



Final Report on the 2002-2003
Salmon River Watershed Planning Project
A Pilot Watershed-Based Fish Sustainability Plan

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Final Report on the 2002-2003 Salmon River Watershed Planning Project A Pilot Watershed-Based Fish Sustainability Plan

1.0 Introduction

The Watershed-Based Fish Sustainability Planning Procedure (WFSP) is a process developed by the Federal Department of Fisheries and Oceans (DFO) and Provincial Environment (MELP) and Fisheries (BC Fisheries) to help conserve BC Fish populations and their habitat. The WFSP process was designed to “help government, organizations and individuals with an interest in fish stewardship to coordinate their efforts ...and to focus on activities that use resources effectively in promoting positive results for fish”¹.

After a review of the WFSP guidebook and discussion with DFO representatives, the Salmon River Watershed Roundtable (SRWR) realized that the WFSP process reflects several of their own key operating principles such as: the recognition that fish are important ecosystem health indicators, consensus building in watershed planning promotes broad participation and improves the likelihood of success, and that building on existing initiatives is an important opportunity to advance fish sustainability goals within the context of social, economic and ecological sustainability planning. The SRWR saw in WFSP the opportunity to build upon an existing 10-year history of watershed sustainability practices undertaken with many partners. The WFSP process offered the opportunity to undertake conservation planning that would further the development of solutions to long existing fish, fish habitat and water related issues that exist in the Salmon River Watershed. The SRWR proposed to a broad range of First Nations, industry, landowners, citizens and government agencies that a WFSP be undertaken for the Salmon River Watershed. The proposal was widely accepted and was funded by DFO. The SRWR brought participation and existing planning products to the WFSP process. The WFSP process brought an opportunity to focus on fish and fish habitat issues as key components to watershed health in the Salmon River Project.

The approach taken recognized that some aspects of watershed health were already being addressed by the SRWR while at the same time enabling the SRWR WFSP planning group to move forward to address some of the yet unresolved sustainability issues , related to fish and water management. New and previous participants worked together over the year-long project identifying issues, assembling information and making recommendations.

The 125 recommendations obtained from the partners during the final phase of the process were assembled into a series of programs and projects, endorsed by the

¹ WFSP, pg ii, note from steering committee

participants. These programs and projects will be carried forward within the context of the broader watershed sustainability plan of the SRWR through a variety of partnerships. As such they will form part of the SRWR long-term action strategy of pursuing social, economic and ecological sustainability goals established in 1996. The strategy builds upon the SRWR 10-year history while holding the 20-200 year perspective required for long-term success.

The “strength” of the WFSP product is that it respects existing SRWR partnerships, sustainability goals, objectives, and guiding principles. The “beauty” of the WFSP product is that the process succeeded in the assembly and endorsement of specific fish and water recommendations, which the SRWR and its partners will implement as part of the Salmon River Watershed Plan.

The following report summarizes the 2002-2003 SRWR WFSP in terms of approach taken, process used, partnership involvement, and products produced as of March 2003.

2.0 Salmon River Watershed Roundtable Background 1991-2002

The purpose of the SRWR is “to be a catalyst to achieve and maintain a healthy Salmon River Watershed through coordinated management of all resources, respect for all concerns and cooperative, positive action.”² The SRWR, as a roundtable, is the action body of the Salmon River Watershed Society. The SRWR was formed in 1993 from the Salmon River Restoration Committee (SRRC), which had been struck in 1991. It was local First Nations and the Environmental Management Committee (EMC) of the District of Salmon Arm (DSA), which began the roundtable process by addressing concerns about the deteriorated condition of the Salmon River³. Landowners and several key agencies, including DFO, MELP and Ducks Unlimited, undertook habitat restoration demonstration projects starting in 1992. DFO has played a significant role throughout this period in assisting the SRWR both in terms of the type and consistency of technical and financial support provided as well as in its willingness to encourage local input in planning and field activity. An open, proactive approach to problem solving developed that encouraged other agencies and organizations to participate, and opened the door for constructive dialogue between First Nations, landowners, industry, agencies and citizens.

By the time the SRWR was formed in 1993, the linkage between certain watershed health symptoms such as eroding river banks, declining salmon runs, loss of riparian vegetation, high water temperatures and the larger question of watershed health had become apparent to the core group. Partnerships were expanded to include forest licencees such as Riverside Forest Products Ltd., all six First Nations Bands with land or traditional territory within the watershed, other government agencies such as the Ministry of Forests and the Columbia Shuswap Regional District, as well as a lengthening list of participating landowners, citizens and project funders (see Appendix 1 for list of partners since 1991).

² SRWR mission statement, adopted 1993

³ Discussion first began at the EMC as a result of the Chair, Dorothy Argent, hearing concerns from Mary and Louis Thomas of the Neskonlith Band

By 1996, after extensive consensus planning involving over 50 public meetings, a watershed plan including a long-term watershed health vision, guiding principles, and a set of 13 goals (presented in Appendix 2) had been adopted to address social, ecological and economic aspects of watershed (ecosystem) health⁴. Priorities set during the planning process, such as restoration of a riparian corridor, were pursued and by 2001 approximately 100 restoration sites had been undertaken with approximately 62 landowners, which represented approximately 20% of the priority, lower mainstem restoration sites identified in 1994. Restoration work was supported by a great many contributors, including DFO, Vancouver Foundation, Pacific Salmon Foundation, HRDC, Shell Canada, CPR, Gibson's Petroleum, Thompson Basin Fisheries Council, Action 21, Ministry of Forests, MAFF, MELP, and landowners. In addition, extensive water monitoring was supported by forest companies such as Riverside Forest Products, Forest Renewal BC and Environment Canada along with MELP, DFO, Thompson Basin Fisheries Council, and Fisheries Renewal BC. Literally thousands of volunteers and interested citizens have been involved in educational and restoration activities. They include both local and provincial groups such as elementary and secondary schools, University of Victoria, Douglas College, Shuswap Community Living Association, and the Canadian Mental Health Association as well as international government, study, and other interests groups from China, Nicaragua, El Salvador, Taiwan, Germany and many others.⁵

Local community acceptance of the value of the Salmon River Watershed Project and a sense of ownership by volunteers and landowners raised the level of awareness, and willingness to cooperate towards watershed sustainability. Attitude toward agencies, such as DFO and their representatives, has also improved considerably, as local community members, businesses, and landowners begin to recognize DFO and other agency staff as sources of assistance rather than as adversaries.

2.1 Opportunity to Carry Out a Watershed-Based Fish Sustainability Planning Project

The intent of the 2002-2003 WFSP project was to enfold participation and support from a broad range of stakeholders on key issues impeding watershed sustainability, particularly those related to fish, and fish habitat, and to identify avenues through which fish and fish habitat sustainability goals could be advanced. The WFSP project amounted to an opportunity to undertake a refinement of the 1996 Salmon River Watershed plan by focussing on fish and water issues, without losing the context of previously established goals, objectives, principles and actions. This initiative followed well from groundwork done through the Habitat Conservation and Stewardship Program (HCSP) to build relations within the community.

⁴ the vision, goals and objectives formed the 1996 watershed plan, which followed the ecosystem objectives template underwritten by the CCME and was sponsored by FRAP (DFO and Env Cda)

⁵ many sponsors supported these activities including several early, key contributors such as Mike Crowe, Mel Sheng, Neils Christiansen, Fred Mah, Mike Romaine, George Butcher, and others.

2.2 Fit Between Guiding Principles of SRWR and WFSP

The WFSP has enabled local interests and concerns to be identified, management options to be considered, strategic directions to be set, available information to be assembled, and a multi-year monitoring and action plan to be developed. These activities cross-reference well between the goals of WFSP and the goals of SRWR. They fall largely within Stages II and III of the WFSP template and within Goals 1, 2, 3, 4, 6, and 11 of the 1996 Salmon River Watershed Sustainability “Goals Objectives” (see Appendix 2).

Activities undertaken between 1993 and 2002 by the SRWR toward watershed sustainability, such as streambank and riparian restoration and watershed inventory, also link well to the goals of the WFSP. Programs such as Habitat Conservation and Stewardship (HCSP) and Habitat Restoration Salmon Enhancement (HRSEP) laid the groundwork for a better understanding of the importance of fish and fish habitat to humans as well as to the rest of the ecosystem. Many previously identified issues remained at the forefront of planning and field action objectives when the WFSP began. They include fish and fish habitat, water, and land management. In relation specifically to fish, they included the need to protect genetic diversity and productive capacity of fish stocks with emphasis on no net loss and net gain management strategies. Local economic considerations to achieve a sustainable watershed were also incorporated.

A summary of some key principles pursued, within the joint WFSP and SRWR methodology have been consolidated below:

Using an Ecosystem Approach:

- take a watershed-based perspective
- recognize ecological, social, political, and economic factors affecting fish and other aspects of watershed health including urban, agricultural and forest development
- guide related land and resource planning toward sustainability

Using an Inclusive Planning Process:

- use an inclusive process including representation from First Nations, all govt. levels, industry, landowners, NGO’s, citizens
- strengthen fish conservation interests
- pursue fish and fish habitat conservation in the context of an ecosystem perspective
- prioritize activities and resource use for the greatest benefit

Building Upon Existing Initiatives:

- respect agreements made to date by SRWR partnerships as expressed through the SRWR Mission Statement, Vision for Sustainable Watershed, Guiding Principles, and the 13 Watershed Sustainability Goals with related Objectives
- use a proactive approach to problem solving, no criticism of past practices, no finger pointing, a where from here attitude
- review and refine watershed health indicators initially suggested for discussion in 1996

- review and incorporate, where appropriate, existing information in monitoring (example: water quality), field action (example: streambank restoration) and planning (example: long term sustainability plan and short term annual work plan)
- recommend action using the best available information
- address genetic diversity and productive capacity of fish stocks
- emphasize no net loss and net gain management strategies for fish stocks
- use standard measures and accept non-technical information
- accept scientific and common knowledge

2.3 Purpose of Undertaking the 2002-2003 WFSP

The objectives of the WFSP project were to reach agreement on critical issues linked to fish and fish habitat sustainability and how to manage those issues for protection, restoration and enhancement of fish and fish habitat in the context of watershed sustainability.

The Salmon River Watershed Roundtable accomplished this through consultation and agreement with landowners, First Nations, industry and agencies, and other citizens.

Implementation of the recommendations made by the WFSP planning team, recorded herein, will enable the SRWR to plan its course of action over the next 10-20 years, with a view to advancing long-term (200-year) watershed sustainability.

3.0 Project Description

The WFSP project consisted of the following steps. Linkages between critical elements of watershed sustainability, such as water management, land use practices, and fish habitat were identified through a series of local community meetings. A planning team was assembled. Information needs were defined. Information was gathered and reported. The results were presented at a series of local community meetings with a request for recommendations. The planning team, took all the above into account and recommended a series of programs and projects designed to address information gaps and action recommendations obtained from the community and the task team members.

3.1 Overview of the 2002-2003 WFSP Project

The WFSP project utilized existing information as a basis for recommendations. Collectively, the partners had most, if not all, of the expertise needed. However, given their various workloads, budgets, and other resource constraints not all questions could be adequately answered within the short time available. Notwithstanding, the goal was to make best use of available information to arrive at a set of recommendations for improved fish and water management that was agreeable to all participants. The planning process was not allowed to stall based on lack of information. Absence of important

information to decision making was noted, and in some cases surfaced again in the recommendation step.

It was plainly stated in the WFSP template that “lack of information should not be a barrier to initiating WFSP. In fact, one of the important tasks of fish sustainability planning is to identify information gaps and ways to fill them”⁶ and that “WFSP can and should proceed using the best information currently available”⁷. The planning team agreed with this proactive approach, and followed it.

Viewed within the philosophy of the SRWR and its proposed context of a 200-year perspective, such shortfalls in information availability can be addressed, and incremental progress toward long-term goals can be accepted. Meanwhile, the 2002-2003 SRWR WFSP moved forward.

3.2 Activities and products Overview

The SRWR was able to outline and implement a model for delivering a local WFSP. The proposed approach combined public input with technical expertise to reach an agreeable outcome by broadening the Stage II and Stage III phases of the WSFP to include consensus-planning as the dominant aspect of the methodology. The model involves joint meetings to present information, make recommendations, identify issues, and identify next steps. Working groups were established to carry out those steps. The working groups were made up of individuals having access to the information and experience needed to carry out the WFSP. The working groups reported back to the entire group in the joint meetings. The final joint meeting ratified the set of recommended options for improved fish habitat and water management that the entire groups felt appropriate based on relevant technical, cost, and other information.

The detailed work schedules and products of the 2002-2003 WFSP have all been recorded, and are available in the Appendices 3-9 . In very brief overview, these schedules and products fall within three landmark steps

Key Planning Topic	Key Product Obtained	Key Product Completion
Fish and Water Issues	Issues Identified	Apr 02
Information Needs	Information Collected	Nov 02
Recommended Activities	Recommendations Adopted	Apr 02 and Mar 03

⁶ WFSP guidebook, p 5

⁷ WFSP guidebook, p 9

3.3 Rationale for Modifying the WFSP Template to Accommodate SRWR Principles

3.3.1 Consensus Planning

The WFSP guidebook sets out guiding principles, and states that within those principles, the planning template can be modified to suit the situation and partnerships included in any particular planning process. While the SRWR WFSP followed the overall process and produced the prescribed results, some modifications were made in methodology, which the planning group felt were crucial to success. In addition to the inclusion of a dominant consensus planning element with the WFSP as described in Section 3.2 above, the following section describes other specific areas where the WFSP guidebook template was also modified to better suit the project and partnerships of the 2002-2003 SRWR WFSP.

3.3.2 Fish and Fish Habitat Context

The guidebook refers to the need to put “fish first”⁸ in the planning process, and that in respect of the need to acknowledge other watershed values, other non fish considerations could be built into the process “at later stages” of the planning process. The SRWR planning team felt that fish and fish habitat interests can only be understood and protected in the context of ecosystem health, with consideration for all aspects of watershed health, and respect for all concerns. The Planning team elected to frame fish and fish habitat considerations within the watershed goals and objectives previously agreed to by many partners, so that all concerns were acknowledged in the belief that more effective participation in the fish and fish habitat planning process would be enabled. In effect, by doing this, the WFSP builds upon existing initiatives and secures fish and fish habitat considerations within the fabric of a long term watershed perspective and support from a broad partnership base.

3.3.3 Scientific Data and Local Knowledge

While it is generally accepted that standardized measures should be used in tracking success, it is also critical that the planning process be capable of accepting and incorporating both scientific and common knowledge. This is important because of the high value of local, traditional and historical knowledge from sources that are often viewed by the scientific community as “non-technical”. Without the capacity to include information sharing and participation from these sources, critical participation and support for the final planning product can be lost. The WFSP template acknowledges the importance of this, but the methodology used in the SRWR WFSP put emphasis on it.

3.3.4 Salmon as an Indicator Species

The WFSP guidebook points to salmon as a keystone species. The SRWR also sees salmon as a keystone species to ecosystem health, including social, ecological and economic health, but prefers to utilize salmon as one indicator within a suite of ecosystem health indicators, rather than singling it out. While it is indisputable that salmon population health is an important indicator of ecosystem and some cases watershed health, the planning group felt that it alone cannot be held as the sole or single

⁸ WFSP guidebook, pg. 4

dominant indicator of health for the Salmon River Watershed due to outside influences over salmon which cannot be controlled, even by the best local stewardship ethic. Conversely, the effort of the SRWR to protect and enhance fish and fish habitat through previous effort has been a key to WFSP success. Restoration activity undertaken with key support from HRSEP has not only improved fish habitat, but also was a very powerful tool in educating and motivating participation from a wide variety of project support, including landowners.⁹As such fish and fish habitat considerations remain very high on the SRWR list of ongoing watershed priorities.

3.3.5 Partnership Ranges

The planning group also added industry to its partnership group, in addition to those outlined in the guidebook: “First Nations, government and community watershed stewardship groups and environmental organizations”¹⁰.

3.3.6 Watershed Area

The recommended size of watersheds for WFSP is suggested to be 50,000 ha. The SRWR WFSP opted to include the entire Salmon River watershed (150,000 ha). This was thought to be manageable due to previous community planning that had achieved a watershed view, the availability of GIS mapping from OUC to help comprehend watershed issues at this scale, and existing partnerships already familiar with the scope of the Salmon River Watershed project.

In most other aspects, the WFSP guidebook was quite closely adhered to during the 2002-2003 SRWR WFSP project. Overall, the group felt the guidebook represents a major advancement in government approach to consultation and partnership building that points the way for other similar initiatives.

3.4 Flexibility by DFO in the WFSP Methodology

The SRWR has long valued technical and non-technical knowledge as important aspects of a collective view. For example, technical input is needed in identifying instream needs, water availability, and potential environmental side effects of options like storing water in lakes. Non-technical input, traditional and local wisdom, is needed from land owners, First Nations and others on such matters as where good storage options exist, stewardship values and priorities for use, local knowledge pertaining to feasibility considerations, and how best to implement the chosen options. Non-technical information can also improve technical information; either by filling gaps or pointing out specifics that scientific assessments or inventories will not adequately capture. Where differences of opinion exist about the validity of information (technical or non-technical) the participants need to enter into a dialogue to conclude what is the best information to use for a particular

⁹ This includes recent increased activity from regional DFO staff in working on off-channel, fish enumeration, watershed planning and streambank restoration activity. All these activities improve local understanding of fish and fish habitat values because of the effort made by DFO staff to involve local participants. This increases the effort required to accomplish fish habitat fieldwork, but pays dividends in terms of local understanding and support.

¹⁰ WFSP guidebook, pg 9

process, with the preferred outcome being mutual learning and consensus-based agreement. Much of what the SRWR has facilitated over the past 10 years has been a venue for mutual learning exchanges.

The flexibility demonstrated by DFO in allowing the WFSP to be undertaken in full respect of previous SRWR agreements and accomplishments, has paid dividends, seen in the results reported here. By allowing the planning processes to be locally led, DFO has demonstrated to participants a confidence in local ability and respect for local opinion within a shared decision making process. This, in turn, has encouraged participation and ownership by the many participating authors (see list of participants in Appendix 3). The SRWR has conducted its affairs in this manner for 10 years, and has managed to maintain strong partnership support due, in part, to this approach. Participants generally agreed that the WFSP would not have succeeded but for the groundwork achieved through previous SRWR activities. This is because the WFSP is so focussed on fish and fish habitat issues that it could alienate other related interests without significant effort toward an inclusive process and open acknowledgement that fish and fish habitat objectives cannot be met without broad support amongst various interests. However, in the context of the existing SRWR watershed plan, which has already gained broad acknowledgment that fish and fish habitat are important aspects of social, economic and ecological watershed health, it has found acceptance. As such the WFSP has built upon levels of cooperation and understanding, achieved since 1991, to improve the watershed plan and include specific recommendations to address fish and fish habitat issues.

4.0 Watershed Planning Activities and Products

A series of watershed planning workshops and meetings that began in 2002 resulted in agreement on several fish and fish habitat management options and identified a series of related water management options for further consideration. Through a forum of open discussion, which demonstrated respect for all concerns and promoted a positive approach to problem solving a series of final recommendations were adopted one year later (March, 2003). Participation from agencies, First Nations, landowners and industry has been key to achieving these agreements. The participation enfolded, planning steps taken and products generated are summarized below.

4.1 Partnerships, Roles and Representation

Partnerships are key to the success of the SRWR. The same is acknowledged within the WFSP process. “Without their skills, knowledge, and support, the process cannot be effective”¹¹ Under the WFSP project the Salmon River Watershed Roundtable and its partners have completed a watershed sustainability plan that combines the principles and processes of consensus planning, utilized by the SRWR, with the guidelines set out in the Watershed Based Fish Sustainability Planning Process (WFSP). In keeping with previous

¹¹ WFSP guidebook, pg. 15

consensus based agreements made within the Salmon River Watershed Roundtable an ecosystem approach to watershed sustainability was followed which adhered to principles, mission statement, vision, goals and objectives established by the SRWR in 1996¹². Thus, the project considers social, economic and ecological aspects of fish and fish habitat and their interactions with other land and water use.

The SRWR identified potential partners and determined their willingness to participate. This was a natural step for the SRWR based on its relationship with various stakeholders from previous planning and restoration activities. The SRWR role was to invite potential partners to participate, host and facilitate community meetings, and, in general, maintained continuity of process. All the partners, by virtue of their specific interests, are stakeholders in the management of fish and fish habitat. Some participants had additional roles to play. For example, federal and provincial agencies had access to technical expertise needed to analyze fish habitat and water management options. First Nations bands and landowners brought both scientific and local knowledge on water supply and use issues, which agencies may not otherwise have access to. The SRWR attempted to generate an appropriate mix of technical/non-technical input as part of its facilitation role.

Considerable effort was made to keep the general public in the valley informed of progress. In the work plan this was the specific job of one task team, made up of local people¹³. Reports of community meetings and communications flyers, brochures and letters with valley residents are recorded in the Appendix 4.

4.2 Identification of Issues

In March of 2002, a series of four community meetings were held to ascertain the local perspective on issues relating to fish and water management. Products obtained from these meetings in Westwold, Falkland, Silver Creek and Mt Ida (near Salmon Arm) included verbatim comments and a summary of key issues agreed upon by participants within each meeting.

Discussions included a review of potential fish and water management options considered by participants to be feasible and respectful of other interests in the watershed such as forestry, agriculture and tourism. Fish management options were discussed and five activities, some of which were familiar through 10 years of restoration work, were agreed upon and adopted. Water management options were generally more controversial, complicated and difficult to achieve. Also, there was significant apprehension about the capacity of government to achieve reasonable water management.

¹² Stavinga and MacDonald, March, 1997 Workshop, Fraser River Action Plan, DOE FRAP 97-08

¹³ Refer to Tasks and Timelines Summary Tables dated Sept 02 outlining task team workplan.

Of the five fish habitat improvement options discussed it was agreed that *streambank restoration*, *off channel habitat redevelopment* and *intake screening* are technically feasible and effective and recommended for continued funding. The remaining two options: *beaver management* (to reduce riparian vegetation losses) and *improving delta passability* (for migrating salmon at summer low flow) were to remain on the list of high priority options for which feasible solutions need to be developed.

Of the six water management options, two, *do nothing* and *access more groundwater*, were discarded as unsustainable. Two others, *increased irrigation efficiency* and *increasing spring runoff storage capacity*, were recommended for study to identify techniques, costs and side effects. The last two, *reduce licenses* and *manage upland runoff*, were recognized as important options that should be pursued, but initially appeared to be problematic and perhaps impracticable due to potential cost to agriculture and forest industry.

All information from the four community meetings was collated into themes and information needs (Appendix 5). The five fish management recommendations and the six water management options were summarized and reported back to participants .

4.3 Early Recommendations, March, 2002

In March, 2002 themes and options described above were presented to forty-two representatives of industry, landowners, citizens, First Nations, and government agencies. They ratified the five fish habitat management options as below:

Fish Management Recommendations Adopted (March 23, 2002)

Recommendation	Major Focus
Continue developing off-channel fish habitat	Fish
Continue water intake screening project	Fish
Develop and implement better access across delta at low flow	Fish
Continue riparian restoration	Riparian
Develop beaver management techniques	Riparian

The planning participants agreed that the six water management options needed more detailed consideration. Concerns over summer low flow and temperature issues in relation to minimum flow requirements for fish stocks, licensed withdrawal and the potential to resolve some of the apparent shortfall between demand and supply through increased water storage and irrigation efficiency formed a series of interrelated questions which the group needed information about before collective recommendations could be made. To address these issues effectively it became apparent that many related aspects of watershed planning such as forest harvest and agricultural interests had to be considered in their affect on water (as well as on fish and fish habitat).

Potential Water Management Options

Water management options proposed for consideration, March 2002	
Do nothing	Discarded as unsustainable, Mar. 02
Access more groundwater	Discarded as unsustainable, Mar. 02
Increase irrigation efficiency	Under consideration till Nov. 02
Reduce licensing	Under consideration till Nov. 02
Manage upland (forest) runoff	Under consideration till Nov. 02
Increase spring runoff storage capacity	Under consideration till Nov. 02

4.4 Information Assembly to Address Issues (Tackling Tougher Issues)

It was apparent from the March 2002 local community meeting results that greater effort was required to determine suitability of the six potential water management options outlined. The April 2002 planning group meeting resulted in the adoption of fish management recommendations and identification of information needed in order to consider the proposed water management options further. Based on those needs, a Draft Plan for Information Gathering Tasks and Timelines was developed by the group (see Appendix 6). It was used as a work plan to guide planning group efforts over the next 9 months. The purpose of the information gathering phase was to clarify which of the potential water management options might be feasible and which might not, and eventually, to reach agreement on recommendations. This draft workplan identified tasks, task teams, others to involve, period goals, resource needs, cautions/risks, and victories for each of the 10 tasks.

Information Gathering Task Teams Formed Sept 02 (Brief Overview¹⁴)

Task Team	Main Focus Area
1. Identify off-stream water requirements and efficiency	Determine human use (especially irrigation) demand and irrigation efficiency opportunities
2. Determine aquatic habitat requirements	Determine river flow needed to sustain fish and aquatic life
3. Estimate surface and ground water availability	Determine water inventory
4. Estimate water available from modified forest harvest patterns	Determine the affect of forest harvest on the hydrograph
5. Identify storage opportunities	Determine potential for water storage
6. Identify water quality issues	Determine main water quality concerns
7. Collate existing information	Compile and distribute existing information to task teams
8. Community extension options	Develop plan for effective information sharing

¹⁴ See Appendix 6 for the entire information gathering work plan “Information Gathering Tasks and Timelines”

This phase became dynamic and interesting because many participants were willing to participate outside their comfort zone, in terms of technical expertise, alongside technical experts to seek out the required information. Landowners worked with fish and agriculture specialists, fish specialists with water specialists, water specialists with foresters, First Nations with landowners and so on. The task teams are listed below, and a detailed copy of the information gathering tasks and timelines plan is included in Appendix 6. The process resulted in information sharing beyond what had been previously accomplished in SRWR planning processes.

During this period considerable effort was made to collect and present information. Through an existing partnership between the SRWR and Okanagan University College a tremendous amount of assistance was obtained in the form of GIS mapping¹⁵ This invaluable assistance enabled the SRWR to put information into an easily viewed and understood format. The GIS maps provided by OUC enabled planning team members to keep track of very large amounts of data describing various watershed characteristics, so that discussions could occur and decisions could be made. Much of the data used¹⁶ had previously been available to the SRWR, but never in such a useful format. The result was that some conclusions became obvious, others needed further clarification, and potential recommendations began to filter through from the discussion. From this project it is clear that GIS was very beneficial and should probably be part of any WFSP project.

4.5 Information Presentation

The November 2002 meeting included presentation of task team progress reports as well as discussion of remaining issues and needs. In addition, all participants agreed to two statements:

1. "There clearly is a water management issue in the Salmon River watershed."
2. "It is not the intention of this planning group to recommend that government "claw back" water licenses without the approval of the licensees."

The following table summarizes key points from the Task Team progress reports. See Appendix 7 for the November 2002 progress report.

¹⁵ OUC instructor Mitch Krupp provided key support to the WFSP planning process.

¹⁶ Examples: water license information, water storage sites.

Task Team Final Reports: Summary of Some Key Points (see Appendix 7)

Task	Final Report Key Points
1. Identify off-stream water requirements and efficiency	Landowners are concerned that water licenses not be lost. Water licenses are currently the best estimates of water use. OUC GIS department produced maps showing water license locations and derived summaries by type of license. MAFF plans to estimate water consumption by type of land use. This will lead to a better estimate of actual water use and could be used to improve irrigation efficiency. Interested landowners should contact MAFF or the SRWR.
2. Determine aquatic habitat requirements	Haig-Brown: "...habitat... is far more important to its (<i>a creature's</i>) survival than anything else." Tennant method used to estimate fish needs. Flow needs vary by stage in fish life cycle. Salmon River, flow, net of water use, is adequate for fish in average year, but, inadequate for drier than average years.
3. Estimate surface and ground water availability	Used daily discharge at Hwy #1 (1961-2001). Derived hydrograph for average and several degrees of wetter and drier years. Peak flows show a significant increase. Low flow show a significant decrease. Total annual discharge shows a significant increase.
4. Estimate water available from modifying forest harvest patterns	A report for the Okanagan will be available in several months. It will describe forest harvest related factors affecting the hydrograph and will summarize what is/is not known about their affects on water. This will help answer some outstanding questions about the affect of forest harvest practices on water management which are key to establishing a long-term sustainability plan.
5. Identify storage opportunities	628 lakes and ponds and 1028 swamps and marshes were identified. Increasing depth 16" would store 7600 acre-feet. Need further work to identify feasible sites. Could turn increased runoff due to logging to advantage, provide for fish and irrigation, improve water quality, fire control, and small-scale hydro generation.
6. Identify water quality issues	Turbidity spikes occur at freshet & major rain events. High phosphorus levels seem to occur naturally. It is not clear whether there is an agriculture link. Bolean Creek contributes high quality water to the main stem. Clearly, water quality is an issue in the watershed.
7. Collate existing information	Five documents on water management provided to the SRWR. Provided explanation of the five-year, seven-day min. flow in licensing: gives 80% assurance that water will be available for irrigation. Process under development, BC-wide, for assessing in-stream needs. Discussion re: various topics including possible measurement of actual ground water use, process of allocating water for in- and off-stream use, and the nature of conservation licenses.
8. Community Extension options	Promoted community involvement and WFSP as an effective planning tool. Developing volunteer program to disseminate WFSP recommendations. Created plan for an intense effort from Feb. 4 to Mar. 18 to take task team reports to the community and to obtain feedback and recommendations for the planning team's consideration on Mar. 18.

(See Appendix 7 for the November 02 progress report and final reports including details of the above)

Significant progress in understanding local water issues was made as task team members cross-referenced flow data with instream (fish) needs to help define minimum flow requirements. Key issues such as water availability and water use remained unanswered, and the provincial agencies with the mandate to manage these elements appeared unable to address these aspects due to current management priorities. The planning team continued to seek ways to work around these shortfalls. Task Team 1 utilized licensed water use as an interim indicator of water demand. A GIS map was produced to show

high demand areas within the watershed. MAFF offered to provide alternative indications of water demand as of fall 2004 for the entire watershed following completion of a land use assessment currently underway. Minimum flow, flood frequency, and fish flow requirements were compiled. Storage site potential was described including some typical examples of structure already functioning locally. Water quality highlights were identified. Further work was planned to complete the information gathering stage by January, 2002 as scheduled. (See the November 2002 summary of key issues in Appendix 7 for other important aspects of progress and work to be done.)

4.6 Refinement of Indicators Selection

Selection of ecosystem health indicators for the Salmon River watershed began in 1996. As part of the 1996 workshop product, a series of ecosystem health indicators were suggested for consideration. Some have been utilized during the period 1996-2003, although a discrete suite of indicators and associated monitoring programs has not been devised. Since 1996 significant work has been done in BC and Canada on indicators selection and use. The 2002-2003 WFSP has built upon this by taking the selection of Salmon River Watershed health indicators to the next step. An inventory of existing indicators of various aspects of social, ecological and economic health was assembled from a variety of potentially relevant sources. These included Health Canada, Environment Canada, BC MELP, Ministry of Forests, Fraser Basin Council and the tentative SRWR indicator lists. None of the indicator suites were entirely adequate for Salmon River Watershed purposes, although each suite included relevant elements. Criteria characterizing useful indicators were developed. Indicators were short-listed based on the relevance to the 1996 sustainability goals of the SRWR. Indicators were also cross-referenced to those selected by the Fraser Basin Council in the hope that Salmon River watershed monitoring could be integrated with similar efforts at a higher order, within the larger Fraser Basin, in concert with the Fraser Basin Council,

Indicators from the short list were discussed and some were suggested by the planning team as strong contenders for use as indicators of success in achieving the SRWR goals and objectives. This was done with provision for modification of the list, should gaps in the indicator suite become apparent during implementation. The group agreed that these indicators would be refined following completion of the 2002-2003 SRWR WFSP. The working list will become part of the data assembled by the planning team with the intention that they will be tested during ongoing monitoring processes. It was agreed that the logical application of these indicators would be during the implementation of the WFSP recommendations (programs and projects) as a means to track long-term progress. It was decided that the SRWR should attempt periodic reporting of watershed status, using the indicators selected, similar to the process used by the Fraser Basin Council.

4.7 Final Recommendations

Following the information gathering and indicators selection the final step in the 2002-2003 SRWR WFSP was to seek agreement on future recommendations for the planning team members. The information assembled by the task teams was summarized and presented for discussion with a request for recommendations about the directions the SRWR should pursue. Recommendations were gathered from both the planning team members and from participants at local community meetings. A cross section of the local community was involved in making these recommendations including First Nations, landowners, ranching and forest workers, local community associations, local economic development and municipal government representatives and individual citizens. This was an important step, as the whole WFSP process had begun with a round of local meetings asking about fish and water management issues. By reporting back with the information assembled and asking for recommendations local community members remained an integral part of the WFSP process.¹⁷

The response was good. By the time the local meetings were completed significant redundancy in suggestions had occurred, indicating a sufficiently exhaustive feedback mechanism. These recommendations were combined with previously recorded recommendations and assembled into a list of 125 particular recommendation statements (see Appendix 8). This recommendation list was treated as “raw data” in organizing 11 programs each including several projects. All the recommendations were accommodated within the programs. These programs and projects were reviewed, discussed, modified and adopted by the planning team. They are provided in Appendix 9. This is a key product, which will be important planning tool in guiding future SRWR activities both in the short term (annual work planning) and in the long term (strategic directions planning).

The following table summarizes the program and project recommendations. The entire table is presented in appendix and the 125 “raw data” recommendations are presented in Appendix 9.

¹⁷ Notes taken at the initial community meetings indicate good correlation with the resulting recommendations formulated a year later. Both the notes and the recommendation files remain as data files in the ongoing community planning process.

List of 11 Programs Recommended by the SRWR WFSP Participants (see Appendix 9)

Program Topics
1. Measure Sustainability Progress
2. Forest Practices
3. Land Use
4. Economic Development
5. Fish and Fish Habitat Management
6. Riparian Management
7. Surface Water Availability
8. Water Storage
9. Ground Water Management
10. Off-stream Water Use
11. Water Quality

(see Appendix 9 for full description, as adopted, of program and project recommendations)

5.0 Project Conclusions

The guiding principles of the WFSP are a good match to those of the SRWR. This close match has enabled a partnership between WFSP and SRWR to be defined relatively easily. Flexibility by DFO in the precise methodology that the SRWR wished to use to accomplish the WFSP objectives created a win-win for all participants. Because of the existing SRWR watershed plan, which has already gained broad acknowledgment that fish and fish habitat are important aspects of social, economic and ecological watershed health, the WFSP process and products have also found a ‘home’, and are already being acted upon. As such the 2002-2003 SRWR WFSP has built upon levels of cooperation and understanding, achieved since 1991, to improve the watershed plan and include specific program recommendations to address fish and fish habitat issues

The WFSP has also re-validated the past 10 years of effort toward watershed sustainability by concurring with and building upon many of the initial activities and objectives, some of which had never before been effectively addressed by the SRWR. The SRWR is well positioned, well focussed and well motivated to move on to the next 10 years of activity by implementing the WFSP recommendations. A win-win moment in watershed sustainability has occurred with the completion of this WFSP project. The WFSP has created the opportunity for interested people from various roles and walks of life to cooperate toward better fish and water management. The SRWR facilitated the process, and the community owns the product and opportunity to act. The WFSP project will probably be looked back upon as a key point in the achievement of long-term (20-200 year) success

6.0 Future Directions

Since completion of the planning process, three recommendations (temperature monitoring, water level monitoring and continued restoration) have already been acted upon. Several landowners have volunteered to help measure water levels on their properties, provincial minimum flow standards will be developed, forest impacts on hydrograph are being investigated, restoration site priorities are being revisited, off channel monitoring of juvenile Coho and Chinook are being monitored, the local municipal government is reviewing the timing of its spring ditch cleaning activity, local citizens are offering to come help the Neskonlith Band in rescuing stranded salmon unable to negotiate the shallow water at the river delta at the time they return to the river to spawn, along with many other actions. Offers for partnership continue to arrive, such as for assistance with tree planting from Canadian Tire Corp, and for wood supply for restoration work from MOF Skimikin Nursery. In addition community meetings are continuing with several planned in April, 2003 to explain the outcome of the 2002-2003 WFSP. In addition a second brochure to summarize the WFSP will be developed and distributed by the SRWR. Subject to resource availability, the SRWR will continue to pursue the implementation of all programs and projects endorsed under the WFSP project.

The chair of the SRWR is organizing a business plan for the SRWR, including the development of an annual workplan, which will be based in part on the findings of the WFSP. As resource sources become available, the recommendations of the WFSP will be acted upon. The WFSP has set the stage for the SRWR to launch into a second decade of progress toward sustainability, including emphasis on critical fish, fish habitat and water management issues.

7.0 Appendices (see CD)