hunt wildlife not within the open season	\$345
26(1)(d)	Hunt during prohibited hours	\$230
26(1)(e)	Hunt wildlife with use of a light	A/N
26(1)(h)	Hunt with unplugged shotgun	\$115
27(1)	Shoot at/wound/kill wildlife from motor vehicle/boat	\$575
31	Discharge firearm on or across highway	\$345

WILDLIFE ACT FIREARM AND HUNTING LICENSING REGULATIONS (BC reg. 336/82)

5(1)	Hunt game without required species license	\$230
7 (1)	Fail to cancel species license	\$115

FIREARM ACT

3	Fail to exercise due care	A/N
12	Loaded firearm in vehicle	\$230

CRIMINAL CODE (note: see code for proper wording of charge)

86(1)	Pointing Firearm	A/N
90(1)	Possess prohibited weapon	A/N
91	Possession of un-registered restricted weapon	A/N
129	Obstruct Peace Officer	A/N
140	Public Mischief	A/N
249	Dangerous operation of Motor Vehicle/Vessel	A/N
264.1	Uttering Threats	A/N
267	Assault with a weapon	A/N
270	Assault Peace Officer	A/N

HABITAT CHARGES

FISHERIES ACT 1985 (R.S., 1985, c. F-14) (Federal)

35(1)	No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat	A/N
36(3)	No person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place or in any condition where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water	AN

Appendix D: Review of Options Discussed by Working Group

Education campaign

Pros:

- Positive medium to share ideas and solutions
- Allows anglers, who are interested in learning new methods/mentality, a chance to modify their approach to sport angling
- Necessary if regulations are changed to assist understanding and knowledge of why the changes/modifications were made
- Great for targeting new and young anglers
- Educating can be done by anglers themselves
- Long term solution
- Non-confrontational
- Expose anglers to ideas and facts to protect and conserve the fish and sport angling.
- Illustrate and freely talk about issues and topics that are somewhat taboo
- A cost effective way to teach anglers ethics, would promote angling in the way it should be approached
- Peer pressure can be a useful tool and this is a good delivery system

“Great way to reach new and old anglers alike.”

*“Start with guest lectures in schools, with the assistance of Fish & Game clubs”
“A hand out folder should be a mandatory upon purchasing a salmon conservation stamp”*

“The number one solution.”

Cons:

- Anglers must read & want to learn/ change. Somewhat preaching to the converted
- Anglers must desire, have interest in or be motivated to be educated
- Voluntary participation may not reach enough anglers to make a significant difference
- Will not be adequate alone to confront the issue

Challenges:

- Getting around the heavily debated and even shunned word ‘ethics’
- Finding an acceptable balance between the ‘ethics’ necessary for sport angling’s well being over things that are personal ethics
- Changing things that have been twisted into a question of ‘ethics’ when actually something else such as flossing is snagging, snagging is illegal (and for very good reason). Naming flossing as a question of ethics when it should not be will only cloud attempts to convey solid facts.
- Having publications print such articles depending on their ethical stance
- Determining what needs to be taught, i.e. ethics mixed with solid fact/science/management

- Finding people and/or a medium to present an education campaign, assembling lecturers, finding enough dedicated and experienced anglers with the teaching ability
- Finding time in our busy life style

Cost:

- Depends on how much materials are used (website, handouts, complementary gear for seminars etc), could be expensive if mass medias options pursued
- Affordable option
- Difficult to say as some would encompass volunteer activity, there would be initial cost in setting up course content, printed material, etc.
- I'm sure many anglers will happily volunteer their time to write articles at no cost.
- Paying to have articles written and included in publications could be costly

Time Frame:

- Should/could be one of the first steps to augment other efforts
- Long term
- Should be implemented in the near future.
- This is an action that is already underway and must be continued

“A measure that should be undertaken immediately”

Level of Public Support:

- High to indifferent

“The ethically angling public supports this stuff wholeheartedly and those that do not usually ignore such stuff anyhow.”

Relevant Jurisdiction:

- DFO, MOE, writers, and magazine publishers with the support of all fishing groups.

Angler Ambassadors Program (e.g. Riverwatch)

Pros:

- More eyes on the river to observe and report infractions
- Ability to provide some education in angler ethics, handling of fish, hand out info, etc
- Great way to involve anglers in protecting their resource & support enforcement agencies
- Gives the angling fraternity a good public image

“A visible deterrent to reduce the comfort zone for people which don’t angle ethically, would make trouble anglers far more cautious and uneasy.”

Cons:

- Some fisherperson may think there is an invasion of their space
- Training required in how to deal with confrontation
- Would or could be quite labour and time intensive
- Potential union and insurance issues

Challenges:

- Ensuring a non-confrontational approach
- Amassing a volunteer force, finding and maintaining a skilled group to operate this program (i.e. Willing volunteers, gas expenses, etc.)

Cost:

- Low
- Grants could cover basic operations (vests/hats, gas/mileage, signage etc)

Time Frame:

- Immediately. This will be short to get off the ground if several people dedicate to it.

Level of Public Support:

- High

“Support should be good for Chilliwack River.”

Relevant Jurisdiction:

- RCMP, Conservation Officer Service and DFO will need to be informed and will probably set some direction.

“Communication between local enforcement and river guardians will be crucial to success.”

Research Impacts of Unethical Fishing

Pros:

- Ecological research could help justify need for action (e.g. ethical fishing may be causing a conservation concern)
- Social research could help understand the reasons for unethical behaviour and target action more effectively

Cons:

- ↔ Studies are expensive and take significant time before results are available

Challenges:

- ↔ Capacity/interest to undertake research
- ↔ Funding

Cost:

- ↔ Moderate - high

Time Frame:

- ↔ Moderate - high

Level of Public Support:

- ↔ High

Relevant Jurisdiction:

- ↔ Academic institutions
- ↔ DFO
- ↔ MOE

Increased Enforcement of Regulations

Pros:

- Absolutely necessary to curb the blatant unlawful actions that are a spin-off from snagging/poor ethics
- Will make anglers far more conscious of their actions, puts onus the angler to be better educated, which is always good

“Will remove the ‘safe’ feeling poachers currently have on our rivers.”

Cons:

- Confrontational

Challenges:

- Any action made in regards to this issue won't operate at its highest potential without enough enforcement.
- Convincing Ottawa and the Province to dedicate enough funds and officers
- More officers working with low penalties and/or lack of priority in the courts could lower effectiveness. Some of this problem could be offset with a more enhanced fine system. Fines could support increased enforcement, while creating new jobs and a more protected resource.

“Set up a parallel court system to deal with salmon related infractions in the sport fishery.”

Cost:

- Relatively high

Time Frame:

- Immediately

“Immediately is not soon enough.”

Level of Public Support:

- High

Relevant Jurisdiction:

- DFO and MOE need to make a strong commitment

Increase Fines for Fishing Infractions

Pros:

- Will make the risk of breaking fishing regulations not worth it
- Might help compensate a lack of officers
- Realistic way of punishment without adding burden to the courts

“Would give teeth to laws in place to protect fish.”

“Fines should go back into enforcement and associated programs”

Cons:

- Higher fines may motivate more people to take charges to court, tying up officers from being in the field.
- Requires an increase in enforcement personnel along with increase in budgets

“More people will most likely challenge the ticket.”

Challenges:

- Pressuring a change to the fines
- Convincing court system to take fishing violations seriously
- Getting support from over-stressed justice system

Time Frame:

- Should be in short term plans.

Level of Public Support:

- High

Relevant Jurisdiction:

- DFO/MOE

Dedicated Environmental Issues Judge in BC

Pros:

- Judge has more familiarity with environmental violations and understands what appropriate deterrents should be imposed

Cons:

- If judge turned out to be a lenient one, violators would become aware and not take the deterrents seriously

Challenges:

- Convincing the Attorney General this type of judge is necessary to help address environmental abuse

Cost:

- Low (number of court appearances would not change)

Time Frame:

- Long

Level of Public Support:

- Low

Relevant Jurisdiction:

- All BC environmental organizations

Change Regulations to Restrict Leader Length

Pros:

- A tangible way to help reduce the incidence of snagging
- Easy to enforce if stated clearly in the regulations
- Should be manageable for all fishing types
- Reduce the amount of gear (e.g. lead, hooks, miles of lost leaders) that pollute our rivers

Cons:

- Doesn't address the 'intent' problem
- Alone, will not solve the problem
- Will only work with an intense increase in enforcement
- May negatively impact fly fishing

“Be aware that a shorter leader will not inhibit the same technique from working, however at a much lower success rate”

Challenges:

- Having enough enforcement to enforce the law.
- Not impacting other angling methods, i.e. fly fishing
- Convincing new fisherpersons that allowing fish to make a choice to bite is ethical

“Must make provision in leader length to accommodate the ethical fly fisherman.”

Relative Cost:

- Should be low to make change in regulations
- Cost for increased enforcement at least for the initial start of the regulation change

Time Frame:

- Should be a high priority
- Short/long term part of the solution

“Implement immediately, as it is a good start while more serious actions are put together”

Level of Public Support:

- Unless education is effective as to why these changes are needed, I imagine it will be low among general anglers. General public support will probably be high when the reasons for the regulation are understood and accepted.

Relevant Jurisdiction:

- DFO and MOE

Change Regulations to Allow only Circle Hooks with a Size Restriction

Pros:

- Difficult to snag a fish anywhere but from inside the mouth
- May encourage anglers to explore and focus on tempting a bite instead of currently counting on snagging a fish in or near enough to the mouth
- Used in conjunction with leader restriction could be very effective to curb foul hooking
- Easy to enforce

Cons:

- ➔ A lot of anglers will be skeptical about these hook's effectiveness and will probably balk at the idea, even if they are against/concerned about flossing/snagging
- ➔ Some desirable methods of fishing may see a drop in numbers of fish hooked
- ➔ May make fishing too challenging in some circumstances.

Challenges:

- ➔ Proving these hooks will work and are a necessary tool/burden to help remove the snagging issue.
- ➔ Defending the regulation without relevant data

“A study by anglers to prove effectiveness is needed at this time.”

Cost:

- ➔ Low

Time Frame:

- ➔ May be more suitable to move towards this regulation slowly.

Level of Public Support:

- ➔ Moderate to low

“Support may be difficult to find due to lack of public awareness of these hooks and anglers ongoing quest for more productive fishing methods.”

Relevant Jurisdiction:

- ➔ DFO/MOE

Redefine Snag

Pros:

- Help enforcement officers make clear distinctions between violators and anglers fishing legally

Cons:

- Officers may still be required to make a judgment call, which may lead to an increase in tickets being challenged

Challenges:

- Getting the change made in the regulations

Cost:

- Low (time consuming for DFO/MOE staff)

Time Frame:

- Medium GET

Level of Public Support:

- Low - Mod GET

Relevant Jurisdiction:

- Angler User Groups
- Province MOE
- Federal DFO

Implement an Annual Catch Limit for All Fish Species

Pros:

- Help reduce the abuse of seasonal and/or daily limits.
- Reduce angler pressure and catching fish for friends and neighbours by limiting how many fish each angler can retain in a season.
- Separate licenses with punch card limit for Fraser sockeye openings may help separate this 'fishery' from other angling.
- Limits angler overall take and minimizes meat fishing attitudes

"Help stop double dipping."

"Should be mandatory"

Cons:

- More paper to carry around and to keep track of
- Could be political, expectations with anglers.

Challenges:

- Determining an appropriate limit which possibly will change between species and systems
- Keeping it simple.
- Government not overly supportive of new licenses

Time Frame:

- Should be in short term goals

"Start now as it will take time to get implemented."

Level of Public Support:

- Moderate-high

Relevant Jurisdiction:

- DFO/MOE

Mandatory licensing

Pros:

- A tracking of licensed sport fisherpersons and underage anglers
- Way of getting information out to every angler.
- Necessary. This is the only way to reach fisherperson fishing only for harvest puposes.

Cons:

- Effort required

Challenges:

- Some challenges in merging the new license with the old
- Convincing the political system of the need

Cost:

- Low

Time Frame:

- Should be immediately implemented

Level of Public Support:

- Moderate

Relevant Jurisdiction:

- DFO, MOE, Fish and Game Associations.

Mandatory training and/or test

Pros:

- Promotes angler ethics
- Ensures that new fisherpersons have had some education on accepted fishing techniques, fish ID, handling of fish, safety, ethics, conservation, courtesy to other anglers/users and basic fishing knowledge, etc.
- A tracking of licensed sport fisherpersons and underage anglers

“Weeds out people who cannot be bothered to learn or be trained in angling fundamentals. These individuals are likely a part of the concern we are addressing.”

Cons:

- Creation of a fairly large and daunting administration program
- Could be a fairly costly initiative
- Resource intensive to manage. Would require legislation changes

Challenges:

- Creating the infrastructure for such a program
- Some challenges in merging the new license with the old
- Convincing the political system of the need
- Gathering the appropriate budgets to put the program in place
- Ensuring test can be challenged
- Dealing with course content in the ‘touchy’ subjects such as ethics.
- Changing things that have been twisted into a question of ‘ethics’ when actually something else (i.e. flossing is snagging, snagging is illegal and for very good reason).
- Cost is not too high as to make angling too expensive for some people

“Difficult sell for traveling anglers, this could be avoided by having an online test.”

Cost:

- Moderate (develop curriculum, course material, trainers)

Time Frame:

- Should be immediately implemented
- This program would need to be implemented slowly and carefully.

Level of Public Support:

- Moderate

“I think the public would be hesitant to accept this action, however in hindsight it would be considered a great step to creating better stewards of the resource.”

Relevant Jurisdiction:

- DFO, MOE, Fish and Game Associations.

“DFO or MOE would have to implement their own tests in relevance to the waters affected (Fresh or Tidal).”

Research closure of Fraser River Sockeye Fishery

Pros:

- Promote Sport Angling's zero tolerance for any form of snagging for any reason
- Help stop the snagging mentality on other rivers, i.e. Chilliwack/Vedder
- Will not confuse what sport angling is about with double standards
- Reduce the high level of infractions and poor angling values (poor fish handling, littering, non-selective fishing etc)
- Would eliminate the belief that snagging is a true angling method endorsed by enforcement agencies
- Should decrease the pressure that is now being put on chinook stocks

“Put the sport back into all angling”

Cons:

- Fishery good for economy
- Close opportunity for retention using biting methods (i.e. bar fishing, short floating and methods possibly yet to be discovered)
- Possibly too big a step too soon
- Will not stop the unethical fishing until such time as a new mindset has been instilled into the masses through education
- May mean further decrease in freshwater license sales

Challenges:

- Not creating (more) division between anglers
- Could be political, expectations with anglers, guides, tackle retailers
- Convincing the public, or anyone who has a vested interest in the fishery
- Convincing people that the link between sockeye fishery and the desperate state of Chilliwack River's (and others) angling and that removing it is worth it for Sport Angling's long-term well-being.

Cost:

- In an economic sense, may be high

Time Frame:

- Phase in over time after other steps are started / tested.
- If there are no conservation concerns on the Fraser River, a consultation process would be initiated and that process might be time consuming

“With a weak cycle coming in 2007, the time is perfect for such a closure.”

Level of Public Support:

- Low, but will improve if current trends continue among the angling community

Relevant Jurisdiction:

- DFO