GLOSSARY

The definitions in this list have no legal significance and are provided only for clarification of terms used throughout this program.

acclimation pond

Concrete or earthen pond or a temporary structure used for rearing and imprinting juvenile fish in the water of a particular stream before their release into that stream.

Act -- See Northwest Power Act.

adaptive management

A scientific policy that seeks to improve management of biological resources, particularly in areas of scientific uncertainty, by viewing program actions as vehicles for learning. Projects are designed and implemented as experiments so that even if they fail, they provide useful information for future actions. Monitoring and evaluation are emphasized so that the interaction of different elements of the system are better understood.

adult equivalent population

The number of fish that would have returned to the mouth of the Columbia River in the absence of any prior harvest.

af (acre-foot)

Unit of volume measurement used to describe a quantity of water stored in a reservoir. One acre-foot of water covers one acre to a depth of one foot or 325,850 gallons.

anadromous fish

Fish that hatch in freshwater, migrate to the ocean, mature there and return to freshwater to spawn. For example, salmon or steelhead.

approach velocities

Water velocities at or near the face of a fish screen.

artificial production or artificial propagation

Spawning, incubating, hatching or rearing fish in a hatchery or other facility constructed for fish production.

assured refill curve

A curve showing minimum elevations that must be maintained at each storage project to ensure refill even if the third lowest historical water year occurred; it sets limits on the production of energy.

attraction

Drawing fish to dam fishways or spillways through the use of water flows.

aMW (average megawatts)

The average amount of energy (number of megawatts) supplied or demanded over a specified time.

barrier net

A net system that is placed across a river, stream or channel to block the passage of fish from dam turbine intakes or other hazards without blocking the water flow.

baseload

In a demand sense, a load of electricity that varies only slightly over a specified time period.

baseline stream survey

A survey of the physical and biological resources and characteristics of a stream.

base load

The minimum load in a power system over a given period of time. Base load resources run continually except during maintenance and outages.

billing credits

Under the Northwest Power Act, a payment by Bonneville to a customer (in cash or offsets against billings) for actions taken by that customer to reduce Bonneville's obligations to acquire new resources.

biological diversity

The variety of and variability among living organisms and the ecological complexes in which they occur. Biological diversity at its most basic level is the genetic diversity (genetic variation found within each species), phenotypic and morphological diversity (physical, life history and behavioral variation found within each species), species diversity (number of species in a given ecosystem), and community/ecosystem diversity (variety of habitat types and ecosystem processes extending over a region).

blocked areas

Areas in the Columbia River Basin where hydroelectric projects have created permanent barriers to anadromous fish runs. These include the areas above Chief Joseph and Grand Coulee dams, the Hells Canyon Complex and other smaller locations.

Bonneville Power Administration (Bonneville)

The sole federal power marketing agency in the Northwest and the region's major wholesaler of electricity. Created by Congress in 1937, Bonneville sells power to public and private utilities, direct service customers, and various public agencies in the states of Washington, Oregon, Idaho, Montana west of the Continental Divide, (and parts of Montana east of the Divide) and smaller adjacent areas of California, Nevada, Utah and Wyoming. The Northwest Power Act charges Bonneville with additional duties related to energy conservation, resource acquisition, and fish and wildlife.

brood stock

Adult fish used to propagate the subsequent generation of hatchery fish.

Bureau of Reclamation, U.S. Department of the Interior

An agency that administers some parts of the federal program for water resource development and use in western states. The Bureau of Reclamation owns and operates a number of dams in the Columbia River Basin, including Grand Coulee and several projects on the Yakima River.

bypass system

A channel or conduit in a dam that provides a route for fish to move through or around the dam without going through the turbine units.

captive brood stock

Fish raised and spawned in captivity.

carrying capacity

The number of individuals of one species that the resources of a habitat can support.

cfs (cubic feet per second)

A unit used to measure water flow.

collection and bypass system

A system at a dam that collects and holds the fish approaching the dam for later transportation or moves them through or around the dam without going through the turbine units.

Columbia River Compact

An interstate compact between the states of Oregon and Washington by which the states jointly regulate fish in the Columbia River.

Columbia River Inter-Tribal Fish Commission

The Commission is the coordinating body of the Yakama, Nez Perce, Umatilla and Warm Springs Indian tribes. These tribes all signed the 1855 treaties that reserved their rights to Columbia River salmon and steelhead, certain wildlife and other resources.

Columbia River System

The Columbia River and its tributaries.

Columbia River Treaty

The treaty between the United States and Canada for the joint development of the Columbia River. It became effective on September 16, 1964.

Coordinated Information System

Still under development, this system is designed to allow interested parties to access technical information about Columbia River salmon and steelhead.

Corps of Engineers, U.S. Department of the Army (Corps)

An agency with the responsibility for design, construction and operation of civil works, including multipurpose dams and navigation projects.

creel census survey

The collection of data concerning the number of fish caught by sport fishers on a particular stream or in a particular area.

critical period

The sequence of low water conditions during which the hydropower system's lowest amount of energy can be generated while drafting storage reservoirs from full to empty. Under the Pacific Northwest Coordination Agreement, the critical period is based on the lowest multimonth stream flow observed since 1928. Based on analysis of flows at The Dalles, this streamflow is also the lowest since recordkeeping began in 1879.

critical water

The low streamflow conditions in the critical period, under which the hydropower system will generate only about 12,300 average megawatts. In an average year, the Northwest hydropower system will produce about 16,400 average megawatts.

cryopreservation

The long term preservation of fish gametes by freezing.

deflector screens/diversion screens

Wire mesh screens placed at the point where water is diverted from a stream or river. The screens keep fish from entering the diversion channel or pipe.

demography

The study of characteristics of human populations, especially size, density, growth, distribution, migration and vital statistics and the effect of these on social and economic conditions.

dissolved gas concentrations

The amount of chemicals normally occurring as gases, such as nitrogen and oxygen, that are held in solution in water, expressed in units such as

milligrams of the gas per liter of liquid. Supersaturation occurs when these solutions exceed the saturation level of the water (beyond 100 percent).

drawdown

The release of water from a reservoir for power generation, flood control, irrigation or other water management activity.

economies of scale

Reductions in the average cost of a product that result from increased production.

ecosystem

The biological community considered together with the land and water that make up its environment.

electrophoresis

A technique that allows biologists to determine fish origins by analyzing the genetic variation in fish body fluid and muscle tissue. The technique is used to determine which stocks are being caught in ocean fisheries in order to better regulate ocean fishing.

embeddedness

The degree to which dirt is mixed in with spawning gravel.

emergence

The act of fish leaving their incubation environment in the gravel to forage for food.

escapement

The number of salmon and steelhead that return to a specified point of measurement after all natural mortality and harvest have occurred. Spawning escapement consists of those fish that survive to spawn.

estuary

The part of the wide lower course of a river where its current is met and influenced by the tides.

evolutionary biology

The study of the processes by which living organisms have acquired distinguishing characteristics.

extinction

The natural or human-induced process by which a species, subspecies or population ceases to exist.

exotic species

Introduced species not native to the place where they are found.

Federal Energy Regulatory Commission (FERC)

The Commission issues and regulates licenses for construction and operation of non-federal hydroelectric projects and advises federal agencies on the merits of proposed federal multipurpose water development projects.

federal land managers

This category includes the Bureau of Indian Affairs; the Bureau of Land Management; the National Park Service, all part of the U.S. Department of the Interior; and the Forest Service, U.S. Department of Agriculture.

federal project operators and regulators

Federal agencies that operate or regulate hydroelectric projects in the Columbia River Basin. They include the Bonneville Power Administration, the Bureau of Indian Affairs, the Bureau of Reclamation, the Corps of Engineers and the Federal Energy Regulatory Commission.

FELCC (firm energy load carrying capability)

The amount of firm energy that can be produced from a hydropower system based on the system's lowest recorded streamflows and the maximum amount of reservoir storage currently available to the system.

fingerling

A young fish from the time of the disappearance of the yolk sac to the end of the first year of growth. It ranges in size from approximately 1 to 3 inches.

firm energy or firm power

Electric energy that is considered assurable to the customers to meet all agreed upon portions of the customers' load requirements over a defined period.

fish and wildlife agencies

This category includes the Fish and Wildlife Service, U.S. Department of the Interior; the Idaho Department of Fish and Game; the Montana Department of Fish, Wildlife and Parks; the National Marine Fisheries Service, U.S. Department of Commerce; the Oregon Department of Fish and Wildlife; and the Washington Department of Fish and Wildlife.

fish flows

Artificially increased flows in the river system called for in the fish and wildlife program to quickly move the young fish down the river during their spring migration period. (See "water budget.")

fish guidance efficiency

The percentage of the total number of fish approaching a turbine intake that are deflected from a dam's turbine units by a fish guidance device such as a turbine intake screen.

Fish Passage Center

Part of the water budget program, the center plans and implements the annual smolt monitoring program; develops and implements flow and spill requests; and monitors and analyzes research results to assist in implementing the water budget. (See water budget.)

fish passage efficiency

The percentage of the total number of fish that pass a dam without passing through the turbine units.

fish passage managers

Located at the Fish Passage Center, the two fish passage managers are responsible for the specific planning, implementation and monitoring activities of the Center aimed at helping fish on their migratory routes in the Columbia River Basin. One manager is designated by a majority of the federal and state fish and wildlife agencies, and the other manager is designated by a majority of the Columbia River Basin Indian tribes. (See Fish Passage Center.)

fish screen

A screen across the turbine intake of a dam, designed to divert the fish into the bypass system.

fishway (also called a fish ladder)

A device made up of a series of stepped pools, similar to a staircase, that enables adult fish to migrate up the river past dams.

flows

The rate at which water passes a given point in a stream or river, usually expressed in cubic-feet per second (cfs).

flow augmentation

Increased flow from release of water from storage dams.

forage species

Fish that serve as a food source for carnivorous fish.

forebay

The part of a dam's reservoir that is immediately upstream from the powerhouse.

forebay guidance net

A large net placed in the forebay of a dam to guide juvenile fish away from the powerhouse.

fry

The stage in the life of a fish from the hatching of the egg through the absorption of the yolk sac until it is about 1 inch long.

full pool

The maximum level of a reservoir under its established normal operating range.

game fish

A fish that is regulated by law for recreational harvest.

gametes

The sexual reproductive cells, eggs and sperm.

gas supersaturation

The overabundance of gases in turbulent water, such as at the base of a dam spillway. Can cause fatal condition in fish similar to the bends.

gene

The chemical unit of hereditary information that can be passed on from generation to generation.

gene pool

The total genes in a breeding population.

genetic conservation

The preservation of genetic resources in breeding populations.

genetic conservation refuge

Reserve area whose goal is to protect genetic diversity and natural evolutionary processes within and among natural populations, while allowing varying degrees of exploitation and modification.

genetic diversity

All of the genetic variation within a species. Genetic diversity includes both genetic differences among individuals in a breeding population and genetic differences among different breeding populations.

genetic integrity

The ability of a breeding population or group of breeding populations to remain adapted to its natural environment.

genetic introgression

The entry or introduction of a gene from one gene complex into another, as in introgressive hybridization, which is the spread of genes of one species into the gene complex of another as a result of hybridization between numerically dissimilar populations in which extensive backcrossing prevents formation of a single stable population.

genotype

The complement of genes in an individual.

glides

Stream areas with velocities generally less than one cubic foot per second and with a smooth surface. Water depth generally is less than two feet.

gpm (gallons per minute)

A unit used to measure water flow.

gravity feed system

A system that provides flow in a channel or conduit through the use of gravity.

habitat

The locality or external environment in which a plant or animal normally lives and grows.

harvest controls

Regulations established for commercial and sport fisheries to ensure that the correct proportion of the different stocks escape to spawn.

harvest management

The process of setting regulations for the commercial, recreational and tribal fish harvest to achieve a specified goal within the fishery.

headworks

A flow control structure on an irrigation canal.

headwaters

The source and upper part of a stream or river.

homing behavior

Behavior that leads mature salmon and steelhead to return to their stream or lake of origin for spawning.

husbandry

The scientific management and control of the hatchery environment for the production of fish or wildlife.

hydroelectric power or hydropower

The generation of electricity using falling water to turn turbo-electric generators.

hydrology

The scientific study of the water of the earth, its occurrence, circulation and distribution, its chemical and physical properties, and its interaction with its environment, including its relationship to living things.

hydropower system

The hydroelectric dams on the Columbia River and its tributaries.

impoundment

A body of water formed behind a dam.

imprinting

The physiological and behavioral process by which migratory fish assimilate environmental cues to aid their return to their stream of origin as adults.

incubation

The period of time from egg fertilization until hatching.

Instream Flow Work Group

An interagency group that simulated the effects of various fish flow regimes by using hydropower-regulation computer models. The group was composed of technical experts and water resource managers from the fish and wildlife agencies, federal dam operators and regulators, and state water management agencies.

instream flows -- See flows.

intake traveling screens -- See turbine intake screens.

interim spill

The spilling of water over John Day, The Dalles, Bonneville, Lower Monumental and Ice Harbor dams to aid fish passage. This method will be used until permanent solutions to juvenile fish passage problems are developed.

intertie

A transmission line or system of lines permitting a flow of energy between major power systems. The Northwest has an intertie connection with California.

juvenile

Fish from one year of age until sexual maturity.

kcfs (thousand cubic feet per second) -- See cubic feet per second.

kcfs-month

One kcfs-month is a flow of 1,000 cubic feet per second for one month or 0.0595 million acre-feet.

kilowatt-hour (kWh)

A basic unit of electrical energy that equals one kilowatt of power applied for one hour.

known-stock fishery

A harvest management technique by which specific stocks are harvested in either a mixed-stock or a single-stock fishery.

limnology

The study of the life and phenomena of lakes, ponds and streams.

load shaping

The adjustment of storage releases so that generation and load are continuously in balance.

low-head dam -- A dam at which the water in the reservoir is not high above the turbine units.

Maf (million acre-feet) -- See af.

mainstem

The main channel of the river in a river basin, as opposed to the streams and smaller rivers that feed into it. In the fish and wildlife program, mainstem refers to the Columbia and Snake rivers.

mainstem passage

The movement of salmon and steelhead around or through the dams and reservoirs in the Columbia and Snake rivers.

mainstem survival

The proportion of anadromous fish that survive passage through the dams and reservoirs while migrating in the Columbia and Snake rivers.

mark-recapture study

A study that estimates population size by marking a segment of the population at one time and later measuring the ratio of marked animals to total animals.

mechanical bypass systems -- See bypass system.

megawatt (MW)

The electrical unit of power that equals one million watts or one thousand kilowatts.

mid-Columbia

The section of the Columbia River between the junction with the Snake River and Chief Joseph Dam.

Mid-Columbia Coordinating Committee

A committee whose primary purpose is to improve fish passage at the mid-Columbia dams. It determines annual operating requirements for fish passage at the dams; schedules research projects; and implements flow and spill requirements of the Mid-Columbia Settlement Agreement. The committee is composed of eight representatives of the fish and wildlife agencies, Indian tribes, the three mid-Columbia Public Utility Districts, and a power purchaser's representative.

mid-Columbia dams

Dams owned by the mid-Columbia Public Utility Districts. They include Wells, Rocky Reach, Rock Island, Wanapum and Priest Rapids dams.

mid-Columbia Public Utility Districts (PUDs)

Public Utility District No. 1 of Grant County, Public Utility District No. 2 of Chelan County and Public Utility District No. 1 of Douglas County.

minimum flow level

The level of stream flow sufficient to support fish and other aquatic life; to minimize pollution; or to maintain other instream uses such as recreation and navigation.

minimum operating pool

The lowest water level of an impoundment at which navigation locks can still operate.

Mitchell Act

The Mitchell Act of 1938 (Public Law No. 75-502, 16 U.S.C. 755), which authorizes federal funds for hatchery construction and operation within the Columbia River Basin.

mixed-stock fishery

A harvest management technique by which different species, strains, races or stocks are harvested together.

morphology

A study of the form and structure of animals and plants.

MSL

Mean Seal Level, a measure of elevation above sea level.

natural production

Spawning, incubating, hatching and rearing fish in rivers, lakes and streams without human intervention.

naturally spawning populations

Populations of fish that have completed their entire life cycle in the natural environment and may be the progeny of wild, hatchery or mixed parentage.

naturalization

The process by which introduced fish successfully establish a naturally spawning population.

Northwest Power Act

The Pacific Northwest Electric Power Planning and Conservation Act of 1980 (16 U.S.C. 839 et seq.), which authorized the creation of the Northwest Power Planning Council and directed it to develop this program to protect, mitigate and enhance fish and wildlife, including related spawning grounds and habitat on the Columbia River and its tributaries.

nutrient retention time

The amount of time microscopic food organisms, and nutrients on which they depend, spend in a reservoir. It is these organisms on which fish and the entire food chain depend. Nutrient retention time is measured by the amount of time it takes water to flow through a reservoir. In this program, "water retention time" and "nutrient retention time" mean the same thing.

off-site enhancement

The improvement in conditions for fish or wildlife species away from the site of a hydroelectric project that had detrimental effects on fish and/or wildlife, as part or total compensation for those effects. An example of off-site enhancement is the fish passage restoration work being conducted in the Yakima River Basin for the detrimental effects caused by mainstem hydroelectric projects.

on-site

Usually refers to projects or activities designed to address harm caused to fish and wildlife at the site of the harm.

outfall

The mouth or outlet of a river, stream, lake, drain or sewer.

outmigration

The migration of fish down the river system to the ocean.

outplanting

Hatchery-reared fish released into streams for rearing and maturing away from the hatchery sites.

Pacific Northwest Coordination Agreement

An agreement between federal and non-federal owners of hydropower generation on the Columbia River system. It governs the seasonal release of stored water to obtain the maximum usable energy subject to other uses.

Pacific Northwest Utilities Conference Committee (PNUCC)

A group formed by Pacific Northwest utilities officials in order to coordinate policy on Pacific Northwest power supply issues and activities. PNUCC lacks contractual authority, but it plays a major role in regional power planning through its Policy; Steering; Fish and Wildlife; and Lawyers committees, and the Technical Coordination Group. PNUCC publishes the Northwest Regional Forecast, containing information on regional loads and resources.

passage

The movement of migratory fish through, around, or over dams, reservoirs and other obstructions in a stream or river.

pathogens

Any agent that causes disease, such as a virus, protozoan, bacterium or fungus.

peaking generation -- see power peaking

peaking operations -- see power peaking

PIT tags

Passive Integrated Transponder tags are used for identifying individual salmon for monitoring and research purposes. This miniaturized tag consists of an integrated microchip that is programmed to include specific fish information. The tag is inserted into the body cavity of the fish and decoded at selected monitoring sites.

plume

The area of the Pacific Ocean that is influenced by discharge from the Columbia River, up to 500 miles beyond the mouth of the river.

population

A group of organisms belonging to the same species that occupy a well-defined locality and exhibit reproductive continuity from generation to generation.

population vulnerability analysis

A systematic process for estimating species, location and time-specific criteria for persistence of a population.

powerhouse

A primary part of a hydroelectric dam where the turbines and generators are housed and where power is produced by falling water rotating turbine blades.

power peaking

The generation of electricity to meet maximum instantaneous power requirements. The term usually refers to daily peaks.

predator

An animal that lives by preying upon others.

Public Utility District (PUD)

A government unit established by voters of a district to supply electric or other utility service.

rearing

The juvenile life stage of anadromous fish spent in freshwater rivers, lakes and streams before they migrate to the ocean.

redd

A spawning nest made in the gravel bed of a river by salmon or steelhead.

reproductive isolating mechanisms

Mechanisms that retain genetic diversity among populations. The primary reproductive isolating mechanism for anadromous fish is accuracy of homing, which can be reduced by improper hatchery operations. Stock transfers also reduce reproductive isolation.

reprogramming

The development of a new plan for the time and location of the release of hatchery-produced fish into rivers and streams, especially in the upper river areas.

reregulating dam

A dam and reservoir, located downstream from a hydroelectric peaking plant, with sufficient storage capacity to store the widely fluctuating discharges from the peaking plant and to release them in a relatively uniform manner downstream.

reservoir

A body of water collected and stored in an artificial lake behind a dam.

resident fish

Fish that spend their entire life cycle in freshwater. For program purposes, resident fish includes landlocked anadromous fish (e.g., white sturgeon, kokanee and coho), as well as traditionally defined resident fish species.

resident fish substitutions

The enhancement of resident fish to address losses of salmon and steelhead in those areas permanently blocked to anadromous (ocean-migrating) fish as a result of hydroelectric dams.

riffle

A shallow extending across the bed of a stream over which water flows swiftly so that the surface of the water is broken in waves.

riparian habitat

Habitat along the banks of streams, lakes or rivers.

riprap

A streambank protection method using large rocks, boulders or debris to reduce erosion.

river miles

Miles from the mouth of a river to a specific destination or, for upstream tributaries, from the confluence with the main river to a specific destination.

rule curves

Graphic guides to the use of storage water. They are developed to define certain operating rights, entitlements, obligations and limitations for each reservoir.

run

A population of fish of the same species consisting of one or more stocks migrating at a distinct time.

runoff

The portion of rain or snowmelt that runs across the land surface or infiltrates the soil and flows through the surface soil to ultimately reach stream channels.

Salmon and Steelhead Conservation and Enhancement Act

The Salmon and Steelhead Conservation and Enhancement Act of 1980 (Public Law 96-561, 16 U.S.C. 3301 et seq.), which authorized the establishment of a cooperative program to conserve and enhance the Pacific Northwest's salmon and steelhead stocks. The law called for the creation of the Salmon and Steelhead Advisory Commission; the development of a comprehensive salmon and steelhead enhancement plan; and a "buy-back" program for commercial fishing vessels, licenses and gear.

salmonid

A fish of the Salmonidae family, which includes soft-finned fish such as salmon, trout and whitefish.

sinuosity

The amount of bending, winding and curving in a stream or river.

sluiceway

An open channel inside a dam designed to collect and divert ice and trash in the river (e.g., logs) before they get into the turbine units and cause damage. (On several of the Columbia River dams, ice and trash sluiceways are being used as, or converted into, fish bypass systems.)

smolt

A juvenile salmon or steelhead migrating to the ocean and undergoing physiological changes (smoltification) to adapt its body from a freshwater to a saltwater existence.

Southern Oscillation Index

An oceanographic indicator of environmental conditions that allows for the prediction of global climate events such as El Nino.

spawn

The act of fish releasing and fertilizing eggs.

spawning escapement

The total number of adult fish returning to a hatchery or stream to spawn.

spawner trap

A barrier erected in a stream or in a fish ladder intended to divert adult salmon or steelhead for holding prior to taking their eggs or sperm for culturing.

speciation

The natural process by which new species evolve from existing ones.

species

A group of individuals of common ancestry that closely resemble each other structurally and physiologically and that can interbreed, producing fertile offspring.

spill

Releasing water through the spillway rather than through the turbine units.

spillway

The channel or passageway around or over a dam through which excess water is released or "spilled" past the dam without going through the turbines. A spillway is a safety valve for a dam and, as such, must be capable of discharging major floods without damaging the dam, while maintaining the reservoir level below some predetermined maximum level.

spillway crest elevation

The point at which the reservoir behind a dam is level with the top of the dam's spillway.

squawfish

Refers to the northern squawfish, a native Pacific slope fish that is a major predator of smolts in the mainstem reservoirs.

stock

A population of fish spawning in a particular stream during a particular season. They generally do not interbreed with fish spawning in a different stream or at a different time.

state water management agencies

State government agencies regulate water resources. They include the Idaho Department of Water Resources; the Montana Department of Natural Resources and Conservation; the Oregon Water Resources Department; and the Washington Department of Ecology.

stochastic

Involving chance or randomness.

storage

The volume of water in a reservoir at a given time.

stream morphology

The study of the form and structure of streams.

subbasin

Major tributaries to and segments of the Columbia and Snake rivers.

subbasin planning -- See system planning.

subimpoundment

An isolated body of water created by a dike within a reservoir or lake.

supersaturation -- See dissolved gas concentrations.

supplementation

The release of hatchery fry and juvenile fish in the natural environment to quickly increase or establish naturally spawning fish populations.

system planning

A coordinated systemwide approach to planning in which each subbasin in the Columbia system will be evaluated for its potential to produce fish in order to contribute to the goal of the overall system. The planning will emphasize the integration of fish passage, harvest management and production.

tailrace

The canal or channel that carries water away from the dam.

terrestrial furbearers

Furbearing animals that dwell primarily on land.

test fish

Fish used for research purposes.

thermal plants

A power plant that generates electricity by burning coal, oil or other fuel, or by nuclear fission.

transboundary

Refers to U.S. and Canadian border, transboundary pollution refers to pollution originating in Canada.

transportation

Collecting migrating juvenile fish and transporting them around the dams using barges or trucks.

travel corridors

Paths animals use during their migrations.

tribes

In this program, these include the Burns-Paiute Indian Colony; the Coeur d'Alene Tribes; the Confederated Tribes of the Colville Reservation; the Confederated Salish-Kootenai Tribes of the Flathead Reservation; the Confederated Tribes of the Umatilla Reservation of Oregon; the Confederated Tribes of the Warm Springs Reservation of Oregon; the Confederated Tribes and Bands of the Yakama Indian Nation; the Kalispel Indian Community; the Kootenai Tribe of Idaho; the Nez Perce Tribe of Idaho; the Shoshone-Paiutes of the Duck Valley Reservation; the Shoshone-Bannock Tribes of the Fort Hall Reservation; and the Spokane Tribe of Indians.

turbine intake screens

Large screens, which may have moving or non-moving parts, designed to be placed in a dam's turbine intake at an angle to deflect juvenile fish from the intakes into a bypass system.

uncontracted water

A volume of water in a storage reservoir that is not assigned for other purposes, such as irrigation.

upriver stocks

Salmon and steelhead stocks that spawn in the Columbia River or its tributaries above Bonneville Dam.

upwelling

Near the continental shelf, the movement to the surface of ocean bottom waters that are rich in nutrients.

U.S./Canada Pacific Salmon Treaty

Signed in 1984 and ratified by Congress in 1985 as the Salmon Treaty Act, this treaty governs the harvest and rebuilding of certain salmon stocks in Alaskan, Canadian and the continental United States.

velocity

In this concept, the speed of water flowing in a watercourse, such as a river.

velocity barrier

A physical structure, such as a barrier dam or floating weir, built in the tailrace of a hydroelectric powerhouse, which blocks the tailrace from further adult salmon or steelhead migration to prevent physical injury or migration delay.

wasteway

An open ditch or canal that discharges excess irrigation water or power plant effluent into the river channel.

water banking

An administrative system for renting surplus water.

water budget

A means of increasing survival of downstream migrating juvenile fish by increasing Columbia and Snake river flows during the spring migration period. The water budget was developed by the Council, which oversees its use in conjunction with the fish and wildlife agencies and Indian tribes, the U.S. Army Corps of Engineers, the Bonneville Power Administration and the Bureau of Reclamation.

watershed

The area that drains into a stream or river.

weak stock

Listed in the Integrated System Plan's list of stocks of high or highest concern; listed in the American Fisheries Society report as at high or moderate risk of extinction; or stocks the National Marine Fisheries Service has listed. "Weak stock" is an evolving concept; the Council does not purport to establish a fixed definition. Nor does the Council imply that any particular change in management is required because of this definition.

wild populations

Fish that have maintained successful natural reproduction with little or no supplementation from hatcheries.

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