Glossary of Terms

Other Data Sources

Aquifer – natural underground layer of porous, water-bearing materials (sand, gravel) usually capable of yielding a large amount or supply of water. Use of the term is usually restricted to those water-bearing formations capable of yielding water in sufficient quantity to constitute a usable supply for human uses.

Aquifer (confined) – soil or rock below the land surface that is saturated with water. There are layers of impermeable material both above and below, and it is under pressure so that when the aquifer is penetrated by a well, the water will rise above the top of the aquifer.

Aquifer (unconfined) – an aquifer whose upper water surface (water table) is at atmospheric pressure, and thus is able to rise and fall.

Artificial recharge – a process where water is put back into ground-water storage from surface-water supplies such as irrigation, or induced infiltration from streams or wells.

Bank incision – entrenching of certain streams/rivers into the adjacent land.

Base flow – streamflow coming from ground water. In summer months, virtually all water in Chehalis basin streams is base flow.

Best management practices – structural, nonstructural and managerial techniques that are recognized to be the most effective and practical means to control nonpoint source pollutants yet are compatible with the productive use of the resource to which they are applied. BMPs are used in both urban and agricultural areas.

Biochemical oxygen demand (BOD) – the amount of oxygen consumed by microorganisms (mainly bacteria) and by chemical reactions in the biodegradation of organic matter.

Commercial water use – water used for commercial facilities such as motels, hotels, restaurants, office buildings, institutions, etc.. Water for commercial uses comes both from public-supplied sources, such as a county water department, and self-supplied sources, such as local wells.

Community water system – a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Condensation – the process of water vapor in the air turning into liquid water. Water drops on the outside of a cold glass of water are condensed water. Condensation is the opposite process of evaporation.

Consumptive use – water removed from available supplies without direct return to a water resource system for uses such as manufacturing, agriculture, and food preparation. Also referred to as water consumed.

Control points – legal descriptions to the nearest quarter-quarter section for purposes of the Washington Administrative Code or WAC regulations.

Discharge – the volume of water that passes a given location within a given period of time. Usually expressed in cubic feet per second.

Dissolved oxygen (DO) – measure of water quality indicating free oxygen dissolved in water.

Domestic water use – water used for household purposes, such as drinking, food preparation, bathing, washing clothes, dishes, and dogs, flushing toilets, and watering lawns and gardens.

Drainage basin – land area where precipitation runs off into streams, rivers, lakes, and reservoirs. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map, often a ridge. Large drainage basins, like the area that drains into the Mississippi River contain thousands of smaller drainage basins. Also called a "watershed."

Drawdown – a lowering of the ground water level caused by pumping.

Effluent – water or some other liquid-raw, partially or completely treated-flowing from a reservoir, basin, treatment process or treatment plant.

Erosion – the process in which a material is worn away by a stream of liquid (water) or air, often due to the presence of abrasive particles in the stream.

Estuary – a place where fresh and salt water mix, such as a bay, salt marsh, or where a river enters an ocean.

Evaporation – the process of liquid water becoming water vapor, including vaporization from water surfaces, land surfaces, and snow fields, but not from leaf surfaces. See transpiration.

Evapotranspiration – the sum of evaporation and transpiration.

Fecal coliform bacteria – bacteria found in the intestinal tracts of animals. Their presence in water or sludge is an indicator of pollution and possible contamination by pathogens.

Ground water – water that flows or seeps downward and saturates soil or rock, supplying springs and wells. The upper surface of the saturate zone is called the water table. The supply of fresh water found beneath the Earth's surface, usually in aquifers, that is often used for supplying wells and springs. Because ground water is a major source of drinking water there is growing concern over areas where leaching agricultural or industrial pollutants or substances from leaking underground storage tanks are contaminating ground water.

Ground water, confined – ground water under pressure significantly greater than atmospheric, with its upper limit the bottom of a bed with hydraulic conductivity distinctly lower than that of the material in which the confined water occurs.

Ground-water recharge – inflow of water to a ground-water reservoir from the surface. Infiltration of precipitation and its movement to the water table is one form of natural recharge. Also, the volume of water added by this process.

Ground water, unconfined – water in an aquifer that has a water table that is exposed to the atmosphere.

Hydrologic cycle – the cyclic transfer of water vapor from the earth's surface via evapotranspiration into the atmosphere, from the atmosphere via precipitation back to earth, and through runoff into streams, rivers, and lakes, and ultimately into the oceans.

Inchoate – related to water right certificates to water suppliers based on projected future use rather than actual "beneficial use." The unused portions of those certificates or rights are known as "inchoate" rights.

Instream flow – the quantity of water maintained in a stream to sustain multiple non-consumptive uses, such as: fisheries and wildlife, channel stability and maintenance, riparian habitat maintenance, navigation, recreation, and aesthetics.

Impermeable layer – a layer of solid material, such as rock or clay, which does not allow water to pass through.

Industrial water use – water used for industrial purposes in such industries as steel, chemical, paper, and petroleum refining.

Infiltration – flow of water from the land surface into the subsurface.
Instream uses – water uses that can be carried out without removing the water from its source, as in navigation and recreation.

Macrohabitat – the larger area or environment where an organism or ecological community normally lives or occurs.

Mesohabitat – the intermediate area or environment where an organism normally lives or occurs.

Microhabitat – specific combination of habitat elements in the place occupied by an organism for a specific purpose.

Monitoring – measuring concentrations of substances in environmental media or in human or other biological tissues.

Municipal water system – a water system that has at least five service connections or which regularly serves 25 individuals for 60 days; also called a public water system.

National Pollutant Discharge Elimination System – the program designed to control all discharges of pollutants from point sources in U.S. waterways. A federal or state agency issues NPDES permits to regulate discharges into navigable waters from all point sources of pollution, including industries, municipal treatment plants, large agricultural feed lots and return irrigation flows.

Nonpoint source (NPS) pollution – pollution sources which are diffuse and do not have a single point of origin or are not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by stormwater runoff. The commonly used categories for non-point sources are agriculture, forestry, urban, mining, construction, dams and channels, land disposal, and saltwater intrusion.

Organic matter – plant and animal residues, or substances made by living organisms. All are based upon carbon compounds.

Peak flow – the maximum instantaneous discharge of a stream or river at a given location. It usually occurs at or near the time of maximum stage.

Per capita use – the average amount of water used per person during a standard time period, generally per day.

Percolation – (1) The movement of water through the openings in rock or soil. (2) The entrance of a portion of the streamflow into the channel materials to contribute to ground water replenishment.

Permeability – the ability of a material to allow the passage of a liquid, such as water through rocks. Permeable materials such as gravel and sand allow water to move quickly through them; impermeable materials such as clay don't allow water to flow freely.

Point-source pollution – a stationery location or fixed facility from which pollutants are discharged or emitted. Also, any single identifiable source of pollution, e.g., a pipe, ditch, ship, ore pit, factory smokestack. All point sources must have discharge permits issued by the Washington State Department of Ecology.

Pollution – generally, the presence of matter or energy whose nature, location or quantity produces undesired environmental effects. Under the Clean Water Act, for example, the term is defined as the man-made or man-induced alteration of the physical, biological, and radiological integrity of water.

Porosity – a measure of the water-bearing capacity of subsurface rock. With respect to water movement, it is not just the total magnitude of porosity that is important, but the size of the voids and the extent to which they are interconnected, as the pores in a formation may be open, or interconnected, or closed and isolated. For example, clay may have a very high porosity with respect to potential water content, but it constitutes a poor medium as an aquifer because the pores are usually so small.

Potable water – water that is safe and satisfactory for drinking and cooking.

Public supply – water withdrawn by public governments and agencies, such as a county water department, and by private companies that is then delivered to users. Public suppliers provide water for domestic, commercial, thermoelectric power, industrial and public water users.

Public water system – a system for the provision to the public of piped water for human consumption. Such system have at least 15 service connections or regularly provide water at least 60 days out of the year. A public water system is either a "community water system" or a "non-community water system."

Recharge – water added to an aquifer; for instance, rainfall that seeps into the ground.

Return flow – (1) That part of a diverted flow not consumptively used and returned to its original source or another body of water. (2) (Irrigation) Drainage water from irrigated farmlands that re-enters the water system to be used further downstream.

River – natural stream of water of considerable volume, larger than a brook or creek.

Runoff – (1) that part of the precipitation, snowmelt, or irrigation water that appears in uncontrolled surface streams, rivers, drains or sewers. Runoff may be classified according to speed of appearance after rainfall or melting snow as direct runoff or base runoff, and according to source as surface runoff, storm interflow, or ground-water runoff. (2) The total discharge described in (1) above, during a specified period of time. (3) Also defined as the depth to which a drainage area would be covered if all of the runoff for a given period of time were uniformly distributed over it.

Safe Drinking Water Act (SDWA) – commonly referred to as SDWA. An Act passed by the U.S. Congress in 1974. The Act establishes a cooperative program among local, state and federal agencies to ensure safe drinking water for consumers.

Seepage – (1) The slow movement of water through small cracks, pores, and interstices, of a material into or out of a body of surface or subsurface water. (2) The loss of water by infiltration into the soil from a canal, ditches, laterals, watercourse, reservoir, storage facilities, or other body of water, or from a field.

Septic system – an onsite system designed to treat and dispose of domestic sewage; a typical septic system consists of a tank that receives wastes from a residence or business and a system of tile lines or a pit for disposal of the liquid effluent that remains after decomposition of the solids by bacteria in the tank.

Septic tank – a tank used to detain domestic wastes to allow the settling of solids prior to distribution to a leach field for soil absorption. Septic tanks are used when a sewer line is not available to carry them to a treatment plant.

Sewage – the used water and solids that flow from homes through sewers to a wastewater treatment plant. The preferred term is wastewater.

Sidecast roads – roads constructed in forests. The construction technique involves carving out about half the road width from the uphill side and using that material to create the downhill side. The material is then smoothed over to make the flat road surface. Such roads are landslide-prone.

Stream – a general term for a body of flowing water; natural water course containing water at least part of the year. In hydrology, it is generally applied to the water flowing in a natural channel as distinct from a canal.

Streamflow – the water discharge that occurs in a natural channel. A more general term than runoff, streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface tension – the attraction of molecules to each other on a liquid's surface. This creates a barrier between the air and the liquid.

Surface water – water that is on the Earth's surface, such as in a stream, river, lake, or reservoir.

Transpiration – process by which water that is absorbed by plants, usually through the roots, is evaporated into the atmosphere from the plant surface, such as leaf pores. See evapotranspiration

Unsaturated zone – the zone immediately below the land surface where the pores contain both water and air, but are not totally saturated with water. These zones differ from an aquifer, where the pores are saturated with water.

Wastewater – the used water and solids from a community (including used water from industrial processes) that flow to a treatment plant. Storm water, surface water, and ground water infiltration also may be included in the wastewater that enters a wastewater treatment plant. The term sewage usually refers to household wastes, but this word is being replaced by the term wastewater.

Wastewater treatment plant – a facility that receives wastewater (and sometimes runoff) from domestic and/or industrial sources, and by a combination of physical, chemical, and biological processes reduces (treats) the wastewater to less harmful byproducts; known by the acronyms STP (sewage treatment plant) and POTW (publicly owned treatment works).

Water budget – a summation of inputs, outputs, and net changes to a particular water resource system over a fixed period. Also, water balance model.
Water cycle–the circuit of water movement from the oceans to the atmosphere and to the Earth and return to the atmosphere through various stages or processes such as precipitation, interception, runoff, infiltration, percolation, storage, evaporation, and transportation.

Water purveyor – an agency or person that supplies water, usually potable water.

Water supply system – the collection, treatment, storage, and. distribution of potable water from source to consumer.

Watershed – the land area that drains into a stream. An area of land that contributes runoff to one specific delivery point; large watersheds may be composed of several smaller "subshed,s" each of which contributes runoff to different locations that ultimately combine at a common delivery point.

Water table – the level of ground water. The upper surface of the zone of saturation of ground water above an impermeable layer of soil or rock (through which water cannot move) as in an unconfined aquifer. This level can be very near the surface of the ground or far below it.

Wetlands – any number of tidal and nontidal areas characterized by saturated or nearly saturated soils most of the year that form an interface between terrestrial (land-based) and aquatic environments; include freshwater marshes around ponds and channels (rivers and streams), brackish and salt marshes; other common names include swamps and bogs.

Withdrawal – water removed from a ground-or surface-water source for use.

Yield – the quantity of water (expressed as a rate of flow GPM, GPH, GPD, or total quantity per year) that can be collected for a given use from surface or ground water sources. The yield may vary with the use proposed, with the plan of development, and also with economic considerations.

Acronyms

2496: State legislative bill to fund salmon habitat restoration projects

2514: State legislative bill to authorize/fund watershed planning

303(d) List: WA State's list of water bodies that are impaired by pollution

BOD: Biochemical oxygen demand

BLM: Bureau of Land Management

CAC: Citizens Advisory Committee of the Chehalis Basin Partnership

CBP: Chehalis Basin Partnership

CFS: Cubic feet per second

CWA: Clean Water Act

CWSP: Coordinated Water System Plan

DFW: Washington Department of Fish and Wildlife

DNR: Washington Department of Natural Resources

DO: Dissolved Oxygen

DOE: Washington Department of Ecology

DOH: Washington Department of Health

EDT: Ecosystem diagnosis and treatment

EIS: Environmental Impact Statement

EPA: United States Environmental Protection Agency

ESA: Endangered Species Act

ESHB: Engrossed Substitute House Bill

FPA: Forest Practices Act

GIS: Geographic Information Systems

GMA: Growth Management Act

GPS: Global Positioning System

IFIM: Instream Flows Incremental Methodology

ISF: In-stream Flows

Acronyms

LWD: Large Woody Debris

MOA: Memorandum of Agreement

NMFS: National Marine Fisheries Service

NPDES: National Pollutant Discharge Elimination System

NOAA: National Oceanic and Atmospheric Administration

NRCS: Natural Resources Conservation Service

PWS: Public water systems

RCW: Revised Code of Washington

SASSI: Salmon And Steelhead Stocks Inventory

SDWA: Safe Drinking Water Act

SEPA: State Environmental Policy Act

SMA: Shorelines Management Act

STC: Steering/Technical Committee of the Chehalis Basin Partnership

TMDL: Total Maximum Daily Load (of pollutants in a given water body)

USACE: United States Army Corps of Engineers

USDA: United States Department of Agriculture

USFS: United States Forest Service

USFW: United States Department of Fish & Wildlife

USGS: United States Geological Survey

WAC: Washington Administrative Code

WDFW: Washington State Department of Fish & Wildlife

WDOE: Washington Department of Ecology

WDOH: Washington Department of Health

WDOT: Washington Department of Transportation

WRIA: Water Resource Inventory Area (designated by WA Dept. of Ecology)

WRIA 22: The lower Chehalis Basin (below Porter)

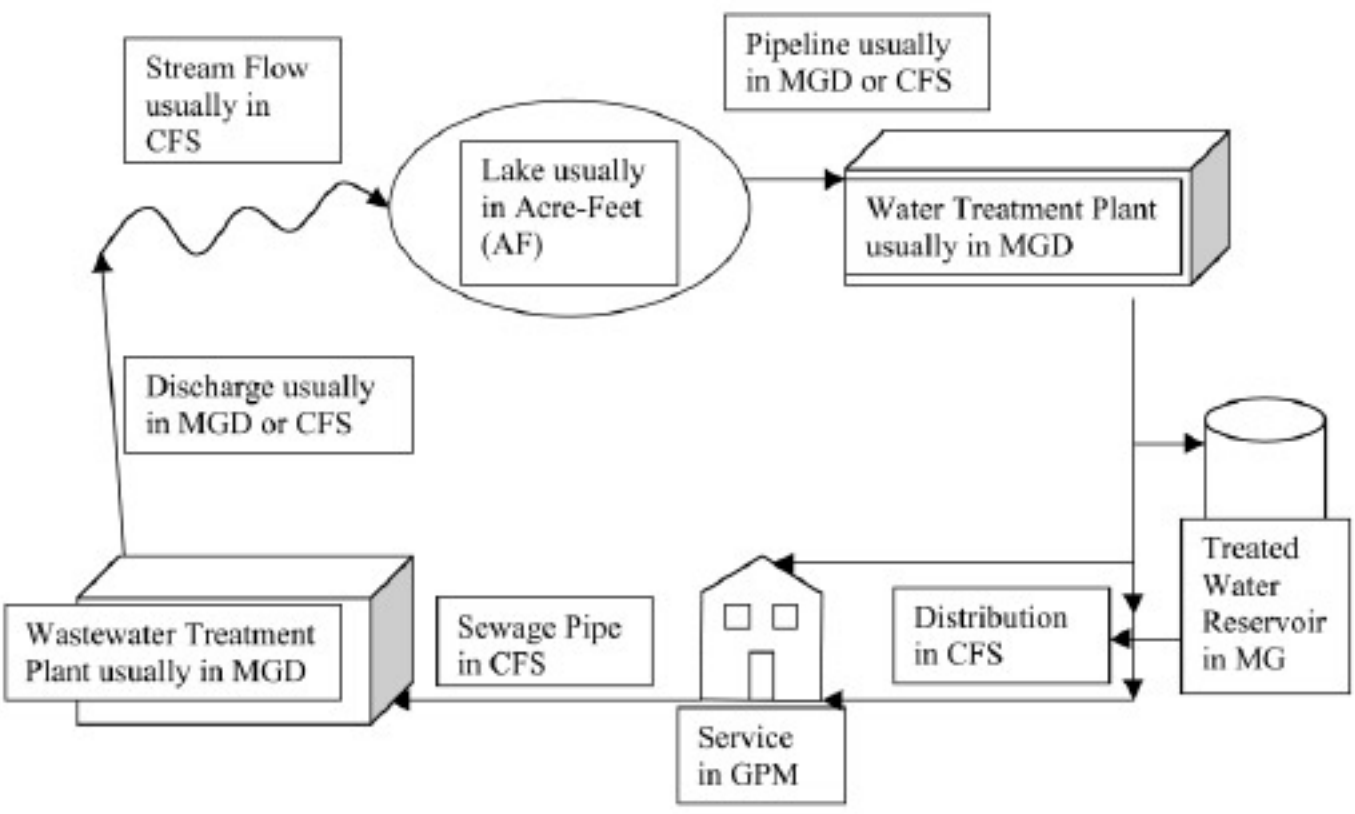
WRIA 23: The upper Chehalis Basin

Measurements of Flow

	Cubic Feet/ Second (CFS)	*Gallons/Day (GD)*	*Million Gallons/Day (MGD)*	*Acre Feet/Year (AFY)*
1 Acre Foot/Day* (AFD)	0.504	325,851	0.326	365
1 Gallon/Minute (GPM)	.00223	1,440	.001440	1.61
1 Cubic Foot/Second (CFS)	---	646,560	0.645	18,396
1 Million Gallons/Day (MGD)	1.55	---	---	11,899

**Acre Foot = the volume of water that would cover 1 acre too a depth of 1 foot.*

Common Usage of Flow Units



INTERGOVERNMENTAL AGREEMENT

Formation of the Chehalis River Basin Watershed Management Partnership & Designation of Lead Agency

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WHEREAS, the environmental, social and economic health of the Upper and Lower Chehalis River Basins, Water Resource Inventory Areas (WRIA) Nos 22 & 23, identified as WAC 173-500-040, hereinafter called the Chehalis River Basin depends upon sound management and stewardship of natural resources; and

WHEREAS, multiple governmental jurisdictions (federal, state, tribal, and local governments) and various, diverse public and private groups share an interest in sound management of the Chehalis River Basin's water resources; and

WHEREAS, issues affecting the management of these resources transcend jurisdictional and ownership boundaries; and

WHEREAS, cooperative and collaborative approaches offer solutions that are less costly, more responsive to local conditions and needs, and garner greater public support; and

WHEREAS, pursuant to Chapter 39.34 RCW and each party's respective authorities, the parties to this Agreement are authorized to jointly exercise the powers, privileges, and authority described herein; and

WHEREAS, Engrossed Substitute House Bill No. 2514 (Laws of 1998) and chapter 90.82 RCW have authorized the allocation of certain funds to a WRIA planning unit for purposes of watershed assessment, planning and management; and

WHEREAS, the governmental entities of the Chehalis River Basin are interested in forming a WRIA planning unit so that they are eligible to apply for and receive funds pursuant to Engrossed Substitute House Bill No. 2514 (Laws of 1998) and chapter 90.82 RCW;

NOW, THEREFORE, in consideration of the mutual promises and covenants recited herein, the parties agree and resolve as follows:

1.0 Parties

The parties to this Agreement shall be (1) all counties within the Chehalis River Basin; (2) all interested cities and towns within the Chehalis River Basin; (3) the water supply utility obtaining the largest quantity of water in each the Upper and Lower Chehalis River Basin; (3) Washington State Department of Ecology and (4) the Confederated Tribes of the Chehalis Indian Reservation and Quinault Indian Nation.

2.0 Purpose

This Agreement shall designate a planning unit and a lead agency for purposes of assessing and managing the water resources of the Chehalis River Basin and to pursue strategies within the Chehalis River Basin which include the key elements of flood reduction, fisheries, recreation, water quality and water quantity and examine their relationship to economic health and sustainability.

3.0 Goals

The parties shall work cooperatively to establish a planning unit to be called the Chehalis River Basin Partnership and to seek participation from interested and affected parties. The Chehalis River Basin Partnership serving in an advisory and informational capacity, shall coordinate efforts focusing on:

- Improvement of water quality
- Management of water resources to provide ample supplies for farms, fish, industry and people (including restoration of healthy runs of salmon and steelhead)
- Reduction of the effects of flooding
- Increase in recreational opportunities
- Increase in watershed awareness through education

The Chehalis River Basin Partnership may also develop a watershed plan consistent with the requirements of chapter 90.82 RCW and Engrossed Substitute House Bill No. 2514 (Laws of 1998).

4.0 Composition of Chehalis River Basin Partnership

4.1 The Chehalis River Basin Partnership and Planning Unit may include, but are not limited to:

- **Counties:** each county in the Chehalis River Basin, appointed by the respective county;

- **Cities:** each interested city and town in the Chehalis River Basin, appointed by the respective jurisdictions;
- **Tribes:** the Confederated Tribes of the Chehalis Indian Reservation and Quinault Indian Nation;
- **Water Supply Utilities:** a representative appointed jointly by the water supply utilities in the Chehalis River Basin;
- **Port Districts:** a representative appointed jointly by the port districts in the Chehalis River Basin;
- **State Departments:** Washington State Departments (Departments), Fish & Wildlife, Natural Resources, Agriculture, and Ecology;
- **Federal Agencies:** Bureau of Indian Affairs, Geological Survey, Bureau of Reclamation, Fish and Wildlife Service, Environmental Protection Agency, National Marine Fisheries Service, Forest Service, Corps of Engineers and Natural Resources Conservation Service;
- **Major Interests:** a minimum of four members representing various major interests in the Chehalis River Basin, appointed jointly by the counties and the tribes. Major interests include but are not limited to timber, agriculture, business, fisheries, recreational, environmental, and industrial water users.
- **Private Citizens:** one private citizen from each of the counties, appointed by the respective counties.

4.2 Technical and citizen advisory committees will be formed, as needed, to formulate options for consideration by the Chehalis River Basin Partnership and reference to various government agencies.

5.0 Chehalis River Basin Partnership Meetings

The Chehalis River Basin Partnership will meet regularly to address water quality, water quantity, flooding, economic development, and fisheries and fish habitat issues. Meetings will be used to share information about developments in the basin and to identify common problems and opportunities.

6.0 Lead Agency

For the purposes of this Agreement, Lewis County shall be designated as Lead Agency. The Lead Agency shall be responsible for and authorized to perform the following tasks:

6.1 Negotiate and execute agreements with Washington State Department of Ecology (DOE) for Watershed Planning Grant funds.
6.2 Receive and disburse funds from DOE.
6.3 Solicit Statements of qualifications, requests for proposals or invitations

for bids, negotiate scope of work, and executes contracts to perform the work for projects performed by or on behalf of the parties pursuant to this agreement.

6.4 The Lead Agency shall not obligate any parties to financial responsibility in performing its tasks under this Agreement without approval of the respective governmental entities.

6.5 Prepare and maintain proper records for accounting and administration of watershed planning grants.

The Lead Agency shall report regularly to the parties to this Agreement and shall provide them with a full accounting on the receipt and expenditure of funds that may be provided pursuant to this Agreement.

7.0 Staff Support

DOE shall provide staff support to the Chehalis River Basin Partnership.

8.0 Funding

The activities of the Chehalis Basin Partnership as described herein, and as may be further defined by the parties to achieve the stated goals, shall be funded by the following sources:

1) Watershed Management Grants made available by DOE; and/or
2) Other public and private funds which are intended for watershed planning and implementation

Funds or services from the parties may be required for matching or providing local shares for other funding sources that may become available. Any funds or services required shall be shared by all parties and will be agreed upon in writing in advance.

9.0 Duration

This Agreement shall continue until terminated by the parties as provided in section 11.0.

10.0 Modification

This Agreement may be modified or amended only by written consent of all parties.

11.0 Termination

11.1 An individual party may withdraw from this Agreement upon ten days written notice to the Lead Agency. The Lead Agency may terminate its membership and/or surrender its lead-status upon ten days' written notice to all other signatories to this Agreement. This Agreement will continue to remain in effect so long as two or more parties remain signatories to this Agreement.

11.2 This Agreement may be terminated only by written consent of all signatories to this Agreement.

12.0 Effective Date

This Agreement shall become effective and commence upon execution of the Agreement by all parties.

13.0 Non-Binding Agreement

The water resource planning process described in this Agreement is intended to result in the cooperative management of Chehalis River Basin Water Resources. The parties agree that participation in the Chehalis River Basin Partnership and Planning Unit shall not bind any member's independent decision-making authority or the reserved rights of the tribes.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of August 31**, 1998.**

BOARD OF COUNTY COMMISSIONERS
Grays Harbor County, Washington

Dick Dixon
Chairman

[signature]
Commissioner

Bob Beerbower
Commissioner

Approved as to form:

H. STEWARD MENEFEE
PROSECUTING ATTORNEY

[signature]
Deputy Prosecuting Attorney

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BOARD OF COUNTY COMMISSIONERS
Lewis County, Washington

Chairman

Commissioner

Commissioner

Approved as to form:

JEREMY RANDOLPH
PROSECUTING ATTORNEY

Deputy Prosecuting Attorney

BOARD OF COUNTY COMMISSIONERS
Mason County, Washington

Absent
Chairman

Commissioner

Commissioner

Approved as to form:

GARY P. BURLESON
PROSECUTING ATTORNEY

CH. DPA
Deputy Prosecuting Attorney

BOARD OF COUNTY COMMISSIONERS
Thurston County, Washington

Chairman

Commissioner

Commissioner

Approved as to form:

BERNARDEAN BROADOUS
PROSECUTING ATTORNEY

Deputy Prosecuting Attorney

CHEHALIS CONFEDERATED TRIBES

Mel Youckton, Chairman

Approved as to form:

Name, Tribal Attorney
Jon Hare

QUINAULT INDIAN NATION

Pearl Capoeman-Baller, President

Name, Tribal Attorney

CITY OF ABERDEEN

Chuck Gurrad, Mayor

Approved as to Form:
ABERDEEN CITY ATTORNEY

By:
Name - Title

CITY OF CENTRALIA

Jessie Brunswig, Mayor

Approved as to Form:
CENTRALIA CITY ATTORNEY

By:
Name - Title

CITY OF CHEHALIS

Bob Spahr, Mayor

Approved as to Form:
CHEHALIS CITY ATTORNEY

By:
Name - Title

CITY OF NAPAVINE

Robert C. McAuley Mayor Pro-Tem
Duane Elwood, Mayor

Approved as to Form:
NAPAVINE CITY ATTORNEY

By:
Name - Title

CITY OF OCEAN SHORES

Dirk Swearingen, Mayor

Approved as to Form:
OCEAN SHORES CITY ATTORNEY

By: _____
Name - Title
Arthur H. Bianchetta, City Atty

CITY OF PeELL

John Penberth, Mayor

Approved as to Form:
PeELL CITY ATTORNEY

By: _____
Name - Title
Robert Shroeder, Attorney

PORT OF CENTRALIA

Wendy Paulin, Title Executive Director

Approved as to Form:
PORT OF CENTRALIA ATTORNEY

By: _____
Name - Title
Larry W. Fagerness, Port Attorney

DEPARTMENT OF ECOLOGY

Sue Mann Regional Director
Name, Title

Approved as to Form:
CHRISTINE O. GREGOIRE
ATTORNEY GENERAL

_____
Name, Assistant Attorney General

BOISTFORT VALLEY WATER

~~Rich Eitel~~, Title PRESIDENT OF THE BOARD
NEIL PEMERL

Approved as to Form:
Attorney for Boistfort Valley Water

_____
Name, Title Scott E. Blinks

GRAYS HARBOR WATER DISTRICT, #2

R.G. Aarhaus, Chairman

Approved as to Form:
Attorney for Grays Harbor Water Dist. #2

_____
Name, Title

CITY OF COSMOPOLIS

Approved as to Form
COSMOPOLIS CITY ATTORNEY

Jerry Raines, Mayor

Name - Title

CITY OF ELMA

Approved as to Form
Elma CITY ATTORNEY

David Osgood, Mayor

Name - Title

CITY OF HOQUIAM

Approved as to Form
HOQUIAM CITY ATTORNEY

Roger Jump, Mayor

Name - Title

CITY OF McCLEARY

Approved as to Form
McCLEARY CITY ATTORNEY

John Adams, Mayor

Name - Title

CITY OF MONTESANO

Approved as to Form
MONTESANO CITY ATTORNEY

Doug George, Mayor

Name - Title

CITY OF WESTPORT

Approved as to Form
WESTPORT CITY ATTORNEY

Berkly Barker, Mayor

Name - Title

Chehalis Basin Partnership Members

(these are the organizations that signed the Intergovernmental Agreement and who have a direct role in making decisions)

[1] This organization has a signature block in the Intergovernmental Agreement
[2] Organization has signed the Intergovernmental Agreement

Organization	*Designated Representative*	*Address*	*Phone*	*E-Mail*
COUNTIES				
Grays Harbor County [1][2]	Commissioner Bob Beerbower (alternate: Lee Napier)	Grays Harbor County, 100 W. Broadway, Suite 1 Montesano, WA 98563	(360)249-4222	
Lewis County [1][2]	Commissioner Richard Graham (alternate: Craig Swanson)	Lewis County 360 NW North Street Chehalis, WA 98532	(360)740-1391	
Mason County [1][2]	Commissioner Jayni Kamin (alternate: Robert Fink)	Mason County 411 North Fifth St Shelton, WA 98584	(360)427-9670 ext 419	
Thurston County [1][2]	Commissioner Bob Macleod (alternate: Mark Swartout)	Thurston County 2000 Lakeridge Dr. Olympia, WA 98502	(360)786-5440	
TRIBES				
Confederated Tribes of the Chehalis [1][2]	Chairman David Burnett (Alternates: Mark White, Harry Pickernell)	Confederated Tribes of the Chehalis P.O. Box 536 Oakville, WA 98568	(360)273-5911	
CITIES				
Aberdeen [1][2]	Lisa Scott Planning & Econ. Development	City of Aberdeen 200 E. Market Aberdeen, WA 98520	(360)537-3226	
Centralia [1][2]	Mayor Pro-Tem Bonnie Canaday (Alternates: Dennis Rhodes)	City of Centralia 1401 W. Mellen Centralia, WA 98531	(360)330-7512	
Chehalis [1][2]	Councilman Robert Spahr - CHAIR (Alternates: Jon Nichols, Patrick Wiltzuis)	City of Chehalis P.O. Box 871 Chehalis, WA 98532	(360)748-6664	
Hoquiam [1][2]	Dean Parsons	City of Hoquiam 609 8th Street Hoquiam, WA 98550	(360)532-6010	

Organization	*Designated Representative*	*Address*	*Phone*	*E-Mail*
CITIES				
McCleary [1][2]	Mayor Wallace Bentley	City of McCleary 100 South 3rd McCleary, WA 98557	(360)495-3863	
Montesano [1][2]	Ron Schillinger Community Development	City of Montesano 112 North Main Montesano, WA 98563	(360)249-3021	
Napavine [1][2]	Jim Haslettt, VICE-CHAIR	City of Napavine P.O. Box 556 Napavine, WA 98565	(360)262-9231	
Ocean Shores [1][2]	Dave Weiser, City Manager	City of Ocean Shores P.O. Box 65 Ocean Shores, WA 98569	(360)289-2754	
Pe Ell [1][2]	John Penberth	Town of Pe Ell 201 Main Street Pe Ell, WA 98572	(360)289-2754	
WATER SUPPLY UTILITIES				
Boistfort Valley Water Co. [1][2]	Rich Eitel	442 Curtis Hill Road Chehalis, WA 98532	(360)748-1285	
Grays Harbor Water District #2 [1][2]	Jean Gayle	7403 Blaine Road Aberdeen, WA 98520	(360)532-1828	

Organization	*Designated Representative*	*Address*	*Phone*	*E-Mail*
PRIVATE CITIZENS *(one from each county; appointed by each county)*				
Citizen - Grays Harbor County	Designated Representative: Terry Willis Appointed Citizens: Gary Waltenbery, Mike Quigg	83 Willis Road Montesano, WA 98563	(360)249-5386	
Citizen - Lewis County	Designated Reresentative: Lyle Hojem Appointed Citizens: Bill Barmettler, Chris Cheney, Jim Hill	149 Hojem Heights Road Chehalis WA 98532	(360)748-7683	
Citizen - Mason County	Designated Representative: Peter Hiebert Appointed Citizens: Jim Bottorff, Laurie Cox, Neal Cox	1272 Lakeside Drive Shelton, WA 98584	(360)482-5249	
Citizen - Thurston County	Designated Representative: J. Roach Appointed Citizens: Earl Emerson, Chanelle Holbrook	7305 Fairview Road SW Olympia, WA 98512	(360)357-9662	
PORT DISTRICTS *(one representative appointed jointly by the port districts)*				
Port of Centralia [1][2]	Art Lehman	Port of Centralia 3508 Galvin Road Centralia, WA 98531	(360)736-3527	
MAJOR INTERESTS *(appointed jointly by the counties and the tribes)*				
Business Representative	Vacant			
Chehalis Basin Fisheries Task Force	Doug Fricke	WA Trollers Association 110 Valley Road Hoquiam, WA 98550	(360)533-2069	
Agriculture	Brian Thompson	121 Blacksmith Road Rochester, WA 98579	(360)736-7498	
Weyerhaeuser	Annette Gainger	Weyerhaeuser P.O. Box 1000 Cosmopolis, WA 98537	(360)537-8311	

Organization	*Designated Representative*	*Address*	*Phone*	*E-Mail*
STATE DEPARTMENTS				
WA Department of Agriculture	Ann Wick	WA Department of Agriculture P.O. Box 42589 Olympia, WA 98504-2589	(360)902-2051	
WA Department of Ecology [1][2]	Kahle Jennings	WA Department of Ecology, SWRO P.O. Box 47775 Olympia, WA 98504-7775	(360)407-6310	kjen461@ecy.wa.gov
WA Department of Fish & Wildlife	Steve Kalinowski (Alternate: Chad Stussy)	WA Department of Fish & Wildlife 48 Devonshire Road Montesano, WA 98563	(360)249-1227 586-6129 ext. 224	kalinsak@dfw.wa.gov
WA Department of Natural Resources	Jim Hotvedt	WA Department of Natural Resources 1405 Rush Road Chehalis, WA 98532	(360)748-2383	
FEDERAL AGENCIES *(eligible for membership but none have requested membership)*				

Chehalis Basin Partnership

Interim By-Laws

I. Purpose

The legislature having recognized the need for local communities to address water resource management issues has created the Watershed Management Act Chapter 247, Laws of 1998, Engrossed Substitute House Bill (ESHB) 2514. The Act establishes a voluntary planning process to assess and to manage the water resources of the Chehalis River basin and to develop strategies within the basin addressing water quantity, water quality, fish habitat and in-stream flows.

The Chehalis Basin Partnership (the Partnership) has been created per the intergovernmental agreement dated August 31, 1998 (attached), designating Lewis County[1] as lead agency, as outlined in ESHB 2514. The agreement designates a planning unit to pursue strategies within the Chehalis River basin which include the key elements of flood reduction, fisheries, recreation, water quality and water quantity and examine their relationship to economic health and sustainability.

The legislature having also recognized the need to address salmon habitat restoration projects has created the Salmon Recovery Planning Act Chapter 246, Laws of 1998, Engrossed Substitute House Bill (ESHB) 2496. The Act establishes a structure that allows for the coordinated delivery of local, state and federal assistance to communities for habitat projects that will assist in the recovery and enhancement of salmon stocks.

The Partnership has been designated the 'lead entity' in the salmon recovery planning process; the cities, counties and tribes within the Chehalis River basin have adopted individual resolutions or provided support letters ratifying this designation.

The Partnership adopts these interim bylaws to implement the intent of both legislative acts this 26th day of February, 1999.

II. Partnership Composition and Quorum

The Partnership shall be composed of the Planning Unit members as defined in section 4.0 of the intergovernmental agreement, dated August 31, 1998. A quorum for the transaction of business exists when any number of planning unit members are in attendance at any regularly scheduled meeting. No action may be taken regarding Partnership business as defined in section IV, at any regularly scheduled meeting, unless a simple majority of the total number of planning unit members are present. Members present at

1. In December 1989 the Partnership requested that Grays Harbor County assume the position of lead agency and lead entity.

a meeting at which a quorum is not present may 1) elect to proceed with the business of the meeting subject to ratification of all action taken whenever a quorum is next present at a meeting, and 2) may elect to adjourn to a definite time and place announced in open meeting at which a quorum is not present at the time of adjournment.

III. Partnership Officers

The Chair and the Vice-Chair of the Partnership shall be selected by the Planning Unit members. Both positions are one-year terms. The Vice-Chair shall preside as chair pro-tem in absence of the Chair of the Partnership. If the Chair and Vice-Chair is unable to attend a meeting of the Partnership, the Chair shall designate another Planning Unit member to serve as acting chair.

IV. Partnership Business

The Partnership, represented by the Planning Unit members, shall use its authority to execute certain contracts and agreements, approve certain expenditures and reimbursements, or conduct any other administrative Partnership function, including such official Partnership business as is reasonably related to or contemplated within such authorization. All Partnership administrative functions shall be delegated to Lewis County, as outlined in section 6.0 of the intergovernmental agreement, dated August 31, 1998.

V. Conduct and Frequency of Meetings

Actions of the Partnership shall be conducted according to a consensus decision-making process. Please see appendix A and B explaining the decision-making process.

The Partnership shall meet at least monthly, preferably on the fourth Friday, unless said date is a holiday. Special meetings may be called by the Chair or if a simple majority of the total number of planning unit members are present. Committees and subcommittees will meet as required to conduct business.

The Chair and Partnership staff shall be responsible for preparation of the agenda for meetings. Any member may submit agenda items through the Chair, or his/her designated staff. Items for Partnership consideration shall be scheduled for discussion at least one meeting prior to any scheduled action thereon; EXCEPT, upon agreement of the Planning Unit members an item first presented for discussion may be acted upon at the same meeting, subject to further review and reconsideration by members at the following meeting. The agenda shall be sent to Planning Unit members and other appropriate individuals at least one week prior to a scheduled meeting. For special meetings, an agenda shall be sent to members of the Partnership and individuals required to be notified of the special meeting at least twenty-four (24) hours prior to such meeting.

VI. Attendance and Absences

Members shall make a concerted effort to attend all Partnership meetings. When a member is unable to attend a Partnership meeting, he/she should make an effort to advise the Chair or other Partnership members of any issues which are of concern or of special interest to such member, and in case of elected official-members should make an effort to have a designee attend the Partnership meeting.

VII. Advisory Committees

The Partnership shall appoint a technical advisory committee. One or more additional advisory committees or subcommittees may be appointed in order to provide focus on specific issues related to the Partnership's responsibilities.

The four (4) county commissions represented on the Partnership shall each designate four (4) local citizens to a citizen advisory committee. Recommendations from such committees and subcommittees shall be forwarded to the full Partnership.

Such additional committees and subcommittees will be chaired by at least one Partnership member, but may draw upon membership outside the Partnership as needed or appropriate to the committee or subcommittee function. Committee or subcommittee membership may be established by the Partnership or, at the discretion of the Partnership, by open public enrollment. Members of the Partnership may attend any committee or subcommittee meeting.

VIII. Public Communications

Business of the Partnership will be conducted in compliance with the Open Public Meetings Act and Public Disclosure Act, Chapters 42.20 and 42.17 RCW. In providing public information, the following will apply:

1. All official public statements on behalf of the Partnership will be made by the Chair or his/her designee;
2. Only documents approved by the full Partnership will be represented as Partnership-official;
3. In public discussions, individual Partnership members will provide a disclaimer that their statements as personal opinions and are not necessarily those of the Partnership;
4. Following each Partnership meeting, a summary of the meeting topics and discussions will be prepared as official minutes (and preferably mailed to Partnership members in advance of the next meeting), and subject to approval at the next meeting. After approval, unless otherwise exempt in part or in whole from disclosure, such minutes shall be made available to the public;

5. The Partnership shall at its earliest opportunity adopt Public Disclosure Act rules governing public access and disclosure policies for the public. Partnership staff shall be responsible for document management and indexing of the records of the Partnership.

IX. Payment of Claims

All claims against the Partnership by persons furnishing materials, rendering services or performing labor, or for any other contractual or noncontractual purpose shall be approved by the Partnership prior to payment by the Partnership's fiscal agent (Lewis County).

Appendix A

Decision Making by Consensus

1. Discuss the issue to surface all points of view. Invite everyone to speak.

2. When there seems to have been enough talking about the issue, publicly vote to "take the temperature" of the group - those in favor, those opposed. Have the group decide when there has been enough talking about the topic and they're ready to try to make a decision.

3. Those voting in the minority get the floor. They are invited to say whatever they want to try to convince others of the rightness of their view by: adding to the body of information already presented; clarifying their position; pointing our flaws, error, deficiencies...in the other's point of view.

4. Continue to ask those in the minority: "Do you think you have now been heard by others in the group? Is there more you want to say? Are you ready to have the entire group vote again?

5. Vote again. Those voting in the minority again get the floor.

6. Invite them again to say whatever they want to try to convince the others of the rightness of their view. This process will continue until those in the minority are able to say: "We are clear about what the majority would like to do. While we personally would not make that choice, we do think the others understand our alternative. We've had sufficient opportunity to sway others to our point of view, and we do think we have been heard."

7. **At this point, there are three variations to conclude the process;** pick one:
   - "Since we have not been able to convince others to change their minds, we are ready to go along with what the majority wants."
   - "The proposed alternative is not our preference, but it has been amended such that we will not oppose it."
   - "We do not favor the proposed alternative, but will go along with the majority, and we wish to include a dissenting opinion for the record."

Adopted February 26, 1999

Appendix B

Seeking Consensus

The top six types of agreement reflect consensus. Solutions that result in types of agreement closer to the top are preferred.

Endorsement: "I like it."

Endorsement with a Minor Point of Clarification: "Basically I like it."

Agreement with Reservations: "I can live with it."

Abstain: "I have no opinion that prevents this from going forward."

Stand Aside: "I really don't like this, but don't want to prevent the group from agreeing."

Formal Disagreement, but Willing to Go with Majority: "I want my disagreement noted in writing but I'll support the decision."

These two types of responses by one or more interest groups indicate a lack of consensus.

Formal Disagreement, with Request to Be Absolved of Responsibility for Implementation: "I don't want to stop anyone else, but I don't want to be involved in implementing it."

Block: "I don't support this proposal and will work to see that it won't be implemented."

Chehalis Basin Partnership (CBP) Watershed Planning Study Area Meetings

Overview

Having opted to sub-divide the river basin into four Study Areas to facilitate information gathering and issue identification, the CBP elected to hold one public open house in each Study Area during Phase 2 of the planning process. These open houses were developed with the first Public Involvement Goal in mind, "to raise awareness of citizens on watershed issues and gain input from the public in developing and adopting the Plan."

The Study Area meetings were held once each month from February through May 2002, with the March and May open houses formatted to include the monthly CBP general business meeting. In numerical order from Study Area #1 through #4, they were held in:

1. Ocean Shores on February 26, 2002
2. Montesano on March 19, 2002
3. Tumwater on April 16, 2002
4. Chehalis on May 21, 2002

The attached map designates each of the study areas and includes an indication of where each study areathe meeting for each study area was held, along with an indication of where study area participants live within the Basin.

All the publicity, meeting materials, outreach, setup and onsite work for the Study Area meetings was done by the Chehalis Basin Partnership. Educational materials were provided both on paper and via educational display boards. The US Army Corps of Engineers requested that they be able to present information and gather comments on their Ecosystem Restoration Study and proposed flood control project; this request was accommodated by the CBP.

Format

The first half hour of each meeting was set aside for citizens to browse the educational displays on water quantity/instream flows, water quality, habitat, general/process, and the Army Corps of Engineers Ecosystem Restoration Study. Large flipchart sheets were posted at these "Listening Posts" for citizens to write comments, questions, and issues of concern related to water resources. NOTE: These issues are listed near the end of the individual summary of the meeting where they were raised (attached here). A map was placed near the entrance for each attendee to mark where they live, using a colored star

sticker. A list of attendees is included at the end of each meeting summary, with "Self" used if no agency affiliation was provided.

After an half hour of mingling, audience members were seated for a round of introductions before a brief presentation on the CBP and watershed planning in the Chehalis Basin. Questions and responsesanswers followed. For meetings in Study Areas 2 and 4, the next segment of the meeting was the monthly CBP general meeting, followed then by Listening Post browsing. In Study Areas 1 and 3, attendees returned to browsing displays, asking individual questions at Listening Posts, and writing down comments or issues for consideration.

Findings

Attendance by local citizens was significant at the second, third and last meetings, though at the Ocean Shores session it was relatively sparse. The issues raised at the four open houses ranged from the need for a hazardous materials transfer station nearer Ocean Shores to multiple concerns about flooding in various areas. Several citizens expressed anti-government sentiments. There was impressive knowledge of, and passion for, water issues. However, these issues were primarily those of immediate concern to local citizens (e.g. flooding, erosion of property) but not larger or more indirect issues such as long-term supply or population growth – with the possible exception of land use concerns.

The format seemed to work well, including the provision of pizza and child care services during what would be the dinner hour for many locals. The efforts of CBP members on all fronts were impressive.

In Conclusion

Citizens throughout the Chehalis Basin have a fairly high degree of knowledge about issues in their geographical proximity. There is still confusion about the actual on-the-ground impacts of 2514 watershed planning. At least one more round of public open houses is recommendedshould be held as the CBP gets closer to recommending solutions and implementation strategies for the various issues identifiedneeded, and would be effective as the CBP approaches completion of the Plan.

Additionally, several groups have asked for presentations related toon the watershed planning process, and it is hoped that the work done to identifyication of "stakeholder groups" should will allow for focused sessions in order to address specific concerns. Additionally, stakeholder group meetings might be coordinated with field tours to better understand specific issues.

Thanks are due to the cities of Ocean Shores, Montesano, Tumwater, and Chehalis, as well as the Counties who helped organize the meetings.

Chehalis Basin Partnership
Study Area #1 Meeting Notes

Tuesday, February 26, 2002, 5:00pm – 8:00pm
Ocean Shores Convention Center, Ocean Shores WA

Open House

This portion of the meeting was set aside for citizens to browse the educational displays on water quantity/instream flows, water quality, habitat, general/ process, and the Army Corps of Engineers Ecosystem Restoration Study. Large flipchart sheets were posted at these "Listening Posts" for citizens to write comments, questions, and issues of concern related to water resources. Approximately 10 citizens attended, primarily from the Ocean Shores area.

Welcome/Introductions + Overview of Watershed Planning

Lee Napier thanked everyone for coming and welcomed participants to the workshop, with a special mention for the elected officials present. Ocean Shores Mayor Terry Vietz then gave brief remarks regarding the importance of water resources and public participation in planning. Chehalis Mayor Bob Spahr also spoke, to thank attendees and invite them to participate in water resources planning and other efforts of the Chehalis Basin Partnership.

Bob Wheeler presented an overview of Washington State Watershed Planning and the ongoing work of the Chehalis Basin Partnership in water resource inventory areas (WRIAs) 22 and 23. He explained that the four-year study must be completed by October of 2003, when the Planning Unit must have a plan that is broadly representative of local governments and water resource interests. He invited comments and questions from citizens on the watershed planning process and also on individual, local issues of concern related to water resources.

Questions & Issues from Citizens

Questions were raised about abandoned water rights and the illegal use of defunct water rights. DOE (Department of Ecology) representative Kahle Jennings acknowledged the importance of tracking water rights from the existing database as a priority, but admitted they did not have the manpower to do this. He also pointed out that these meetings were a "great opportunity to provide directions." A complete list of issues submitted in writing at the "Listening Posts" is included on the back of this page.

This meeting was the first of a series of four scheduled by the Chehalis Basin Partnership to invite public input on improving water quantity, quality and habitat. The next meeting will be in Montesano, March 19 at City Hall, 112 N. Main St. from 5pm to 8 pm. [See next page for issues raised at this open house]

ISSUE	ELEMENT(S)	COMMENTS	SOLUTION(S)
Hazardous Materials	Water Quality, Habitat	Need closer drop-off point to Ocean Shores for hazardous waste, e.g. old gasoline/oil, paint, etc (LeMays, outside Aberdeen, is 25 miles away and only open 2 days a week)	Transfer Station or Haz.Mat Drop-off point
Flood Control Impacts Downstream	Water Quantity, Habitat	Make sure flood control in Lewis County does NOT have negative impacts on areas downstream.	
Back-flooding	Water Quantity	Connor Creek has this problem.	Mouth needs stabilizing
Invasive Species	Water Quality, Habitat	Nuisance aquatic vegetation (Duck Lake mentioned) creates too much phosphorus & other nutrients.	Education about lawn fertilizers
Nuisance Species	Water Quality, Habitat	Increase in seal population in Grays Harbor creating fecal coliform issue + hazard to migrating salmon.	Controlled hunts, Marine Mammal Act dissolved
Bank Erosion	Water Quality, Habitat	East Fork of Satsop has this issue	Plant suitable riparian buffer
Turbidity	Water Quality, Habitat	Problem in Grays Harbor (along with fecal coliform bacteria).	Maintain forests to keep sediments from washing into harbor
Over-allocation	All four	(from local fisherman) Not enough water to go around; river/stream water is over-allocated.	Conservation, "fish-friendly" land use
Municipalities Returning "used" water	Water Quantity	Most cities return up to 75% of the water they withdraw, often in the same or better condition, to the rivers – and don't get credit for it.	
Abandoned/ defunct water rights	Water Quantity	Will Ecology address these? *(KJ response: not currently a priority, but if Planning Unit says this is important it will influence Ecology's priorities.)*	

Name	Interest or Organization	Address
Beerbower, Bob	Grays Harbor County (Commissioner)	PO Box 11, Elma
Bowen, Barbara	Jefferson County Natural Resources	65 Sheridan, Port Townsend
Charlie Caldwell	Port of Grays Harbor	N/A
Crumley, Lonnie	LWC Fisheries Consulting	97 Bartell Rd., Oakville
Daneker, Lee	US EPA	1200 Sixth Ave, Seattle
Ellen Pickell	Self	PO Box 736, Hoquiam
Estes, Ken	Self	PO Box 656, Ocean Shores
Fricke, Doug	Chehalis Basin Fisheries Task Force	110 Valley Rd., Hoquiam
Giteser, Eileen	Self	199 Ocean Blvd, Ocean City
Hegy, Terra	WA Dept. Fish & Wildlife	N/A
Jacobson, Jim	US Army Corps of Engineers	N/A
Lemisk?(illegible), Jim		
Lytle, Mike	Self	98 Valley Rd., Hoquiam
MacPherson, Bruce	Self	411 Lake View Loop NE, Ocean Shores
Nelson, Ernie	Self	175 Canal Dr. SE, Ocean Shores

Name	Interest or Organization	Address
Patnude, Sue	US Dept. Fish & Wildlife	48 Devonshire Rd., Montesano
Rader, Margaret	Chehalis Basin Partnership	11521 Holm Rd. SW, Rochester
Sims, John	Quinault Indian Nation	N/A
Spahr, Bob	City of Chehalis (Mayor)	930 SW 16th Ave, Chehalis
Veitz, Terry	City of Ocean Shores (Mayor)	PO Box 2015, Ocean Shores
Wiatrak, Phil	WA State Dept. of Ecology	Olympia
Wick, Ann	WA State Dairy Association	PO Box 42589, Olympia
Woodwick, Gene	Ocean Shores Interpretive Center	PO Box 1531, Ocean Shores

Chehalis Basin Partnership
Study Area #2 Meeting Notes

Tuesday, March 19, 2002, 5:00pm – 8:00pm
Montesano City Hall, Montesano WA

Open House

This portion of the meeting was, like the Ocean Shores event, slated as an "open house" time when citizens could browse the educational displays on water quantity, water quality, instream flows, habitat, process, and the Army Corps of Engineers Ecosystem Restoration Study. Large flipchart sheets were available for citizens at these "Listening Posts" to write comments, questions, and issues of concern related to water resources. Approximately 50 citizens attended from a fairly broad geographical area; an attendance list is attached to this document.

Welcome/Introductions + Overview of Watershed Planning

Lee Napier thanked everyone for coming and welcomed participants to the workshop, with a special mention for the elected officials present. She informed attendees that the Chehalis Basin Partnership would hold its monthly business meeting after the open house portion of the event and invited those present to stay and listen in on that meeting as well as to attend future meetings of the Partnership.

Bob Wheeler then presented an overview of Washington State Watershed Planning and the ongoing work of the Chehalis Basin Partnership in water resource inventory area (WRIA) 22 and WRIA 23. He explained that the four-year study must be completed by October of 2003, when the Planning Unit must have a plan that is broadly representative of local governments and water resource interests. He invited comments and questions from citizens on the watershed planning process and also on individual, local issues of concern related to water resources.

Questions & Issues from Citizens

A handful of questions were raised about a tributary of the Chehalis River (Satsop?Wynoochee) that was eroding away a local citizen's property. The ensuing discussion touched on gravel bars, riparian vegetation, flooding, and water quality. Another citizen mentioned a giant pile of dirt that had been dumped north of the Satsop-Chehalis confluenceright next to the confluence of two streams; the dirt has been washing into the streams and adding sediment to the water, which degrades habitat for salmon. A complete list of issues noted in writing at the various "Listening Posts" by attendees is on the back of this page.

This meeting was the second of a series of four scheduled by the Chehalis Basin Partnership to invite public input on improving water quantity, quality

and habitat. The next meeting will be in Tumwater, April 16 at Black Hills High School (7741 Little Rock Rd.) from 5pm to 8 pm.

Issues Identified at Montesano open house, 3/19/02

ISSUE	ELEMENT(S)	COMMENTS	SOLUTION(S)
Rules	Flows	How do we have confidence that the instream flow standards are realistic or real?	Gaging
Water returned to river	Water Quantity, Flows	How is it accounted that most water used is returned to the river after use?	
Fish	Water Quantity	Water for fish	
Bank Erosion	Habitat		Eliminate livestock access, plant riparian buffers
Erosion	Water Quality, Habitat	Loss of natural grazing land/farmland, including tax base for county; buildup of silt increased. Bank erosion on Wynoochee. Gravel buildup reduces channel capacity.	Grassroots effort in high-priority basins to educate/ involve property owners
Riparian Development	Water Quality, Habitat	Our stream banks are being damaged, which harms water.	
Failing Septic Systems	Water Quality, Habitat		
Temperature	Water Quality, Habitat	In Centralia reach, this is a block to salmon survival.	
Development Near Streams	Water Quality, Habitat	Development on or near stream banks must be controlled so as not to worsen stormwater runoff.	Land use policies
Agriculture Practices that Harm W.Qual.	Water Quality	Ag must be regulated to avoid harm to water quality	
Up-River Changes	All four	Modifications made affect folks living down-river. This needs to be taken into account in planning.	
Hydropower Water Storage	I.Flows	When they hold the river at a higher level to generate power, it washes away our land when they let it go.	Tree planting
Dirt Dumping (Duke Construction)	Water Quality	Just north of the Satsop-Chehalis confluence, a huge pile of dirt was dumped and is washing sediment into the River. If this was by permit, the process needs to be changed. If not by permit, then permitting needs to be enforced.	
Agriculture (as beneficial)	Water Quant., W. Qual.	Natural vegetation draws up a lot of water too; it's not just irrigation. Don't make agriculture the bad guy, some agriculture is good for the river and for the basin.	
Failing Septics	Water Quality	Self evident	Financial assistance to fix septics

Chehalis Basin Partnership
Study Area #3 Meeting Notes

Tuesday, February 26, 2002, 5:00pm – 8:00pm
Black Hills High School, Tumwater WA

Open House

This portion of the meeting was again set aside for citizens to browse the educational displays on water quantity/instream flows, water quality, habitat, general/process, and the Army Corps of Engineers Ecosystem Restoration Study. Large flipchart sheets were posted at these "Listening Posts" for citizens to write comments, questions, and issues of concern related to water resources. Approximately 45 citizens attended, primarily from Study Area #3.

Welcome/Introductions + Overview of Watershed Planning

Lee Napier thanked everyone for coming and welcomed participants to the workshop, with a special mention for the elected officials present. Chehalis Mayor Bob Spahr also spoke, to thank attendees and invite them to participate in water resources planning and other efforts of the Chehalis Basin Partnership. Mayor Spahr then began a round of introductions by asking each attendee to give their name, affiliation if any, and interests related to water resources. The issues raised during this portion of the meeting are included in the table on the following page.

Questions & Issues from Citizens

During this time, citizens raised several issues of local concern (a complete list of issues submitted in writing at the "Listening Posts" is included following this narrative). These included, in brief:

- Flooding of Scott Lake
- Filling in of floodplain "by Lewis County and citizens"
- Rowing access to Black Lake
- Creeks near Elma need help
- Preserve Black Lake
- Fair/open water resources planning process and a "do-able" Plan
- Concern that deepening Black Lake will dry up Ashley Creek
- Fisheries restoration
- Concern that money spent on this Plan won't get put to use "on the ground"
- Protection of land via conservation easements
- Possible solution: water storage off the Middle Fork Newaukum River

Bob Wheeler presented an overview of Washington State Watershed Planning and the ongoing work of the Chehalis Basin Partnership in Water Resource Inventory Areas 22 and 23. He explained that the four-year study must be completed by October of 2003, when the Planning Unit must have a plan that is broadly representative of local governments and water resource interests. He invited citizens to use the flipcharts around the room to submit comments and questions on the watershed planning process and also on local issues of concern. He also asked if there were any questions; the following were asked:

Q: Is it possible to determine original, base flows (before humans) and use these in setting target flows?

A: Maybe estimates could be done using models…you can't really use those to set new flows because we simply cannot go back to that level of non-consumption.

[CONCERN was voiced here that target flows will end up being even higher than original, natural flows.]

Q: Will local control mean citizens can control water rights?

A: It's up to you, and what recommendations you make to the State, bearing in mind existing laws.

[CONCERN was voiced here that there is more water allocated than is being used; "free up the extra!"]

Q (to attendees): Does this format work for you to give input?

A: It's a start. Hopefully folks here will talk to others about it.

[COMMENT: There should be more emphasis on preserving what is there, less on economic development.]

Q: If I had a fish restoration idea for my property, where would I go?

A: Departments of Fish and Wildlife (both state and federal) can bring resources to help, come see us.

Following the question and answer period, attendees returned to browsing the displays and contributing comments and concerns on the flipcharts posted at the Listening Posts.

This meeting was the third of a series of four scheduled by the Chehalis Basin Partnership to invite public input on improving water quantity, quality and habitat. The next meeting will be in Montesano, May 21 at Chehalis Middle School 1060 SW 20th Street Chehalis, WA 98532rch 19 at City Hall, 112 N. Main St. from 5pm to 8 pm. [See next page for issues raised at this open house]

Issues Identified at Tumwater open house, 4/16/02

ISSUE	ELEMENT(S)	COMMENTS	SOLUTION(S)
Black Lake Ditch	Water Quantity, Flows	Close Black Lake Ditch – return water to Black River Drainage	See comments
Fish Passage – Dams	Habitat, Flows	Remove Williams Pipeline Dam on Black River in order to restore salmon to Black Lake tributaries – also, what about fish passage over Skookumchuck Dam? (Reservoir is open but there is no public access.)	See comments
Culverts	Habitat	Remove culvert near Churchill Rd. on Yelm Tenino Road (would restore salmon to branch of plunge pool Scatter Creek); what about culverts on abandoned railroad grades?	See comments
Flooding	Water Quantity, Flows	Elma (west side), Vance Ck have problems. Also, Scott Lk floods in winter.	
Sediments	Water Quality, Habitat	Slides, logging sediments problems are moving down	
Inappropriate Development	All Four	Near sensitive areas this is a problem (e.g. asphalt plant near Black River refuge, pipeline additions disrupting existing areas such as McClaine Creek, Black River, Ashley Creek)	
Abandoned Dams	Water Quantity, Habitat, Flows	These used to supply water to Cedar Creek Corrections Center on Cedar Creek.	
Building in floodplain	Water Quality, Quantity, Habitat	Lewis County and cities are filling floodplain and floodways – stop filling (protection of life and property).	See comments
Overuse of water	Water Quantity	Water usage needs more management	
Runoff	Water Quality	Development is harming water quality	
Parks/Trails	Recreation	Are there any plans to develop parks, water access, or interpretive trails in the watershed?	
Flooding of Scott Lake	Water Quantity		
Filling in of floodplain	Water Quantity, Quality, Habitat	"By Lewis County and citizens."	Specific land use regulations
Rowing access to Black Lake	Recreation		
Creeks near Elma need help	Water Quantity, Quality	Not specified what problems are	
Preserve Black Lk	Water Quality		
Fair/open planning process	Process		
Concern that deepening Black Lake will dry up Ashley Creek	Water Quantity		Determine hydraulic continuity, deny permit?
Fisheries Restoration	Habitat		
Concern that Plan won't get implemented	Process		Implementation Committee
Protection of land	Water Quantity, Quality, Habitat		Conservation easements
	Water Quantity		Possible solution: water storage off the Middle Fork Newaukum R.

Attendance at Tumwater Open House

Name	Interest or Organization	Address
Baker, Lamm	Lewis County	575 New Oly Rd., Chehalis
Balt, Clark	Scott Lake Drain Committee	2237 113th Ave SW, Olympia
Beerbower, Bob	Grays Harbor County (Commissioner)	PO Box 11, Elma
Biermann, Connie	Self	5922 95th Ave SW, Olympia
Black Lake Fire Department	Thurston County	4402 Black Lake-Belmore, Olympia
Brokke, Bette	WA Dept. Natural Resources	PO Box 47027, Olympia
Coffing, Hilary	Thurston Conservation District	2400 Bristol Ct., Olympia
Coffing, Jenny	Thurston Conservation District	2400 Bristol Ct., Olympia
Coffing, Sarah	Thurston Conservation District	2400 Bristol Ct., Olympia
Dunlap, Dan	Scott Lake Conc.	21940 Scott CRR Dr., SW
Edwards, Tami	Rochester/Grand Mound Parks	16639A Jordan St. SW, Rochester
Eldridge, Les	Olympia Area Rowing	N/A
Emerson, Earl	Self	9825 Prather Rd. SW, Centralia
Graham, Richard	Lewis County	351 NW North St., Chehalis
Gurrad, John	Self	5429 Klipsius Ln. SW, Olympia
Holm, Pete	CRC Thurston County	11521 Holm Rd. SW, Rochester
Jones, Lile	Thurston Conservation District	5221 Black Lake Blvd. SW, Olympia
Klein, Rita	A.B.L.E.	6428 Guerin SW, Olympia
Larue, R.W.	Self	PO Box 555, Elma
Manchester-Harris, Amy	Chehalis River	2202 Blossomwood Ct., Olympia
Milken, Phile	G.S.R.O.	
Miller, Ken	Self	11801 Tilley Road S., Olympia
Napier, Lee	Grays Harbor County	100 W. Broadway, Montesano
O'Sullivan, Kevin	Thurston County (Commissioner)	2000 LakeRidge Dr. SW, Olympia
Olson, Arnie	Self	3946 90th Lane SW, Olympia
Olson, Shirley	Self	3946 90th Lane SW, Olympia
Penberth, John	Self	PO Box 162, PeEll
Pferzga, Kasia	Self	213 Rogers St. NW, Olympia
Roach, J.	Self	N/A
Sampson, Douglas	Thurston County	16604 Mima Acres Dr. SE, Tenino
Sand, Robert	Ashley Creek Farm	9221 Littlerock Rd. SW, Olympia
Smith, Dan	City of Tumwater	555 Israel Rd., Tumwater
Smith, Dan	Self	575 Newaukum Rd., Chehalis
Speaks, Rene	Capitol Land Trust	3728 11th Ave NW, Olympia
Stewart, Dick	City of Elma	PO Box 129, Satsop
Stussy, Chad	WA Dept. Fish & Wildlife	600 Capitol Way N., Olympia
Swanson, Craig	Lewis County	350 N. Market Blvd., Chehalis
Temple, Barbara	Self	2529 Green Ct. SW, Olympia
Welter, Michael	Thurston County Parks & Recreation	2617A 12th Ct. SW, Olympia
Willis, Mike	Scott Lake Drain Committee	2631 114th Way SW, Olympia

Chehalis Basin Partnership
Study Area #4 Meeting Notes

Tuesday, May 21, 2002, 5:00pm – 8:00pm
Chehalis Middle School, Chehalis, WA

Open House

This portion of the meeting was again set aside for citizens to browse the educational displays on water quantity/instream flows, water quality, habitat, general/process, and the Army Corps of Engineers Ecosystem Restoration Study. Large flipchart sheets were posted at these "Listening Posts" for citizens to write comments, questions, and issues of concern related to water resources. Approximately 50 citizens attended, primarily from Study Area #4.

Welcome/Introductions + Overview of Watershed Planning

Chehalis Mayor Bob Spahr thanked everyone for coming and welcomed participants to the workshop. He provided a brief history of the Chehalis Basin Partnership (the Partnership or CBP) and explained that its primary purpose is to facilitate communication and understanding among residents and local government agencies of the Chehalis River Basin. Mayor Spahr then began a round of introductions by asking each attendee to give their name and affiliation, if any.

Bob Wheeler (BW) presented an overview of Washington State Watershed Planning and the ongoing work of the Partnership in Water Resource Inventory Areas 22 and 23. He explained that the four-year study must be completed by October of 2003, when the Planning Unit must have a plan that is broadly representative of local governments and water resource interests. He invited citizens to use the flipcharts around the room to submit comments and questions on the watershed planning process and also on local issues of concern. He also asked if there were any questions; the following were asked:

Q: Why is there no mention of farming interests in the Mission statement?

A: It was intended that "viable and healthy communities" would encompass the different types of human livelihood in the Basin. The Partnership will consider adding farming or agriculture to its mission or goals statements.

Q: How many of our suggestions will you actually use? I've never seen any citizen's suggestion ever used in a plan.

A (BW): We will document all questions, answers and issues and include the record in the Plan. The Partnership will consider (action on) all of these. Does anyone from the CBP want to address that question?

A (Chanele Holbrook): I've been coming to CBP meetings for over a year and every suggestion by a citizen has been seriously considered and acknowledged, if not acted on.

A (Mark Swartout): The purpose of the CBP is to share information, we have never made a plan before. We are there to hear information and advice from folks who have lived on the river, and to make sure government agencies hear that input.

A (J. Roach): This whole process [watershed planning] was pushed for by the citizens. We said "permits are impossible, we've got to do something." And the state legislature responded.

Comments:

- "Cooperative, not regulatory" was included in the goals to recognize and incorporate input from all of us, with recognition that the regulatory approach does not work for many of the basin residents.
- I've been flooded three times, because of a log jam that the government said "it's gotta go" but then they won't do it and they won't give me a permit to do it. And they won't let me build a levee either.
- The Army Corps is building in the flood plain, local government(s) they're are building new treatment plants in the flood plain, and there are other new buildings in the flood plain built by government, but a citizen can't build there. It's hellish to try and get a permit. We have to get government in line with the regulations citizens have to follow.
- The fisheries people told us some areas need less water for fish eggs to be clean, but then they say the water level is too low for their nests.

Q: What about this 200-foot setback buffer on my land (200 feet from the river) that I can't do nothing with? That's nearly all my land.

A: We've got to work within the existing laws.

Q: Is this group going to build anything? Are you trying to supersede or change government at all? (I represent 11 families.) What are you all trying to do?

A: The plan will make recommendations to the state on water resources…if a number of watershed planning groups around the state make similar recommendations then yes, state law could change.

A: We are a diverse basin. We need your input. That's what the CBP is all about.

Q: Can my 11 families get together and make a recommendation for your group to consider?

A: Yes. Remember, the Chehalis Basin Partnership has a broader focus than just watershed planning. The intergovernmental agreement mentions "purposes of assessing and managing the water resources of the Chehalis River Basin and to pursue strategies within the Chehalis River Basin which include the key elements of flood reduction, fisheries, recreation, water quality and water quantity and examine their relationship to economic health and sustainability."

Following the question and answer period, some attendees returned to browsing the displays and writing comments and concerns at the Listening Posts, while some chose to listen in on the Partnership monthly meeting.

This meeting was the last of a series of four scheduled by the Chehalis Basin Partnership to invite public input on improving water quantity, quality and habitat.

Issues Identified at Chehalis open house, 5/21/02

ISSUE	ELEMENT(S)	COMMENTS	SOLUTION(S)
Bank Stability	Habitat	Fisheries people told me to take out the rock I had placed and plant willow sprouts, but those washed away.	
Stream Bank Buffers	Habitat	These prevent property owner from using land, and do not benefit owner.	
Water Quality	Water Quality	Quality of our water is crucial – if it's good for wildlife it will be good for us.	Buffers, land use
Logging	Water Quantity, Quality	When it rains near clear cuts, the river nearby has a very rapid response and heavy sediments.	Updated logging practices
FLOODING			
E. Side Newaukum R.	Water Quantity	Between I-5 bridge and county bridge on Kirkland Rd.-severe flooding every time, mitigation desirable	
STOP Filling in Flood Plains	Water Quantity, Quality	STOP! Allowing filling in flood plains and flood ways.	
STOP Filling in Flood Plains	Water Quantity, Quality	Stop allowing filling of floodways and restricting waters of storm water discharge and/or floodwaters. Also, no enforcement of regulations. I'm against dikes also.	
Filling in Flood Plains	Water Quantity, Quality	Why is it OK for government to build dikes or other structures in the flood plain or shorelines?	
(Army Corps' Proposed) Levee Placement	Water Quantity	Paid for/built by tax $: will cause more flooding of my property and all near me (specific one is River St. & Arizona Ave & golf course area & farm property). I am totally against the levee!	
Flooding Scott Lake	Water Quantity	The lake doubles in quantity each year, the golf course floods and septic systems are impacted.	
Levees	Water Quantity	We feel that levees are a bandaid and not a true solution to the flooding problem. We need to get the river moving (summer and flood season) so it can handle more water and take a more direct path to the ocean.	
Deforestation	W. Quantity, Quality, Habitat, Flows	Widespread in the Chehalis Basin – during rain events all the water comes out of the tributaries immediately instead of being held back.	
Storm Management	W. Quantity, Quality, Habitat, Flows	Vegetation would control runoff on all streams including type 5. Avoid diking and levees in favor of management to maintain flood plains as a clear area without buildings or fill. Borrow of fill from flood plain to create levees will be ineffective as sedimentation will refill the void. Levees and dikes affect quantity and direction of flow and damage from diversions should be avoided by proper regulation.	
WRIA 22/23 PROCESS ISSUES			
Study Area Boundaries		Coal Creek is a tributary to Salzer Creek; Study Area boundaries may be incorrect.	
Road Names on Map		Should Hwy 608 be labeled Hwy 508?	
Mission Statement		Needs to include agriculture/farming.	
Action on Citizens' Issues		How many of the issues raised by citizens will be included in the Plan?	
Laws & Regulations		Please post (at future meetings) those that affect watershed planning	

Attendance at Chehalis Open House

Name	Interest or Organization	Address
Amrine, Bob	Lewis Conservation District	N/A
Baker, Lamm	Citizen	575 New Oly Rd., Chehalis
Balmelli-Powe, Julie	Self	PO Box 341, Chehalis
Barmettler, Bill	CBP CAC member	PO Box 1462, Chehalis
Beerbower, Bob	Grays Harbor County (Commissioner)	PO Box 11, Elma
Butler, Gene	Self	196 Taylor Rd., Chehalis
Calkins, Terry	City of Centralia	PO Box 609, Centralia
Campbell, Dave	City of Chehalis	PO Box 871, Chehalis
Crumley, Lonnie	Self	97 Bartell Rd., Oakville
Curns, Kevin	Zarelli for Congress	N/A
Daneker, Lee	US EPA	1200 Sixth Avenue, Seattle
Dugaw, Paul	Attorney	300 Valley View SE, Chehalis
Emerson, Earl	Self	9825 Prather Rd. SW, Centralia
Emrich, Steve	Resident (Lewis County)	1358 NW River St., Chehalis
Gall, Chuck	PI Engineers	606 N. Columbia #103, Olympia
Gernhart, Bart	WSDOT	2318 NW 128th, Vancouver
Giffey, Mark	Port of Chehalis	179 Hojem Heights, Chehalis
Gore, Red	Resident (Lewis County)	N/A
Gore, Sally	Resident (Lewis County)	N/A
Hadaller, Dennis	Lewis County Comm.	N/A
Hare, Jon	Chehalis Tribe	420 Howanut, Oakville
Haslett, Jim	City of Napavine	PO Box 761, Napavine
Hojem, Lyle	Lewis County	N/A
Holbrook, Chanele	Heernett Foundation	N/A
Jennings, Kahle	WA Dept. of Ecology	PO Box 47775, Olympia
Johnson, Ann	Resident (Lewis County)	149 Donahue Rd., Chehalis
Johnson, Dick	Resident (Lewis County)	149 Donahue Rd., Chehalis
Johnson, Eric	Lewis County	N/A
Kay, Leslie	US Army Corps of Engineers	3745 E. Marginal Wy S., Seattle
Keahey, Dan	City of Centralia	PO Box 609, Centralia
Liou, Albert	PI Engineers	PO Box 1599, Edmonds
Mackey, Darlene	Resident (Lewis County)	150 Frogner Rd., Chehalis
Mackey, Tim	Self	150 Frogner Rd., Chehalis
Milton, James	Resident	808 Reynolds Ave, Centralia
Morris, Lori	US Army Corps of Engineers	3745 E. Marginal Wy S., Seattle
Napier, Lee	Grays Harbor County	100 W. Broadway, Montesano
Patten, J.R.	Self	2514 Hwy 508, Onalaska
Penberth, John	Self	PO Box 162, PeEll
Pollock, Ron	WSDOT	308 Rosebrook Rd., Chehalis
Powe, Brad	Self	PO Box 341, Chehalis
R.C. Jacobson	Self	7300 Rather Rd. SW, Centralia
Rader, Margaret	CBP CAC member	N/A
Roach, J.	Self	N/A
Schanz, Rob	Self/CBP CAC member	443 River Rd., Chehalis
Schiewe, Kasey	Congressman Baird	120 Union Ave #105, Olympia
Smith, Dan	Self	575 Newaukum Rd., Chehalis
Smothers, Ed	Self	1576 Sunset Way, Centralia
Spahr, Bob	Mayor, City of Chehalis	N/A
Spencer, Roberta	Lewis County	PO Box 533, Centralia
Spencer, Tracy	River resident	208 Kirkland Rd., Chehalis
Spogen, Rose	Self	PO Box 474, Chehalis
Stussy, Chad	WDFW	600 Capitol Way N., Olympia
Swanson, Craig	Lewis County	350 N. Market Blvd., Chehalis
Vinatieri, Mike	Resident (Lewis County)	107 Hemlock Dr., Chehalis
Wilkins, Dave	The Daily World	315 S. Michigan, Aberdeen
Willis, Terry	CBP	83 Willis Rd., Montesano
Wiltzius, Patrick	City of Chehalis	PO Box 871, Chehalis
Young, Alan	BVWC	442 Curtis Hill Rd., Chehalis
Zengel, Mike	"Parts Unknown"	103 Brian Dr., Chehalis

Plan Links or Cross References

Reference Area

Issue	Ag issue paper	Core Issues issue paper	Econ. Value of Recreation issue paper	Exempt Well issue paper	Flooding issue paper	Habitat issue paper	Hydraulic Continuity issue paper	Instream Flow Report / issue paper	Land Use issue paper	Mgt. Frame-work issue paper	Municipal Supply issue paper	Protection of Areas w/High Water Quality issue paper	Public Infor-mation issue paper	Storm-water issue paper	TMDL issue paper	Voluntary Agreements issue paper	Water Conser-vation issue paper	Water Quality Impair-ment issue paper	Level 1 Detailed Summary	Water Storage Report	Water Quality Moni-toring Report
Adjudication		•									•										
Agricultural Runoff	•								•			•						•			
Agriculture & Water Use	•	•																			
Availability Of Water	•	•		•				•	•		•										
Bank Erosion						•													•	•	
Bank Stability	•				•	•													•	•	•
Barriers/Blockages To Fish Passage						•														•	
Beaver Dams																				•	
Changes In Laws Or Regulations		•						•	•	•	•				•						
Conservation		•		•				•			•		•			•	•				
Consumptive Water Use / Water Returned To River		•		•			•	•			•										
Development Near Streams						•			•			•	•		•			•			
Discrepancy Between Water Use & Paper Rights	•	•									•								•		
Dissolved Oxygen						•									•			•	•		
Education / Information	•		•	•	•	•		•				•	•	•		•	•	•		•	•
Exempt Well Use		•		•			•	•													
Existing Laws, Regulations & Rules	•	•		•	•	•		•	•	•	•	•	•	•	•		•	•			•
Federally Reserved Water Rights		•						•													
Flooding					•								•						•	•	
Forestry Practices					•	•			•			•								•	•
Future Water Right Determination		•					•				•						•				
Gauging								•		•											•

Reference Area

	Ag issue paper	Water Quantity core Issues issue paper	Econ. Value of Recreation issue paper	Exempt Well issue paper	Flooding issue paper	Habitat issue paper	Hydraulic Continuity issue paper	Instream Flow Report / issue paper	Land Use issue paper	Mgt. Framework issue paper	Municipal Supply issue paper	Protection of Areas w/High Water Quality issue paper	Public Information issue paper	Storm-water issue paper	TMDL issue paper	Voluntary Agreements issue paper	Water Conservation issue paper	Water Quality Impairment issue paper	Level 1 Detailed Summary	Water Storage Report	Water Quality Monitoring Report
Governance					•				•						•						•
Groundwater Right Issuance		•		•			•				•										
Habitat Restoration			•			•						•								•	
Hydraulic Continuity				•			•	•											•		
Implementation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Instream Flow Rules								•													
Instream Flows (For Fish)							•	•			•					•				•	
Invasive Species						•											•			•	•
Lack Of Enforcement								•				•									
Levees					•																
Management System								•	•	•		•				•	•	•			•
Measuring Success																					
Monitoring								•	•	•		•			•			•			•
NPDES Permits														•							•
Protection Of Land			•						•			•						•			
Regulatory Vs. Voluntary Approach						•		•		•	•	•				•	•	•			
Reused Water		•									•		•				•			•	
Riparian Damage					•	•			•										•	•	•
Sediments/Turbidity						•												•		•	•
Source Protection									•												
Stormwater/Runoff/ Impervious Surfaces	•				•				•	•			•		•	•	•			•	
Temperature	•					•						•			•			•	•		•
Total Ma•imum Daily Load (TMDL)										•		•			•		•	•	•		•
To•ics: Non-Point Sources												•	•	•	•		•				•
To•ics: Point Sources												•			•						•
Updates To Plan										•						•					
Water Quality Data (Lack)												•						•	•		•
Water Quality In Lower Basin																		•	•		•
Water Rights: Information, Investigation, Validation, Issuance		•					•				•									•	
What Form Will The Partnership Take?										•						•					

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Water Quantity	Hydraulic Continuity	1.1	General	Recommend to Ecology that the agency develop a new hydraulic continuity policy (statewide or for the Chehalis) that allows water right applicants to employ more flexible strategies for meeting their water needs given that hydraulic continuity is an issue.	Basin-wide	2004-2005	Counties		State (Ecology)
Water Quantity	Inchoate Municipal Rights	1.2	General	Address requirements of Phase 4 watershed planning related to municipal water rights by estimating quantity of water represented by inchoate rights	Basin-wide	2004-2005	Partnership		State (Ecology)
Water Quantity	Regional Water Supply	1.3	General	Regional Water Supply, or coordinated water system planning	Basin-wide	2004-2005	Partnership		State (DOH)
Water Quantity	New water rights	1.4	General	Allow out-of-kind mitigation for new or changed water rights, e.g. using base flow restoration as mitigation for new right	Where needed	2004-2005	State (Ecology)		
Water Quantity	Adjudication	1.5	General	Request a streamlined adjudication for the Chehalis River basin.	Basin-wide	2004-2005	State (Ecology)		State (Ecology)
Water Quantity	Oversight of water use	1.6	General	Establish a Water Master program	Basin-wide	2004-2005	Partnership		
Water Quantity	Funding	1.7	General	Recommend adequate funding for water resources management	Basin-wide	2004-2005	Partnership		State (Ecology) Legislature
Water Quantity	Data collection	1.8	General	Continue to collect data pertaining to water resources	Basin-wide	2004-2005	Counties, Cities, Tribes, State		State (Ecology), ACOE
Water Quantity	Existing laws	1.9	General	Increased enforcement of existing laws and regulations to support voluntary efforts	Basin-wide	Ongoing	State (Depts. of Health, Ecology), Federal (EPA)		
Water Quantity	Exempt wells	1.10	General	Investigate the magnitude of impact from exempt wells	Basin-wide	2006-2007	State or Counties		
Water Quantity	Conser-vation	1.11	General	Develop and implement water conservation programs	Basin-wide	2004-2005	Partnership		State (Ecology)

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Water Quantity	Hydraulic Continuity	1.12	Specific	Conduct a groundwater study that provides the information necessary to address the hydraulic continuity issue. This study would provide specific information about the character of the groundwater throughout the Chehalis basin to allow decision-makers to better evaluate whether: • an individual water right application would impact streamflows • a strategic groundwater pumping schedule could be developed for a particular site to delay the impact on the river until the high flow period	Basin-wide	2004-2005	State (Ecology)		
Water Quantity	Black Lake	1.13	Specific	Conduct a feasibility study to assess the possibility of closing Black Lake Ditch and re-routing that water south to Black River	Black Lake	2006-2007	Thurston County, State		
Water Quality	Protecting healthy waters	2.1	General	Protect healthy waters of the basin so they do not become impaired or need TMDLs	Basin-wide	Ongoing	All local governments		
Water Quality	Monitoring	2.2	General	Implement the basin-wide water quality monitoring program developed as part of this planning process, including hiring a water quality monitoring coordinator	Basin-wide	2004-2005	Partnership		ACOE, State (Ecology)
Water Quality	TMDL	2.3	General	Develop a program to clean up water quality impairments before TMDL's need to be implemented	Basin-wide	2006-2007	State, local governments		
Water Quality	TMDL	2.4	General	Develop programs to address non-point sources of pollution in the Chehalis Basin so there can be a more equitable system for improving water quality	Basin-wide	2004-2005	State (Ecology)		
Water Quality	TMDL	2.5	General	Propose a "package" of improvements to the State to address non-point pollution (not a single approach)	Basin-wide	2004-2005	Partnership, State		
Water Quality	TMDL	2.6	General	Develop approaches to keep forestry and agriculture on the land. This will reduce future impairments caused by more intensive forms of land use.	Basin-wide	2006-2007	Partnership		

Water Quality	TMDL	2.7	General	Develop standards for "reasonable assurance" for non-point source reduction so that local communities know what the standard is if they want to produce programs to take pressure off point sources.	State	2006-2007	State (Ecology)		
Water Quality	TMDL	2.8	General	Set up a regional water quality board to manage water to prevent future TMDLs.	Basin-wide	2008-2009	State (Ecology)		
Water Quality	TMDL	2.9	General	Look at opportunities for pollution trading in the Chehalis Basin.	Basin-wide	2006-2007	Partnership		
Water Quality	TMDL	2.10	General	Develop sources for funding water quality improvements.	State	2004-2005	State (Ecology)		
Water Quality	Invasive Species	2.11	General	Plant species that are not native to this area should be eliminated or never introduced	Basin-wide	Ongoing	All local governments		
Water Quality	Septic systems	2.12	General	Develop and distribute public information on inspection and care of septic systems	State	2006-2007	State (Ecology)		
Water Quality	TMDL	2.13	Specific	Develop a prioritized list of TMDL projects where 303d impairment listings already exist.	State	2004-2005	State (Ecology)		
Water Quality	TMDL	2.14	Specific	Recommend that the Department of Ecology adopt "use-based" water quality standards for the Chehalis River basin	Basin-wide	2004-2005	State (Ecology)		
Habitat	Communication	3.1	General	Develop a better communication and coordination structure among the various groups involved in habitat restoration in the Chehalis basin	Basin-wide	2004-2005	Partnership		
Habitat	Coordination	3.2	General	Create a central, non-profit organization to coordinate restoration activities in the basin	Basin-wide	2004-2005	Partnership		
Habitat	Restoration strategy	3.3	General	Develop a single habitat restoration strategy (e.g. Chehalis Basin Plan for Habitat Restoration)	Basin-wide	2006-2007	Partnership		
Habitat	Measuring success	3.4	General	Develop a data, inventory and monitoring strategy for determining how effective habitat enhancement efforts have been	Basin-wide	2006-2007	State		
Habitat	Public information	3.5	General	Inform the public about how they can best protect habitat on their own land	Basin-wide	2004-2005	Partnership, State		
Habitat	Funding	3.6	General	Identify or create a funding source for small habitat projects	Basin-wide	2004-2005	Partnership, State		
Instream Flows	Existing regulatory flows	4.1	General	Current regulatory flows should be retained (the Partnership wishes to preserve the 1976 priority date for those flow levels)	Basin-wide	2004-2005	State (Ecology)		

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Instream Flows	New regulatory flows	4.2	General	After analysis of new and existing information (see below), the Partnership will consider recommending flow levels for streams with no regulatory minimums or adding incremental flows to existing regulatory minimums. Any new recommendations adopted by the State that are higher would carry a 1998 priority date for the additional flow increment.	Basin-wide	2004-2005	Partnership, State		
Instream Flows	Recommen-dations on new flows	4.3	General	Request WDFW/Ecology, in consultation w/tribes and Partnership members, recommend instream flow levels for all control stations. In addition to current stream hydrology and IFIM results, both the historic, "natural" stream flow level and flow levels less than 100% optimum for fish should be considered. Those agencies should consider the strategy of dry-year and wet-year flow numbers, as well as the possibility of "target" flows.	Basin-wide	2004-2005	State (WDFW, Ecology)		

Instream Flows	Instream flow "philosophy"	4.4	General	The Partnership adopts the following philosophy for how to approach setting stream flow levels: • New regulatory minimum instream flows in the Chehalis Basin should represent flows that provide a healthy environment for fish and other aquatic life (related to flow conditions) and that are hydrologically achievable. These flows should strive for the flow levels that occurred in the stream prior to European settlement. Definitions for the two components in this statement (healthy environment for fish, and pre-European hydrologically achievable flows) need to be formulated. • Based on Indian, or federally-reserved, water rights, the Chehalis Tribe and Quinault Nation retain an instream flow right necessary to protect fishing and hunting rights. The tribal right to instream flows will likely be adjudicated or settled using the IFIM methodology. • Keep salmonids in the Chehalis Basin off of the threatened and endangered species list. • These flows should be measured and monitored. The results will be used to evaluate the effectiveness of the program and make necessary adjustments. • A focus should be placed on gauging and increasing summer-time flows into the streams and rivers of the basin. Questions to consider (documented responses from agencies/tribes would be beneficial): • What is a healthy environment for fish? • What flows are hydrologically achievable to meet the needs of people and fish? • What flows occurred prior to European settlement? • Enforcement of existing laws, rules and regulations would assist greatly in achieving flow levels that are adequate for fish and people.	Basin-wide	2004-2005	Partnership	N/A	N/A

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
	New flow recommendation	4.5	General	In the implementation stages of the watershed planning process, the Partnership will consider recommending flow levels for streams with no regulatory minimums, or adding incremental flows to existing regulatory minimums, using information from the following: • CBP goals and objectives and the above instream flow philosophy • Existing flow data • Out-of-stream uses • IFIM flow study results • Estimates of pre-European flows • Recommendations from Ecology/WDFW, in consultation with tribes • Possible strategy of dry-year and wet-year flow numbers	Basin-wide	2004-2005	Partnership, State (Ecology)		
Instream Flows	Flow monitoring	4.6	Specific	Ecology/EPA/USGS should monitor flows at all sites	Basin-wide	2004-2005	State (Ecology), Federal (EPA, USGS)		
Instream Flows	Voluntary vs. regulatory	4.7		The Chehalis Basin Partnership prefers voluntary approaches to regulatory in attempts to make water available for stream flows.	Basin-wide	Ongoing	Partnership member agencies		
Instream Flows	Making more water available	4.8		An important focus of watershed plan recommendations and implementation should be to make more water available for instream uses, especially in the time period from roughly April through October (most important are the months from July through October)	Basin-wide	Ongoing	Partnership member agencies		
Instream Flows	Timeline for new flow recommendations	4.9		The new flows that should be established by rule will be specified when information becomes available.	Basin-wide	2004-2005	Partnership		

Instream Flows	Basin closure	4.10		The CBP may recommend that Ecology close certain basins from further surface water withdrawals at certain times during the year. The CBP does desire, however, that water rights be issued for groundwater applications if the applicant can show that their withdrawals would not impact stream flows from August through October, through timing or consumptive use.	Basin-wide	2006-2007	State (Ecology)		
Land Use	Forestry & agriculture	5.1	General	Encourage landowners who have property in forests to keep it in forest, and encourage farmers to continue to farm.	Basin-wide	Ongoing	Counties		
Land Use	Forestry & agriculture practices	5.2	General	Encourage the use of forestry and agricultural practices that mitigate the adverse impacts of timber, crop and livestock production on water resources.	Basin-wide	Ongoing	Counties		
Land Use	Land use practices	5.3	General	Require land use practices that limit the adverse effects on water quality when forest and agricultural lands are converted to more intensive uses.	Basin-wide	Ongoing	Counties		
Flooding	Flood hazard mgt. plans	6.1	General	Those cities and counties with comprehensive flood hazard management plans should implement them, including both structural and non-structural options	Upper Basin: WRIA 23	2008-2009	Cities, Counties		
Flooding	Coordination	6.2	General	Counties and cities with comprehensive flood hazard management plans should coordinate with each other during implementation of these plans, and should consider using the Partnership as a forum for coordination/ communication between Lewis County, Centralia & Chehalis flood officials	Upper Basin: WRIA 23	2006-2007	Cities, Counties, Partnership		
Flooding	Elevation poles	6.3	Specific	Place elevation poles and staff gauges along major rivers	Upper Basin: WRIA 23	2004-2005	Counties, Cities		
Water Storage	Wetland restoration	7.1	General	Establish a general program of wetland restoration: if money becomes available for wetland projects as mitigation in the basin, restoration projects that expand wet areas or reconnect the floodplain should be given additional weight.	Basin-wide	2006-2007	Partnership		

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Water Storage	Impervious surfaces	7.2	General	Establish a public information program including information on: • the effects of impervious area • how individuals can mitigate these effects • how development costs can be reduced by implementing Low Impact Development (LID) • the benefits of a policy of LID for new development in the basin (recommend drafting a model LID ordinance that could be easily adopted or modified by counties in the basin)	Basin-wide	2004-2005	State, Counties, Cities	$120,000	
Water Storage	Agricul-tural drainages	7.3	General	Establish a public information program to instruct agricultural landowners on the effects that agricultural drainages have on wetlands, water quality, and runoff. As part of this program, a database would be established to help track existing drainage systems, their condition, and the current land use.	Basin-wide	2006-2007	State, Counties, Cities	$207,000	
Water Storage	Beaver dams	7.4	General	Establish a public information program to explain the beneficial effects that beavers have on ecosystems and encourage landowners not to automatically remove beavers from an area. Establishing a program to relocate nuisance beavers is also a recommended priority	Basin-wide	2004-2005	State, Counties, Cities	$170,000	
Water Storage	Forestry & hydrology	7.5	General	Continue emphasis on forest conservation. Recommend an advanced study to quantify the relationship between forest cover, infiltration, groundwater, and surface water. By quantifying the effects of forest harvesting on base flows, new regulations can be fairly developed and administered or proper mitigation can be specified.	Basin-wide	2008-2009	State, Counties, Cities		
Water Storage	Skookum-chuck reservoir	7.6	Specific	Further investigate the possibility of expanding the storage of the Skookumchuck reservoir to the originally authorized volume of 28,500 acre-feet.	Basin-wide	2008-2009	Army Corps of Engineers (?)		

Water Storage	Wynoochee dam	7.7	Specific	Monitor implementation of the Wynoochee Dam project to ensure that this project contributes to the goals and objectives of the Chehalis Basin Watershed Management Plan	Basin-wide	Ongoing	Quinault Indian Nation		
Water Storage	Water releases	7.8	General	Releases of water from existing reservoirs must be timed with awareness of fish health and to support fish health	Basin-wide	Ongoing	Army Corps of Engineers (?)		
Water Storage	Aquifer storage & recover	7.9	Specific	If an aquifer storage and recovery project is to be considered, study Newaukum Artesian Aquifer: characteristics to evaluate include specific storage the aquifer might hold and hydraulic conductivity. Test wells would have to be drilled and groundwater modeling of the aquifer would be necessary before a pilot project could be established.	Basin-wide	2008-2009	Army Corps of Engineers (?)		
Public In-for-mation	Public information plan	8.1	General	The Citizens Advisory Committee (CAC) of the Partnership should take a leading role in developing a plan for public information, including specific roles and responsibilities. The CAC would make recommendations to and be guided by the Partnership.	Basin-wide	Ongoing	Citizens Advisory Committee		
Public In-for-mation	Partnership agencies' efforts	8.2	General	Member agencies of the Partnership should consider what outreach techniques are a good fit for their resources and assist accordingly	Basin-wide	2004-2005	Partnership member agencies		
Public In-for-mation	Focus of public information efforts	8.3	General	Initial efforts must focus on the water resource issues deemed most vital by the Partnership and should begin as soon as the Plan is adopted.	Basin-wide	2004-2005	Partnership member agencies		
Public In-for-mation	Partnership meetings	8.4	General	Make clear in all communications that meetings of the Partnership are open to interested members of the public.	Basin-wide	Ongoing			
Public In-for-mation	Outreach materials	8.5	General	Develop eye-catching informational materials such as a "Chehalis Basin Water 101" brochure.	Basin-wide	2004-2005			
Public In-for-mation	Revisions to materials	8.6	General	Revise public informational materials and efforts over time to reflect what proves to be more/less effective.	Basin-wide	Ongoing	Citizens Advisory Committee		
Public In-for-mation	"Talking points"	8.7	Specific	Develop "talking points" on water resources that all Partnership members can have on hand to spread the word.	Basin-wide	2004-2005			
Public In-for-mation	Brochure	8.8	Specific	Create a brochure that portrays the Chehalis basin as a destination for recreating and living; this brochure will also convey that protecting what we've got is the key to our quality of life.	Basin-wide	2004-2005			
Exempt Wells	Status quo	9.1	General	Maintain status quo, until steps below are taken	State-wide	2006-2007	State (Ecology, Legislature)		

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Exempt Wells	State issue	9.2	General	Legislature/Ecology should address exempt well use on a statewide basis following existing laws, rules and regulations	State-wide	2006-2007	State (Ecology, Legislature)		
Exempt Wells	Current regulations	9.3	General	State should enforce current regulations, including addressing any excessive uses of exempt wells and situations that conflict with the Attorney General's opinion.	State-wide	Ongoing	State (Ecology, Legislature)		
Exempt Wells	Current regulations	9.4	General	Evaluate current regulations on exempt wells for adequacy in protecting surface waters (quantity and quality)	State-wide	2004-2005	State (Ecology, Legislature)		
Exempt Wells	Surface water impacts	9.5	General	Clarify and resolve the science around the impacts of exempt wells on surface water.	State-wide	2004-2005	State (Ecology, Legislature)		
Exempt Wells	Funding from State	9.6	General	State must allocate resources if local governments are to have a role in managing exempt wells	State-wide	2006-2007	State (Ecology, Legislature)		
Exempt Wells	State evaluation	9.7	General	Ecology should conduct statewide evaluation of exempt well use, using the following guidelines: • Ecology should conduct its evaluation in an open process involving stakeholders. • Ecology should sponsor sub-regional and regional workshops on exempt wells, leading to a statewide workshop/ forum/ task force on exempt wells to better quantify technical aspects and to identify policy and cost factors. • Ecology should develop an educational program related to the use of exempt wells and their potential impact on instream flows and water quality. • Ecology should develop criteria for when it will require use of deeper aquifers as a source of exempt well water. If deeper aquifers are used for household use, shallow aquifers would be available to supplement stream flows. • Ecology should address the timing of withdrawals and the possibility or requirement that withdrawals minimize impacts on stream flows.	State-wide	2006-2007	State (Ecology)		

Exempt Wells	Exempt wells vs. community systems	9.8	General	The Department of Health should prepare a white paper that compares use of exempt wells per parcel to the use of community systems (Class B). In particular, it should address the benefits that Class B community systems have for water quality.	State-wide	2004-2005	State (Ecology)		
Exempt Wells	Priority	9.9	General	The Partnership believes that a conflict exists among the 1945 Groundwater Law, the Attorney General's opinion, and the Chehalis Instream Resource Protection Program (IRPP) as to whether small withdrawals can affect surface water rights and whether they are subject to the same system of priorities as all other appropriators. The Partnership recommends that Ecology or the Attorney General's office address this conflict in the Chehalis basin.	Basin-wide	2004-2005	State (Ecology, Attorney General's office)		

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Exempt Wells	Concern	9.10	General	The Partnership has discussed exempt wells and its members have widely divergent opinions on whether or not exempt wells are a concern in the Chehalis basin. Some believe that exempt wells have minimal impact while others believe that exempt wells have, or will have, an impact, especially on stream flows. Based on the data evaluation that shows that there may be concerns with exempt wells in certain sub-basins, the Partnership has agreed to recommend the following specific statement and actions regarding exempt wells in the Chehalis basin: Statement of Concern Related to Exempt Wells in the Chehalis basin: 1. The Partnership believes that exempt wells may be a problem in specific sub-basins of the Chehalis basin where rural development and/or hydrogeologic and/or streamflow conditions create cause for concern. 2. The Partnership further believes that exempt wells may be a potential future problem in other sub-basins where future rural development combined with existing hydrogeologic and/or existing or future streamflow conditions, may create cause for concern. Recommended Actions Related to Exempt Wells in the Chehalis basin • Prioritize sub-basins in the Chehalis Basin based on concerns about exempt wells and conduct specific hydrogeologic studies and evaluations to identify specific problem areas. Areas of higher concern are those that have substantial human development now or projected in the future, poor hydrogeological conditions and/or hydraulic continuity, or low stream flows • Pursue funding sources for investigating possible solutions for identified sub-basin problem areas in order to: • Focus on these sub-basins and areas within these sub-basins in developing alternative options for exempt wells, for example, providing water purveyor service, using deep aquifers where supplemental water may improve streamflow conditions, and/or considering means to influence the timing of withdrawals to benefit stream flows • Develop educational materials and program for informing basin/state residents, agriculture and businesses on how to use exempt wells and to lessen their impact on the environment	Basin-wide	2006-2007	State (Ecology)		

Stormwater	Public information	10.1	General	Focus on public information to explain impacts of impervious surfaces and stormwater on water resources	Basin-wide	2004-2005	State (Ecology)		
Stormwater	Studies	10.2	General	Study specific problems and develop recommendations	Basin-wide	2006-2007	State (Ecology)		
Recreation	Revenue	11.1	General	Outdoor recreation opportunities should be cultivated where they can contribute to a sustainable economic revenue base	Basin-wide	Ongoing	Partnership member agencies		
Recreation	Preser-vation	11.2	General	Money spent in the basin should be used to preserve fish, wildlife and aquatic habitat within the basin	Basin-wide	Ongoing	Partnership member agencies		
Recreation	State money	11.3	General	Fish and wildlife money/services in the area and associated taxes should be used for preservation of habitat within the Chehalis basin (i.e., provide funding for small restoration or preservation projects)	Basin-wide	Ongoing	State (Legislature)		
Recreation	Events	11.4	General	Local governments should encourage festivals and events that support water resources and fish and wildlife within the basin (i.e., pamphlet/brochure with maps describing the basin as a great place to fish, boat, recreate and live because of the natural resource.	Basin-wide	Ongoing	Partnership member agencies		
Recreation	Study	11.5	General	The Economic Development Council should study the issue of recreation and its economic value within the Chehalis basin.	Basin-wide	2006-2007	State (Economic Development Council)		
Management Framework	Legal entity	12.1	General	Partnership should become a legal entity, a broadly representative governing body to oversee implementation	Basin-wide	2004-2005	Partnership		
Management Framework	Maintenance of the Partnership	12.2	General	Until a preferred entity is established and functioning, the Partnership should remain the management entity, using Gray's Harbor County as the lead entity. It will be responsible for Plan approval through the Counties and Plan implementation.	Basin-wide	2004-2005	Partnership		
Management Framework	District formation	12.3	General	The Plan recommends that agriculture consider ways to better manage water. Formation of an irrigation district should be investigated to explore opportunities for sharing water rights to support agriculture while at the same time encouraging more efficient use of existing water rights.	Basin-wide	2004-2005	Partnership member agencies		

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Management Framework	Recommended Entity	12.4	General	The Partnership recommends investigating two types of basin-wide organizations: a Water Resources District (as described in the State Department of Ecology's Phase 4 Implementation Report) and a Chehalis Basin Council of Governments that would focus on Water Resources. This investigation would include a consideration of legislative changes that might be necessary to fully meet the needs of the Chehalis Basin.	Basin-wide	2004-2005	Partnership		
Management Framework	Agreements	12.5	General	Voluntary Inter-Local Agreements designed to preserve the health and integrity of the basin's water resources.	Basin-wide	2004-2005	Partnership member agencies		
Management Framework	New committee	12.6	General	Funding and implementation committee	Basin-wide	2004-2005	Partnership		
Measuring Success	Tracking	13.1	General	Track what happens to implement the Plan, for example: • The counties adopt the Plan • The Partnership constitutes itself as a legal entity to oversee implementation of the Plan • Whether or not a legal entity is created to oversee implementation, participating cities, counties, tribes and water purveyors take actions to implement specific recommendations in the Plan • A single legal entity (if one is created) or individual cities/counties/tribes/water purveyors or combinations of these entities send recommendations to state/local governments requesting actions that would benefit the basin and the agencies respond positively to these recommendations • Funding is obtained either by the Partnership (if it becomes a legal entity) or by member agencies to implement projects that benefit water quality, water quantity, instream flows, habitat or storage and prevent flooding • Public outreach and information efforts raise awareness about water resources and encourage citizens of the basin to adopt behaviors that benefit water resources over the long term	Basin-wide	Ongoing	Partnership		

Measuring Success	Plan elements	13.2	General	For each element of this Plan, determine first whether general/specific recommendations are implemented, then measure effectiveness of projects implemented, for example: • Water Quantity: Are cities, water districts and rural communities able to meet needs without impairing stream flows? • Water Quality: Have any water bodies been taken off the 303(d) list? Does water quality monitoring show improved water quality? • Habitat: Is monitoring strategy complete? Has it been implemented? Does state (Fish & Wildlife) monitoring show positive results? • Instream Flows: Are regulatory minimum flows being met? • Flood Prevention: Has flood damage been mitigated? • Storage: Have any recommended actions achieved positive results (e.g., less sever flood damage in winter, higher stream flows during low flow months)	Basin-wide	Ongoing	Partnership		
Measuring Success	Tracking tool	13.3	General	Track implementation of recommendations using a table with column headings: • Recommendation • Implementation Strategy • Responsible Party • Schedule • Results • Steps to take if off track (adaptive management)	Basin-wide	Ongoing	Partnership		
Data Needs	Forestlands	14.1	General	Gather information on condition of Chehalis basin forestlands (e.g., extent of harvests, replanting, regrowth, etc)	Basin-wide	2006-2007	?		
Data Needs	Forestlands	14.2	General	Gather information on ownership of Chehalis basin forestlands	Basin-wide	2006-2007	Partnership		
Data Needs	Forestlands	14.3	General	Compare forest practices/requirements under current Washington forest practices rules and forestry as practiced under Habitat Conservation Plans (HCPs) in the Chehalis basin	Basin-wide	2006-2007	?		
Data Needs	Forestlands	14.5	General	Gather information on extent to which harvest units within the basin are complying with Washington forest practices rules and the HCP's	Basin-wide	2004-2005	?		

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Data Needs	Water quantity	14.6	General	The sub-basin prioritization effort was used for initial selection of water quantity study area. The priority list should be used as the basis for future similar water quantity evaluations, starting with the Wishkah sub-basin and followed by the Black River sub-basin. Future water quantity studies should select sub-basins alternating between WRIAs based on overall priority.	Basin-wide	2008-2009	Partnership		
Data Needs	Sub-basin priorities	14.7	General	The list should be used to inform future technical and policy efforts, understanding that there may be additional factors to consider.	Basin-wide	2006-2007	?		
Data Needs	Pilot studies	14.8	General	Because of the huge size of the Chehalis basin, technical and specific policy efforts should consider using sub-basins as pilot efforts to make limited resources go further and to test techniques on a small scale. The sub-basin priority list should be the basis for selecting study areas.	Basin-wide	2008-2009	?		
Environ-mental Education	Teacher training	15.1	General	Provide more teacher trainings and information about existing resources	Basin-wide	Ongoing	School districts in the basin		
Environ-mental Education	Organiza-tions	15.2	General	Involve more organizations with environmental education such as stream team, conservations districts, counties, cities, YMCA Earth Corps, WFPA, and state agencies.	Basin-wide	Ongoing	School districts in the basin		
Environ-mental Education	New position	15.3	General	Establish a coordinator's position to form partnerships with community members and to use their expertise to create a strong program.	Basin-wide	2006-2007	Partnership		
Environ-mental Education	Salmon, stream ecology	15.4	General	Provide education on the value of salmon, salmon habitat, and stream ecology through workshops and field studies.	Basin-wide	Ongoing	School districts in the basin		
Environ-mental Education	Biological assessment	15.5	General	Offer training in how to use biological assessment as an educational and action tool to determining the health of salmon habitat	Basin-wide	Ongoing	?		
Environ-mental Education	Habitat restoration	15.6	General	Teach habitat restoration skills to teachers, students, and homeowners.	Basin-wide	Ongoing	?		
Environ-mental Education	Applied knowledge	15.7	General	Provide teachers, students, and homeowners with a opportunity to apply the knowledge and skills they have learned to a habitat restoration project	Basin-wide	Ongoing	?		

Environmental Education	Environment as context	15.8	General	Push to use the environment as integrating context (combine with math, science, and English curriculum) to improve test scores, retention, and participation.	Basin-wide	Ongoing	?		
Agriculture & Water Mgt.	Public information	16.1	General	Promote education about the effects of activities on the quality of the water to those who use the water.	Basin-wide	Ongoing	?		
Agriculture & Water Mgt.	Local produce	16.2	General	Encourage local agricultural production and promote local agricultural product sales.	Basin-wide	Ongoing	?		
Agriculture & Water Mgt.	Science	16.3	General	Promote science-based research and education to support agricultural producers by WSU Cooperative extension and other institutions which provide these services to Chehalis Basin growers.	Basin-wide	Ongoing	?		
Agriculture & Water Mgt.	Strategic Plan	16.4	General	Develop an overall strategic plan for promoting Chehalis Basin agriculture.	Basin-wide	2004-2005	?		
Agriculture & Water Mgt.	Land use	16.5	General	Develop a Chehalis Basin program for the purchase of development rights to maintain land in agriculture.	Basin-wide	2004-2005	?		
Agriculture & Water Mgt.	Funding	16.6	General	Develop local programs to match state and federal agency funding for agricultural lands conservation.	Basin-wide	2004-2005	?		
Agriculture & Water Mgt.	Adjudication	16.7	General	Conduct a general water rights adjudication in the Chehalis Basin.	Basin-wide	2006-2007	?		
Water Conservation	Phase 4	17.1	General	Meet Phase 4 requirements for conservation, if Phase 4 funding is accepted.	Basin-wide	2004-2005			
Water Conservation	Coordination	17.2	General	The Partnership should meet with water purveyors to develop coordinated water conservation efforts that benefit all purveyors of the Chehalis Basin. Such an effort would provide an economy of scale by pooling purveyor resources and ideas into a regional approach. 17.2	Basin-wide	2004-2005			

Element	Sub-topic	#	General / Specific	Recommendation	Area	Priority / Date H: '04-'05 M: '06-'07 L: '08-'09	Jurisdiction(s)	Est. Cost	Possible Funding Sources
Water Conservation	Agriculture & Conservation	17.3	General	Provide opportunities between the CBP and the agricultural community to consider cooperative efforts to simultaneously support agriculture & stream flows. This could lead to a coordinated effort involving Farm Bureaus, Conservation Districts, the Washington State Department of Agriculture and/or individual members of the agricultural community, including a resource for technological information.	Basin-wide	2004-2005			
Water Conservation	Sharing water rights	17.4	General	The current "use it or lose it" law is a disincentive to conserve water for agriculture. Therefore, the CBP recommends considering a management system to allow the agricultural community to combine resources and "share" water rights to become more efficient.	Basin-wide	2004-2005			
Water Conservation	Water Master	17.5	General	The Partnership should consider recommending a "Water Master" who could work with Conservation Districts or irrigators to use water efficiently and minimize impacts on stream flows.	Basin-wide	2004-2005			
Water Conservation	"Use it or lose it"	17.6	General	Recommend changes to the state's "use it or lose it" law to allow saving water without losing water rights.	Basin-wide	2004-2005			
Water Conservation	Trust water rights	17.7	General	Encourage consideration of the Trust Water Rights Program as a method to preserve water rights and allow water to go to the streams.	Basin-wide	2004-2005			
Water Conservation	Measure success	17.8	General	17.3 Water purveyors continue to comply with DOH requirements. Consider methods to measure success of water purveyors' current conservation efforts to see if adjustments are needed. Consider state funding to support purveyor conservation efforts.	Basin-wide	2004-2005			

Level 2 Selection Table

Basin No.	Basin Name	Risk to Fish					Risk to Human						Instream Flow met? Y(2) N(1)	Protected Land: > 40%(1), 10-40%(2), <10%(3)
		SaSI (2002) Draft Stock	Recovery Strategy	Water Quantity	Water Quality	Overall Stock Risk H(1), M(2), or L(3)	# of Apps.	Inst. Cfs of Apps.	# of Claims	# of Permits and Certificates	Inst. Cfs of Permits and Certificates	Overall Risk H(1), M(2), or L(3)		
7	Newakum River	1	1	1	1	1	10	2.57	640	179	56.56	1	1	1
10	Mainstem near Chehalis/Centralia	3, 1	1	1	1	1	2	9.21	1053	266	74.09	1	1	1
11	Black River	3	1	1	1	2	9	7.63	1015	418	209.40	1	?	2
13	Chehalis River Middle Reach 2	3, 1	1	1	1	2	15	8.69	1017	425	162.13	1	1	1
31	Grays Harbor	3, 1	1	N/A	1	1	34	33.79	609	109	62.00	2	none set	1
9	Skookumchuck	1	1	1	1	1	5	3.30	309	120	307.16	1	2	2
22	Hoquiam	1	1	1	2	1			146	38	64.71	3	no data	1
30	Chehalis River Lower Reach 2	3, 1	1	1	1	2	4	2.34	540	102	66.08	2	none set	1
4	Upper Chehalis River	3	1	DG	1	1	7	3.78	882	243	66.97	1	no data	1
19	Chehalis River Lower Reach 1	3, 1	1	1	1	2	9	9.52	434	144	49.71	2	1	1
21	Wishkah River	3	1	1, 3=2	3	1			186	39	38.64	2	no data	2
8	Salzer Creek	3	3	1	1	2			73	12	2.41	2	1	1
14	Cloquallum Creek	3	2	1	1 (DG)	2	4	1.52	318	78	16.85	3	1	1
20	Wynoochee River	1	1	1	1	1	4	0.77	171	59	1574.50	2	1	2
1	Chehalis River headwaters	3	1	1	1	1	2	0.02	103	42	8.21	3	1	1
5	South Fork Newaukum River	1	1	1, 3=2	1	1			140	16	8.92	3	1	1
6	North Fork Newaukum River	1	1	1, 3=2	1	1	1	0.02	8	11	13.98	3	1	1
15	EF Satsop River	1	1	3	1	1	7	4.90	91	21	71.14	3	1	1
16	Decker Creek (trib to Satsop)	1	1	3	1	1			64	13	8.20	3	no data	1
17	Middle Fork Satsop River	1	1	1	DG	1			30	12	0.94	3	no data	2
18	Satsop River	1	1	DG	1	1	3	1.17	142	45	35.76	3	1	3
23	Middle Fork Hoquiam River	1	1	1	2	1				0	0.00	3	no data	1
24	East Fork Hoquiam River	1	1	1	2	1			117	23	2.39	3	no data	1
25	Humptulips River	1	1	3	1	1	2	0.32	237	28	86.23	3	1	3
2	Elk Creek	3	2	1	DG	2			38	10	12.92	3	1	2
3	South Fork Chehalis River	3	1	1	1	2			24	29	11.69	3	no data	1
12	Cedar Creek	3	3	3	DG	3			8	11	2.71	3	no data	3
26	Elks River (low fish data)	DG	2	1	3	3			10	0	0.00	3	no data	2
27	Johns River (low fish data)	DG	2	3	3	3			27	0	0.00	3	no data	1
28	Newskah Creek (low fish data)	DG	2	DG	1 (DG)	3			11	0	0.00	3	no data	1
29	Charley Creek (low fish data)	DG	2	DG	DG	3			3	2	2.10	3	no data	1
	Total:						118	89.55	8446	2495	3016.41			

Basin No.	Basin Name		*Land Use* Primary LU	Primary LU %	Secondary LU	Secondary LU %	Tertiary LU	*Growth Pressure* Tertiary LU %	H(1), M(2), L(3)	25 yr added population	population % Increase 2000-2025	population density per sq. mi, 2025	land area (sq. mi)	overall growth pressure: H(1), M(2), L(3)		Total Risk Factors
7	Newakum R.	Forest	69%	Agriculture	28%	Urban/Industrial	2%	1	4,611	66%	141	82	1	**4**
10	Mainstem nr Chehalis/Cent.	Forest	69%	Agriculture	21%	Urban/Industrial	9%	1	13,900	66%	214	102	1	**4**
11	Black R.	Forest	71%	Agriculture	18%	Wetlands/Water	7%	1	15,475	90%	238	137	1	**5**
13	Chehalis Middle Reach 2	Forest	78%	Agriculture	15%	Urban/Industrial	6%	1	11,337	82%	111	226	1	**5**
31	Grays Harbor	Forest	68%	Urban/Industrial	12%	Other	6%	1	5,979	32%	102	?	1	**5**
9	Skookumchuck	Forest	88%	Agriculture	8%	Urban/Industrial	2%	2	7,148	70%	98	177	2	**6**
22	Hoquiam	Forest	89%	Wetlands/Water	7%	Urban/Industrial	5%	1	3,252	57%	172	52	1	**6**
30	Chehalis Lower Reach 2	Forest	66%	Urban/Industrial	24%	Wetlands/Water	6%	1	4,601	32%	314	60	1	**6**
4	Upper Chehalis R.	Forest	82%	Agriculture	17%	Urban/Industrial	1%	3	4,232	66%	51	211	2	**7**
19	Chehalis Lower Reach 1	Forest	79%	Urban/Industrial	15%	Agriculture	6%	1	2,220	32%	97	94	2	**7**
21	Wishkah R.	Forest	93%	Wetlands/Water	3%	Urban/Industrial	2%	2	2,008	32%	80	104	2	**7**
8	Salzer Ck.	Forest	84%	Agriculture	13%	Urban/Industrial	3%	2	677	66%	90	19	2	**8**
14	Cloquallum Ck.	Forest	91%	Urban/Industrial	4%	Agriculture	4%	2	1,343	38%	70	70	2	**9**
20	Wynoochee R.	Forest	95%	Agriculture	3%	Wetlands/Water	1%	3	422	29%	9	198	3	**9**
1	Chehalis headwaters	Forest	96%	Agriculture	3%	Urban/Industrial	1%	3	723	64%	16	116	3	**10**
5	S Fork Newaukum	Forest	91%	Agriculture	6%			3	327	56%	22	42	3	**10**
6	N Fork Newaukum	Forest	95%	Agriculture	5%			3	86	65%	7	32	3	**10**
15	EF Satsop	Forest	96%	Wetlands/Water	4%			3	381	100%	13	57	3	**10**
16	Decker Ck (trib to Satsop)	Forest	93%	Agriculture	4%	Wetlands/Water	2%	3	399	87%	18	48	3	**10**
17	Middle Fork Satsop	Forest	99%					3	79	48%	4	57	3	**10**
18	Satsop River	Forest	94%	Agriculture	3%	Urban/Industrial	1%	3	794	56%	16	137	3	**10**
23	Middle Fork Hoquiam	Forest	90%	Wetlands/Water	10%			3	0	0%	0	10	3	**10**
24	E Fork Hoquiam	Forest	97%	Urban/Industrial	1%	Wetlands/Water	1%	3	150	32%	24	26	3	**10**
25	Humptulips	Forest	96%	Wetlands/Water	2%	Agriculture	1%	3	331	30%	6	244	3	**10**
2	Elk Creek	Forest	99%	Agriculture	1%			3	119	65%	5	60	3	**11**
3	S Fork Chehalis	Forest	89%	Agriculture	10%	Urban/Industrial	1%	3	100	66%	5	50	3	**11**
12	Cedar Creek	Forest	96%	Agriculture	2%	Urban/Industrial	2%	3	359	82%	20	39	3	**12**
26	Elks (low fish data)	Forest	99%	Wetlands/Water	1%			3	0	0%	0	18	3	**12**
27	Johns (low fish data)	Forest	97%	Wetlands/Water	3%	Agriculture	1%	3	25	32%	3	30	3	**12**
28	Newskah Ck (low fish data)	Forest	97%	Agriculture	2%			3	21	32%	7	12	3	**12**
29	Charley Ck (low fish data)	Forest	94%	Agriculture	5%			3	13	31%	7	8	3	**12**
	Total:								81,112					

Chehalis Basin Watershed Plan Useful Internet Sites

Other Data Sources

Local Websites

Chehalis River Council site for water issues, Partnership minutes, links to other sites:
www.crcwater.org/watershed.html

Grays Harbor County (Level 1 Assessment and other Watershed Plan materials):
http://www.co.grays-harbor.wa.us *under "Departments" and "Public Services"*

Flooding

US Army Corps of Engineers site for Chehalis Basin flood control projects:
http://www.nws.usace.army.mil/pm/centralia
http://www.nws.usace.army.mil/pm/chehalis

General Water Info

Water Resources of the United States
http://water.usgs.gov/

"Blue Gold" Report focusing on Washington's Water:
http://www.celp.org/2002fall.pdf

CELP (The Center for Environmental Law & Policy):
http://www.celp.org/

State Watershed Planning Web Pages

WRIA maps (population density, flooding): http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm

Chehalis Basin Watershed Planning (includes studies done for this Plan):
www.ecy.wa.gov/watershed/2223.html

Salmon Recovery Funding Board:
http://www.wa.gov/iac/salmonmain.html *under "Salmon"*

Agriculture

American Farmlands Trust:
www.farmland.org.

Cascade Harvest Coalition (practical ideas for promoting local agriculture):
www.cascadeharvest.org

WSU Coop Extension Small Farms Team:
http://smallfarms.wsu.edu/

Funding/Resources

*Environmental Finance Center Network (advisory services; education, pub*lications, and training; technical assistance; analyses on financing alternatives):
http://www.epa.gov/efinpage/efc.htm

Salmon Information

Summary of the Chehalis Basin Limiting Factors analysis, info on how to order complete Limiting Factors Analysis:
www.conserver.org/salmon/index.php3

State Salmon Recovery Board funding site:
www.wa.gov/iac/salmonmain.html

Technical information about culvert design, streambank protection, and a Citizen's Guide to Riparian Restoration:
www.wa.gov/wdfw/habitat.htm#habrest

Information about the various species of salmon and their status:
www.wa.gov/wdfw/outreach/fishing/salmon.htm

Information on salmon recovery:
www.longlivethekings.org

Some good photos and case studies about fish barrier (small dam) removal projects:
www.tu.org