Appendix M: Summary of Existing Conservation Efforts in the Willamette Basin

Federal Species Protection	
Oregon chub recovery plan	The USFWS adopted a recovery plan for Oregon Chub in 1998. The recovery plan criteria for delisting require the existence of 20 populations, with at least 500 adults in each population and at least four populations located in each of the three subbasins: the Willamette River mainstem, Middle Fork Willamette, and Santiam.
Draft bull trout recovery plan	The Willamette Basin is a designated bull trout recovery unit. A draft recovery plan exists for bull trout populations and will provide the framework for discussion of status, trends, limiting factors, and recovery strategies. Recovery criteria in the draft plan call for populations in the Clackamas, McKenzie, and Middle Fork Willamette subbasins.
Willamette-Lower Columbia Salmon Recovery Process	NOAA Fisheries has established a Technical Recovery Team which has documented historical abundance and genetic make-up of listed salmonids and is establishing recovery criteria. NOAA is working with the ESA Executive Committee, a bi-state, multi-agency advisory group, in this process. NOAA also established "4(d) rules" for Pacific Salmon in 2000 and 2003 that identify under what circumstances a range of actions would not result in a "take."
Additional Recovery Plans:	Additional recovery plans include those for the following plant and animal species: Columbia White-tailed deer; Golden paintbrush; Bald eagle; Bradshaw's lomatium; Nelson's checkermallow
Federal Columbia River Power System Biological Opinion & RPAs	Reasonable and Prudent Alternatives in the FCRPS Biological Opinion and the Basinwide Salmon Strategy address salmonid habitat needs in the Willamette. Recommendations include, for tributary habitats on non-federal lands, a "fast start" approach to fund actions with immediate benefits, including those that remove fish passage barriers, screen diversions and improve streamflows and water quality. For non-federal lands, federal agencies have identified 16 priority subbasins, including the Willamette-Clackamas subbasins, North Santiam subbasin and McKenzie subbasin for immediate actions. (National Marine Fisheries Service. 2000. Conservation of Columbia Basin Fish—Final Basinwide Salmon Recovery Strategy. Volume 2: Technical Information. December 2000. Prepared in consultation with the Federal Caucus: Army Corps of Engineers; Bonneville Power Administration; Bureau of Indian Affairs; Bureau of Land Management; Bureau of Reclamation; Environmental Protection Agency; Fish and Wildlife Service; Forest Service).
State Species Protection	
ODFW Native Fish Conservation Policy	The policy's primary purpose is to remove fish species from Endangered Species Act lists and avoid future listings while providing for sport, commercial, cultural and aesthetic benefits for current and future generations. It focuses on the sustainability of naturally produced native fish; identifies naturally produced fish as the foundation for hatchery programs and fisheries; and provides for basin-by-basin management for individual watersheds through conservation plans with measurable criteria.
ODFW Wildlife Diversity Plan and Program	Designed to conserve the diversity of fish and wildlife species in the state, the Wildlife Diversity Plan is a blueprint for addressing the needs of Oregon's native fishes, amphibians, reptiles, bird and mammals, and contains information on all species and habitats in the state. The Plan was first adopted in 1986, and was updated in November 1993 and again in January 1999. The plan guides the Wildlife Diversity Program which focuses on protecting and managing the 88 percent of the state's native fish and wildlife species that are not hunted, angled or trapped. ODFW has also begun work on a Statewide Conservation Plan, described under conservation efforts that are expected to have significant impacts in the immediate future.

ODFW Subbasin-specific Salmon and Steelhead Production Plans	Provides basis for salmon and steelhead production strategies, documents current and potential production, documents current management efforts, and summarizes the agencies' and tribes' management goals and objectives for 9 watershed and reach areas in the Willamette subbasin. (Funded by NW Power Planning Council)
ODFW Subbasin-specific Fish Management Plans	There are 10 subbasin-specific fish management plans that set out management priorities of fish populations and habitat: Clackamas, Coast Fork, Mainstem, McKenzie, Middle Fork, Tualatin, Molalla-Pudding, Santiam-Calapooia, Spring Chinook Chapters
ODFW Fisheries Management and Evaluation Plans	There are 5 Fisheries Management and Evaluation Plans which specify future management of recreational and commercial fisheries potentially affecting listed salmonids: Lower Columbia River Chinook; Lower Columbia River Chum; Lower Willamette and Clackamas Steelhead, Trout, Sturgeon and Warmwater Fisheries; Upper Willamette Spring Chinook; Upper Willamette River Winter Steelhead.
ODFW Hatchery and Genetic Management Plans	There are 6 HGMPs in the Willamette Subbasin.: Clackamas river Spring Chinook program; Clackamas River Winter Steelhead Program; McKenzie River Spring Chinook Program; North and South Santiam River Spring Chinook program; North and South Santiam River Summer Steelhead program; Willamette Basin Rainbow Trout program;. HGMPs, objective is to provide hatchery-based sport harvest opportunities while minimizing intentional risks to naturally producing populations.
Fish Passage	There are numerous fish passage programs underway in the basin, including: local, state, and federal efforts to improve road-stream crossings for anadromous fish; FERC relicensing requirements for hydroelectric dams; and water diversion screening by local, state, and federal agencies coordinated in part by ODFW's HB 3002 fish screening program.
ODFW Willamette Mitigation Program	The goal of the Willamette Basin Mitigation Program is to cooperatively develop and implement measures to mitigate for fish and wildlife habitat losses resulting from the construction of the federally licensed hydro-electric dams and facilities—all while implementing easements, acquisitions, management plans, and enhancement activities designed to achieve the Council's mitigation goals for target species and habitats maintain and improve water quality and quantity, habitat connectivity, integrity and functionality, biodiversity and overall ecosystem health. The program started in 1993. Activities have included: identifying land parcels for acquisition, easement and enhancement measures; securing easements; conducting habitat sampling and NEPA surveys; eradicating nonnative vegetation in various sites; compiling hydrologic data to determine costs and potential success of restoring water to historic river channels; developing hydro-geomorphic index for Willamette Basin fish and wildlife habitats; completing current aerial photograph and public land ownership map atlas for the Willamette River and riparian areas.
Corps of Engineers Willamette Basin Reservoir Project Management	The Corps balances water released from its 13 Willamette Basin reservoirs to support listed salmon and steelhead during the spring migration period and ensure enough water remains in the system for summer and fall water quality augmentation flows, while seeking to provide reservoir levels appropriate for recreation. Since 1999, the Corps has released enough water from the Willamette Valley reservoirs to meet a target of 20,500 cubic feet per second of water (cfs), measured at Salem. These required flows begin April 1 and gradually decrease to 8,700 cfs by June 30 to meet the biological needs of the fish, as determined by federal and state fisheries biologists. The state makes an annual flow recommendation through the Oregon Water Resources Department, which has been designated by the Governor's Office as the state coordinating body for operation of Corps water storage projects. The Corps is also undertaking major construction at Cougar and Blue River Dams, in the McKenzie watershed. The way water is drawn from the reservoirs has changed downstream water temperatures, making sections of the McKenzie less hospitable to spring Chinook salmon and bull trout, now listed as threatened under the Endangered Species Act. The Corps will modify the intake towers at both Cougar and Blue River, and has started work at Cougar. The intake tower will be fitted

	with adjustable weir gates, which will allow dam operators to draw water from various levels, adjusting the temperature "mix" as needed. The total cost of the project at Cougar is estimated at $41 million in 1998 dollars.
Water Quality	
NPDES program	Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating the discharge of pollutants from discrete sources, such as pipes or man-made ditches. The Oregon Department of Environmental Quality administers the program in Oregon. In the Willamette Basin, DEQ has issued 27 major permits for industries with large pollutant loads, toxic discharges, or large domestic waste treatment facilities; and 1,208 minor permits for other types of discharges.
Stormwater Management	Stormwater discharge results from runoff from land and impervious surfaces such as paved streets, parking lots, and building rooftops during rain and snow storms. The discharge often carries pollutants in enough quantity to adversely affect water quality. Most stormwater discharges are considered point sources and require coverage by an NPDES permit. The primary method to control stormwater discharges is through best management practices. In response to the 1987 Amendments to the Clean Water Act (CWA), the U.S. Environmental Protection Agency (EPA) developed Phase I of the NPDES Storm Water Program in 1990. Since 1990, the NPDES program has required permits for storm water discharges from: Medium and large municipal separate storm sewer systems located in incorporated places or counties with populations of 100,000 or more; and 11 categories of industrial activity—including construction activity that disturbs five or more acres. Since 1999, the program has required a discharge permit for certain small municipal storm sewer systems and construction disturbing between 1 and 5 acres of land. In the Willamette, these smaller communities include Keizer, Turner, Springfield, Coburg, Corvallis, Philomath, and Adair Village.
Combined Sewerage Overflow correction	Combined Sewer Overflows (CSOs) occur when it rains in cities where stormwater and sewerage systems are interconnected. Stormwater quickly fills the combined sewers, which carry both sanitary sewage and runoff from streets, parking lots, and rooftops. These overflows, which carry bacteria from untreated sewage as well as other pollutants in the stormwater, pour directly into rivers through storm drains—they are not treated. Most recently, the City of Portland and the City of Corvallis have undertaken extensive corrective measures. Portland: Starting in 1991, Portland began a 20 year, $1 billion program to reduce combined sewer overflows by working on the east side of the Willamette River and on the Columbia Slough. Prior to correction, roughly 6 billion gallons of sewage overflowed to the Columbia Slough and Willamette River each year. Now, the program has reduced CSO volume by 3.2-billion gallons annually—and Willamette River bacteria levels are dropping. Since 1992, concentrations of E. coli bacteria during rainy weather have declined by 49 percent at the Morrison Bridge, by 35 percent at the St. Johns Railroad Bridge, and by 18 percent at Kelley Point Park. Eastside work continues with the construction of a 20-feet diameter, six mile long pipeline-intercept, and on the westside with a 14 foot pipeline, and with a large pump station to deliver and hold overflows. All Willamette River CSO projects will be complete by 2011. (City of Portland; http://www.portlandonline.com/cso/) Corvallis: Corvallis began its CSO correction work in 1998 and completed it 2001. Historically, CSOs discharged about 1.4 billion gallons into the Willamette River each year. Under targets set by DEQ and the city, on the average, 1 overflow would be allowed every 5 years during the winter and 1 overflow every 10 years during the summer–a reduction of more than 99 percent. The project was completed under budget, at approximately $30 million. (http://www.ci.corvallis.or.us)
Total Maximum Daily Loads	Oregon is required to establish Total Maximum Daily Loads (TMDLs) for stream segments which violate water quality standards. TMDLs identify how much pollution a water body can absorb and still meet water quality standards. TMDLs account for pollution from all sources, including industrial and sewage discharges; runoff from farms, forests and urban areas; and natural sources—plus a safety margin to account for uncertainty. This information is then used to determine what

	changes must take place to achieve water quality standards. Water quality management plans are then developed to guide what actions landowners, local governments, agencies, and other land managers will take to effect those changes. Total Maximum Daily Loads (TMDLs) have been approved by EPA for the Willamette River mainstem for dioxin; Tualatin River for temperature, bacteria, DO, solids, ammonia, chlorophyll a, pH, phosphorous; Yamhill River for phosphorous; Pudding River for Ammonia, BOD; Rickreall Creek for BOD; and Coast Fork Willamette for ammonia, phosphorous. DEQ has placed a priority on completing TMDLs for most of the Willamette Basin by 2004 and all by 2006. 2004 • Clackamas • North Santiam • South Santiam • McKenzie • Middle Fork Willamette • Coast Fork Willamette • Upper Willamette • Middle Willamette • Lower Willamette • Willamette Mainstem 2006 • Molalla-Pudding • Yamhill TMDLs are done for the Tualatin. In 2001, EPA approved a Total Maximum Daily Load allocation for the Tualatin subbasin for temperature, Bacteria, DO, Algae, pH. Previous TMDLs had been set in 1988 for phosphorous and ammonia. From http://www.deq.state.or.us/wq/willamette/
Agricultural Water Quality Management Plans	In 1993, the Oregon Legislature passed Senate Bill 1010, or the Agricultural Water Quality Management Act. The Act, and one that followed it, designate ODA as the state agency solely responsible for regulating agricultural activities that affect water quality. The Act authorizes ODA to develop water quality management plans and rules in coordination with farmers and ranchers. These watershed-based plans identify measures and strategies necessary for landowners to prevent and control water pollution. Plans are created on a watershed basis by local committees and ODA. The plan is a guide for landowners and operators that helps identify water quality issues in their watershed. Each plan has an accompanying set of rules. The Plan contains recommendations for to improving water quality, and are not enforceable. Landowners and operators must, however, comply with the rules. Consistent failure to comply with the rules can result in civil penalties levied against violators. ODA begins the planning process once water quality issues in a watershed have been identified and a watershed plan is required by state or federal law, such as listing on the DEQ's 303(d) list. The following areas have completed agricultural water management plans and rules:

	• Yamhill Subbasin • Tualatin Subbasin • Clackamas Subbasin • Molalla-Pudding-French Prairie-North Santiam Subbasin • Southern Willamette Valley Subbasin • Mid-Willamette Valley Subbasin • South Santiam Subbasin • Upper Willamette Subbasin • Lower Willamette Subbasin From: http://www.oda.state.or.us/nrd/water_quality/manprac.html; http://www.oda.state.or.us/nrd/water_quality/overview.html
Portland Harbor Superfund Clean Up	A 1997 study conducted by the Environmental Protection Agency (EPA) and DEQ found that in-water sediments in the lower Willamette River between Sauvie Island and Swan Island are highly contaminated by metals (like mercury and tributyl tin), pesticides (like DDT), and other hazardous substances (such as PCBs, petroleum products, and dioxins). As a result, in July 2000 EPA proposed that this reach of the river, referred to as Portland Harbor, be placed on the National Priorities List—commonly know as Superfund. Governor Kitzhaber concurred with the proposed listing in a July 2000 letter to EPA. DEQ serves as the lead agency for cleaning up sites located on the banks of the river, and EPA is responsible for cleanup of contaminated sediments in the river. DEQ will also be responsible for coordinating with state and local efforts. Clean-up schedules and techniques are still under study. The first actions are not expected before 2006. However, it is likely that the effort will require many years, and by some estimates may cost in excess of $200 million.
State and Federal Refuge Complex / Greenway	
Federal	Fish and wildlife refuges and management areas represent important components of the Willamette Subbasin's overall fish and wildlife management framework. They offer vital nodes of often-high-quality habitat and potential future building blocks for a more connected system of lands managed for habitat purposes. The US Fish and Wildlife Service manages the National Wildlife Refuge System which is the only nationwide system of federal land specifically managed and protected for fish, wildlife, and their habitats. The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the nation for the befit of present and future generations. Four National Wildlife Refuges currently contribute to the protection and enhancement of Willamette Valley fish, wildlife, and plant resources. These refuges include William L. Finley (5,594 acres), Ankeny (2,835 acres), Baskett Slough (2,520 acres), and Tualatin River (3,058 acres). [NPCC, Willamette Subbasin Summary, 2001]
State Wildlife Management Areas	Sauvie Island Wildlife Management Area: 12,000 acres of state-owned habitat for wintering waterfowl, swans, herons, sandhill cranes, bald eagles and 250 other species. E.E. Wilson Wildlife Management Area: It encompasses 1,683 acres of brush-grassland habitat, mature oak stands and several restored wetlands. The area has a rich local history; historic wetlands and home of the Kalapuya Indians, site of small homesteads, farms and the small town of Wells, the site of Camp Adair Army training center, and is now E.E. Wilson Wildlife Area.

	Fern Ridge: Established in 1957 under an agreement with the U.S. Army Corps of Engineers with 5,010 acres of federal land and water as wildlife habitat. The area is located within the 15,000 acre Fern Ridge Reservoir Project Area on the Long Tom River about 10 miles east of Eugene.
Willamette Greenway	Willamette River Greenway Program - The Greenway was established in 1967 to protect and preserve the natural, scenic, and recreational qualities of lands along the Willamette River. The Oregon Parks and Recreation Department administers over 8,000 acres of Greenway property. These lands range from large acreage major destination parks and campgrounds like Champoeg, Willamette Mission and Elijah Bristow, to small, undeveloped parcels that provide natural habitat and remnant samples of the gallery forests and other flora and fauna once prevalent along the Willamette prior to European settlement. (OPRD, State Comprehensive Outdoor Recreation Plan, 2003 -_)
Multi-Purpose Programs Affecting Habitat	
Northwest Forest Plan/Aquatic Conservation Strategy	Adopted in 1994, the Northwest Forest Plan (NFP) is an integrated, comprehensive design for ecosystem management, intergovernmental and public collaboration, and rural community economic assistance for federal forests in western Oregon, Washington, and northern California. The Aquatic Conservation Strategy of the NFP was developed to restore and maintain ecological health of watersheds (and the aquatic ecosystems contained within them) on Federally-managed lands within the Northwest Forest Plan area. The four major components of the Aquatic Conservation Strategy (Riparian Reserves, Key Watersheds, watershed analysis, and watershed restoration) provide the basis for protection of watershed health. The Plan designated 164 “key watersheds” that cover 9.1 million acres, or about 37 percent of all land in through the NW region. There are 143 Tier 1 Key Watersheds that provide habitat for fish at risk of extinction such as salmon, trout, or steelhead. The Plan designates 21 Tier 2 Key Watersheds that are designated primarily because they provide high quality water but do not provide habitat for threatened fish. “Riparian Reserves” are areas designated along streams, rivers, and wetlands that are off-limits to most ground-disturbing activities.
Oregon Forest Practices Act	The Oregon Forest Practices Act was enacted in 1972, with substantive revisions in 1987 1994, and 1998. The purpose of the Forest Practices Act is to promote effective and efficient forest management; sustain healthy forests; maintain the continuous growing and harvesting of forest trees on non-federal lands; protect soil productivity, fish and wildlife habitat, air and water quality; and foster other forestland values and benefits. This is achieved primarily through legally-required best management practices. These BMPs include: • Activities near streams, lakes, and wetlands must include water quality protection. • Wildlife trees and down logs must be left in most large clear-cut areas. • Clear-cut size is usually limited to 120 acres. • Sensitive bird nesting, roosting, and watering sites require protection. • Activities on slopes must include erosion and landslide control. • Replanting or land use changes must be completed within two years. • Road and skid trail use must prevent erosion into streams, lakes, and wetlands. • Harvesting adjacent to designated Scenic Highways requires special practices. • Some activities require pre-approval of a written plan.

	Forest Practices Act rules provide benefit to salmonids through protection of water quality and habitat, but are not intended as a recovery mechanism for wild salmonids. The rules focus on specific activities as they occur on specific sites—for example, timber harvest, use of chemicals, reforestation, and the design, construction, and maintenance of roads. The rules address water protection, and include specific provisions for Riparian Management Areas, primarily vegetation retention or re-establishment to provide for functioning riparian habitat along streams, which will benefit water quality of fish habitat. (Independent Multidisciplinary Science Team. 1999. Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Act Rules and the Measures in the Oregon Plan for Salmon and Watersheds. Technical Report 1999-1. / Oregon Department of Forestry Web sites: http://159.121.125.11/FP/BackgroundPg/BdgtGoals01-03.doc http://159.121.125.11/FP/OpnPlanning/OperationPlan'g_.htm
Farm Bill landowner incentives programs	The NRCS administers a host of conservation programs in Oregon, including "Farm Bill" programs. The Farm bill is a voluntary program that provides financial and technical assistance to producers who advance the conservation and improvement of soil, water, air, energy, plant and animal life, and other resources. In Oregon NRCS programs include: • Conservation Innovation Grants (CIG) • Conservation Reserve Program (CRP) • Conservation Security Program (CSP) • Environmental Quality Incentives Program (EQIP) • Farm and Ranch Lands Protection Program (FRPP) • Grassland Reserve Program (GRP) • Oregon National Resource Inventory • Resource Conservation & Development Councils (RC&D) • USDA Conservation Program • Wetland Reserve Program (WRP) • Wildlife Habitat Incentives Program (WHIP) Totals spent (from *Conserving Oregon's Landscapes;* Fiscal Year 2003 Annual Report for Oregon. Program Central Coast/ Upper Willamette Lower Willamette Environmental Quality Incentives Program (EQIP) $848,001 $ 1,404,658 Grassland Reserve Program (GRP) $10,896

	$34,944 Wildlife Habitat Incentives Program (WHIP) 0 $113,752 Wetland Reserve Program (WRP) $1,966,329 $3,403,175 $2,825,226.00 $4,956,529.00
Oregon Plan for Salmon and Watersheds-WRI	The goal of the Oregon Plan is to "restore populations and fisheries to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits." Components of this plan include: (1) Coordination of efforts by all parties; (2) development of watershed action plans with relevance and ownership at the local level; (3) monitoring progress; and (4) making appropriate corrective changes in the future. This process included chartering 84 locally-formed and represented "watershed councils" across the State. Membership on the watershed councils includes: landowners, businesses interests, agricultural interests, sport fishers, irrigation/water districts, individuals, State, Federal, and Tribal agencies, and local government officials. The Willamette Restoration Strategy is the Willamette Basin Supplement to the Oregon Plan and includes 27 critical actions and 4 key recommendations for improving habitat in the basin.
Oregon Watershed Enhancement Board	The Oregon Watershed Enhancement Board is a state agency led by a policy oversight board. The agency promotes and funds voluntary actions that strive to enhance Oregon's watersheds. The Board fosters the collaboration of citizens, agencies, and local interests. OWEB's programs support Oregon's efforts to restore salmon runs, improve water quality, and strengthen ecosystems that are critical to healthy watersheds and sustainable communities. OWEB administers a grant program that awards more than $20 million annually to support voluntary efforts by Oregonians seeking to create and maintain healthy watersheds. To accomplish this...OWEB: • funds projects that restore, maintain, and enhance the state's watersheds. • supports the capacity of local watershed-based citizen groups to carry out a variety of restoration projects. • promotes citizen understanding of watershed needs and restoration ideas. • provides technical skills to citizens working to restore urban and rural watersheds. • monitors the effectiveness of investments in watershed restoration. • coordinates the collection of data about natural resource conditions throughout Oregon. • Collects and analyzes data about watershed conditions • reports on the progress of the Oregon Plan for Salmon and Watersheds. OWEB also has a Strategic Plan with the following strategies: *Outcome One—Accountability*: 1: Frame a Statewide Strategy; 2: Integrate Local Priorities; 3: Monitor Progress;4: Exchange Information; 5: Report Results

	Outcome Two—Partnerships: 6: Establish Shared Government Priorities; 7: Enhance Public/Private Relationships; 8: Promote Local Partnerships; 9: Initiate Research *Outcome Three—Understanding:* 10: Support Local Education Efforts; 11: Reach Out to Citizens and Youth.
Oregon Division of State Lands Removal-Fill and Wetlands Programs	Oregon's Removal-Fill Law (ORS 196.795-990) requires any person or organization who plans to remove or put (fill) material in waters of the state to obtain a permit from the Division of State Lands. The law, enacted in 1967, seeks to protect public navigation, fishery and recreational uses of the "waters of the state"—"natural waterways including all tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and nonnavigable, including that portion of the Pacific Ocean that is in the boundaries of this state." Permits are required for: projects requiring the removal or fill of 50 cubic yards or more, or of any material in a stream designated as essential salmon habitat (with some agricultural and small mining exemptions) or as a state scenic waterway. (http://www.oregonstatelands.us/r-fintro.htm) The Division of State Lands also implements the 1989 Wetlands Conservation Act, including administering the Statewide Wetlands Inventory and National Wetlands Inventory. DSL also works closely with local governments and the Department of Land Conservation and Development (DLCD) in assisting with local wetlands inventories as required by statewide land use planning Goals 5 (Natural Resources), 16 (Estuaries) and 17 (Coastal Shorelands). (http://www.oregonstatelands.us/wetlandsintro.htm)
Oregon Land Use Planning Program—Goals 5 & 6	Oregon's statewide land use planning program was enacted in 1973 and is built on 19 goals that address a wide range of resources and issues, including citizen involvement, farm and forestland, transportation, public facilities, and natural resources and open space. Goal 5—the natural resources goal—seeks "to protect natural resources and conserve scenic and historic areas and open spaces," while Goal 6—the air, water and land resources quality goal—seeks to "maintain and improve the quality of the air, water, and land resources of the state." Goal 5 is the state planning goal most explicitly designed to address the needs of fish and wildlife and is basically a process goal that requires local governments to identify significant natural resources and adopt unspecified programs to protect them. The Goal 6 objective is to "maintain and improve the quality of the air, water and land resources of the state." The goal also states "waste … discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards." Guidelines for Goal 6 recommend that comprehensive plans "buffer and separate those land uses which create or lead to conflicting requirements and impacts upon the air, land and water resources." The guidelines encourage local governments to use carrying capacity as a "major determinant" in providing for the "maintenance and improvement" of these resources.
Local Conservation Efforts	
Local governments	A sampling survey conducted for the Willamette Subbasin Plan in 2004 had the following results: 1) a majority of respondents (55 percent) have inventoried streams within their jurisdictions and instituted some type of riparian management protections. 2) Wetlands are protected by 40 percent of the respondents; 43 percent restrict development activities (grading, excavation, etc.) in wetlands within their jurisdictions and see wetlands as providing benefits to wildlife habitat, groundwater recharge and stormwater retention. 3) 40 percent have "considered" using a stream's "channel migration zone" for planning and resource protection. 4) 46 percent have reviewed their road maintenance programs to minimize impacts to fish and wildlife. 5) 60 percent have adopted erosion control standards for new construction; 6) 40 percent have completed a comprehensive Stormwater Management Plan, and 46 percent have identified ways to reduce stormwater run-off; 7) 43 percent have development standards that limit impervious surface development in new construction. 8) 43 percent have made changes to their wastewater treatment to better support sensitive species (mostly temperature reduction efforts). The

	entire survey report may be found in Appendix N.
Watershed Councils and Soil and Water Conservation Districts	A particularly intense array of conservation activities has been built through the efforts of the Willamette Basin's watershed groups, including watershed councils and soil and water conservation districts. There are 26 watershed councils in the Willamette Subbasin—18 of which have organized under ORS 541.360.(In addition, a new watershed council began forming in the Oregon City area in 2004.) According to this state law, a watershed council is "...a voluntary local organization designated by a local government group convened by a county governing body to address the goal of sustaining natural resource and watershed protection and enhancement within a watershed." Legislative guidelines provide that a watershed council be a voluntary, local group; and that it represent a balance of interested and affected persons within the watershed. Watershed councils prepare watershed assessments, develop actions plans, and convene a broad spectrum of interests to implement the action plans. There are also 11 soil and water conservation districts in the basin that work closely with the agricultural community to promote and assist with land and water stewardship. SWCDs develop annual work programs that set out resource objectives, collaborate with watershed councils, and have a lead role in agricultural water quality management planning.