

Puget Sound National Estuary Program

LAND DEVELOPMENT AND COVER BASE PROGRAM ANALYSIS

Prepared by:
Christopher Wally Wright

PUGET SOUND INSTITUTE

W UNIVERSITY *of* WASHINGTON

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Members of the Habitat Strategic Initiative Lead Team

Colleagues at the Puget Sound Institute

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Interviewees from Conservations Districts, Department of Natural Resources, Washington Farmland Trust (formerly known as PCC Farmland Trust), Natural Resources Conservation Service, Recreation and Conservation Office, Washington State Conservation Commission, Wapato Valley Mitigation Bank

Reviewers from the Washington State Department of Commerce, Department of Natural Resources, Natural Resources Conservation Service, Washington State Conservation Commission, WSU Pierce County Extension

The author is solely responsible for any errors or omissions.

EXECUTIVE SUMMARY

The Land Development and Cover Implementation Strategy (IS) has been under development since 2016. The Department of Commerce (Commerce) and the Partnership worked together to lead development of the Land Development and Cover Implementation Strategy along with volunteers to serve on a Land Development and Cover Interdisciplinary Team (IDT) that met several times to guide strategy development.

The Land Development and Cover IS development process is currently led by the Habitat Strategic Initiative, composed of representatives from the Washington Department of Natural Resources (DNR) and Washington Department of Fish and Wildlife (DFW) with input from the Washington Department of Commerce (Commerce), Washington Department of Ecology (Ecology), the Washington EPA, and various cities, counties, conservation districts, private citizens, and tribal organizations. The Puget Sound Partnership and Puget Sound Institute provide technical support to the Habitat Strategic Initiative.

The [Land Cover and Development Vital Sign](#) “measures the conversion of land from forests, farms, and natural areas into land for homes, businesses, and roads.”¹ The Vital Sign has four indicators that report status and trends region-wide: [Rate of Forest Cover Loss to Development](#), [Riparian Restoration](#), [Conversion of Ecologically Important Lands](#), and [Growth in Urban Growth Areas](#).

The Interdisciplinary Team developed three strategies/actions to meet the Land Development and Cover Vital Sign indicator targets. They are available in the implementation strategy supporting documentation and modeled using [results chains](#). The three strategies are:

1. **Protect and restore ecologically important lands.** The primary goal of this strategy action is to identify and protect lands that are considered ecologically important lands.
2. **Reduce barriers to infill and redevelopment in Urban Growth Areas.** The primary goal of the strategy is to reduce the barriers to urban living, simplify the permitting process, and promote growth in areas away from ecologically important lands and agricultural resources. This strategy identifies actions to promote compact growth in preferred areas, including identifying those areas and the barriers associated with development on a parcel-specific growth scale.
3. **Support working lands:** The primary purpose of this strategy action is to make progress toward preventing the conversion of forestry and agricultural areas to more intensive land uses.

This Base Program Analysis (BPA) is intended to provide supporting information to the Implementation Strategy by summarizing and analyzing a variety of cost-share programs at the federal, state, and local government levels, as well as technical assistance programs and established and emerging market-based programs (such ecosystem services payments or carbon

¹ <https://vitalsigns.pugetsoundinfo.wa.gov/VitalSign/Detail/15>

sequestration) that support the Implementation Strategy. This report is one of several appendices to the Land Development and Cover Implementation Strategy Narrative.

This report starts with an introduction of the Puget Sound National Estuary Program recovery planning. Next is an overview of the regulatory approaches to the Implementation Strategy including the Growth Management Act, land use planning in and out of Urban Growth Areas, comprehensive long-range and multi-county planning processes and analysis, and Critical Area planning and protection. The remaining sections and sub-sections present the landscape of financial, technical and market-based programs available that can assist in the protection of ecologically important lands, reduce barriers to infill and development in Urban Growth Areas, and support working agricultural and forest lands.

These programs are divided at the organization level (federal/state/local government or similarly-funded technical and financial assistance programs such as those offered by the US Department of Agriculture or the Department of Natural Resources) and programs that are more voluntary-type landowner programs, market-based incentive programs or miscellaneous policy/planning programs and initiatives. The programs are analyzed based on input from experts and review of pertinent literature. Program recommendations are provided if applicable or offered by literature and/or experts.

A navigation table is provided following the overview section for easier access to specific programs, initiatives and policies. At the end of the document several appendices are available. The first appendix is a table that describes near term actions (NTAs), funded and unfunded, that relate to the Land Development and Cover Implementation Strategy. The second appendix is a summary of the current status of the transfer of development rights programs in Puget Sound.

ACRONYMS AND ABBREVIATIONS

Commerce	Washington Department of Commerce
CA	Critical Areas
CAO	Critical Area Ordinance
CD	Conservation District
CREP	Conservation Reserve Enhancement Program
CWA	Clean Water Act
CUT	Current Use Taxation
DNR	Washington State Department of Natural Resources
Ecology	Washington Department of Ecology
EQIP	Environmental Quality Incentives Program
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FFFPP	Family Forest Fish Passage Program
FREP	Forest Riparian Easement Program
GMA	Growth Management Act
ILA	Inter-local Agreement
IS	Implementation Strategy (under the Puget Sound Action Agenda)

LCLIP	Landscape Conservation and Local Infrastructure Programs
LO	Lead Organization (under NEP)
NEP	National Estuary Program
NFWF	National Fish and Wildlife Foundation
NIPF	Nonindustrial private forestland
NRCS	Natural Resources Conservation Service
NTA	Near-Term Action
PBRF	Public Benefit Rating System
PDR	Purchase of Development Rights
PSP	Puget Sound Partnership
PSRC	Puget Sound Regional Council
PSWC	Puget Sound Watershed Characterization model
RCO	Recreation and Conservation Office
RCFB	Recreation and Conservation Funding Board
RCPP	Regional Conservation Partnerships Program
TDR	Transfer of Development Rights
UGA	Urban Growth Area
USDA	United States Department of Agriculture
VSP	Voluntary Stewardship Program
WCTAT	Watershed Characterization Technical Assistance Team
WDFW	Washington Department of Fish and Wildlife
WSDA	Washington State Department of Agriculture
WDNR	Washington Department of Natural Resources
SCC	Washington State Conservation Commission
WSDOT	Washington State Department of Transportation

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INTRODUCTION

The National Estuary Program (NEP), administered by the U.S. Environmental Protection Agency (EPA), was established to protect and restore the water quality and ecological integrity of estuaries of national significance. The Puget Sound Partnership (PSP) leads the Puget Sound NEP by bringing together partners to mobilize action around a common agenda. PSP focuses the region’s collective effort through development of a shared vision and strategy articulated in the [Action Agenda for Puget Sound](#). The Action Agenda is a comprehensive plan that helps to efficiently allocate federal, state, and local recovery investments based on a science-driven, prioritized system.

PSP has developed 25 [Vital Signs](#) that track progress toward Puget Sound recovery goals. These Vital Signs represent overarching measures used to communicate the health of Puget Sound and gauge improvements or declines. Each Vital Sign has one or more specific and measurable metric, known as indicators, which have associated recovery targets that align with regional recovery goals. These indicator targets include quantitative milestones that reflect the region’s commitments to and expectations for significantly improving the condition of Puget Sound by the year 2020 (Kinney 2020).

1. Implementation Strategies

Progress toward Vital Sign indicator targets has been mixed. Several indicators have made gains relative to baseline conditions, but many others are not showing improvement (PSP 2017a). The U.S. Environmental Protection Agency (EPA), as federal lead for NEP efforts in Puget Sound,

identified a need to further focus regional recovery and protection priorities. An [Implementation Strategy](#) is a planning tool developed to provide this focus.

Implementation Strategies describe outcomes necessary to accelerate progress towards one or multiple Vital Sign indicator targets. They are intended to serve as a road map for aligning opportunities across agencies and programs, provide priorities for the Action Agenda, and guide funding decisions. These strategies are developed collaboratively with technical, professional, and policy experts and with local and regional input.

Implementation Strategy development follows a process designed by PSP (2017b). A volunteer Interdisciplinary Team recruited through a public process provides most of the technical input on what to include, focus on, and recommend as priorities within the Implementation Strategy. This occurs in facilitated workshops where [Open Standards for the Practice of Conservation](#) planning tools are used to structure group discussion and develop products. The strategies and content developed by the Interdisciplinary Team are vetted and refined during topical subgroup meetings, a technical workshop, and a partner workshop. These subgroups and review workshops broaden participation to validate and improve the draft materials before public and external science reviews occur. Participant feedback is intended to improve the accuracy of content, identify additional resources or information available, and to allow input from organizations that may bear some responsibility for implementation of the proposed strategies.

A complete Implementation Strategy contains the following elements:

- A summary narrative that includes eight major content areas. The narrative identifies and prioritizes approaches for achieving targets; describes strategies, actions, programs, and policy changes associated with each approach; delineates research and monitoring needs; identifies adaptive management opportunities; and estimates strategy costs.
- Three types of [Open Standards for the Practice of Conservation](#) logic models:
 - A [situation analysis](#) that documents the Interdisciplinary Team’s common understanding of the factors contributing to problems, barriers, and implementation opportunities. This conceptual model is used to help participants decide where and how to intervene.
 - [Result chains](#) that describe the cause-effect changes necessary to make progress under each identified approach. They define the sequence of steps needed to achieve specific outcomes, and document group hypotheses about how approaches are intended to address identified problems.
 - A schematic overview depicting how the approaches selected by the Interdisciplinary Team work together to drive progress towards indicator targets. Priority pathways are also indicated.
- Supporting technical reports/appendices including, but not limited to, an analysis of ongoing programs per NEP guidance for “base program analysis” (EPA 1993); a state of knowledge

report synthesizing technical information about current conditions and uncertainties; and tables that specify proposed actions to achieve outcomes identified in the results chains.²

1.1 Development of the Land Development and Cover Implementation Strategy

The Land Development and Cover Implementation Strategy (IS) has been under development since 2016. “The Department of Commerce (Commerce) and the Partnership worked together to lead development of the Land Development and Cover Implementation Strategy, with Commerce serving as the Strategy Development Lead. In early 2016, the Partnership and Commerce solicited volunteers to serve on a Land Development and Cover Interdisciplinary Team (IDT) that met several times to guide strategy development. IDT members and others have also participated in subgroups to discuss specific topics (e.g., mapping land cover change, agriculture, climate change, strategy logic, social dimensions, etc.).”³ An [Interdisciplinary Team](#) of 14 technical experts represented several organizations including:

Cascadia College
Department of Commerce (Strategy Development Lead)
Department of Ecology
Washington State EPA
Futurewise
Puget Sound Partnership
Puget Sound Regional Council
Regional Open Space Strategy
Thurston Regional Planning Council
Tulalip Tribes
Snohomish County
WDFW
Whatcom Conservation District

The Land Development and Cover IS development process is currently led by the Habitat Strategic Initiative Team, composed of representatives from the Washington Department of Natural Resources (DNR) and Washington Department of Fish and Wildlife (DFW) with input from the Washington Department of Commerce (Commerce), Washington Department of Ecology (Ecology), the Washington EPA, and various cities, counties, conservation districts, private citizens, and tribal organizations. The Puget Sound Partnership and Puget Sound Institute provide technical support to the Habitat Strategic Initiative. Key tasks for each Strategic Initiative Advisory Team include funding Near Term Actions (see Appendix A for a complete list of funded and unfunded NTAs relevant to Land Development and Cover) and stewarding respective Implementation Strategies.

1.2 Land Cover and Development Vital Sign Indicator Targets

² Kinney 2020

³ <https://pspwa.app.box.com/s/mqzyrtt0148o0q6np86uah0iz4hs5kjh/file/103197320087>

The [Land Cover and Development Vital Sign](#) “measures the conversion of land from forests, farms, and natural areas into land for homes, businesses, and roads.”⁴ The Vital Sign has four indicators that report status and trends region-wide: rate of forest cover loss to development, riparian restoration, conversion of ecologically important lands, and growth in Urban Growth Areas. Each indicator has a target (known as [Vital Sign Indicator Targets](#)) described below.

- 1) The [Rate of Forest Cover Loss to Development](#) indicator is measured by the “number of acres of non-federal forest land cover converted to development.” The indicator has one recovery target: by 2020, average annual loss of forested land cover to developed land-cover in non-federal lands does not exceed 1,000 acres per year. According to the most recent data available from 2016, the “rate of forest loss decreased below the target value of not exceeding 1,000 acres per year, to 836 acres per year. **Status:** Near or at 2020 target.
- 2) The [Riparian Restoration](#) indicator has one recovery target: restore 268 miles of riparian vegetation or have an equivalent extent of restoration projects under way by 2020. According to data from the Washington State Recreation and Conservation Office’s Project Information System (PRISM) provided to the Puget Sound Partnership, nearly 300 miles of vegetation along riparian corridors has been restored through 179 projects. However, according to the Partnership “because of uncertainties around the estimate of the streambank treated metric and lack of complete record of streambank planted projects, the status of the indicator relative to the target is questionable” and has been kept at “below the 2020 target”, until further review. **Status:** Below 2020 target (as of 3/18/2020).
- 3) The [Conversion of Ecologically Important Lands](#) indicator has one recovery target: basin-wide loss of vegetation cover on ecologically important lands under high pressure from development does not exceed 0.15 percent of the total 2011 baseline land area over a five-year period. A baseline rate of land cover change on the indicator land base across all 12 Puget Sound counties was established in 2011 and subsequently measured every five years through Landsat satellite imagery⁵. From 2011 to 2016 the percent of conversion rate of ecologically important lands was measured at 0.18 percent. From 2016 to 2021 the conversion is projected to be 0.15 percent. **Status:** Near or at 2020 target (as of 6/26/2019).
- 4) The [Growth in Urban Growth Areas](#) indicator has one recovery target: “the proportion of Puget Sound basin-wide population growth occurring within UGAs is at least 86.5 percent (equivalent to all counties exceeding their population growth goals by 3 percent) with all counties showing an increase over their 2000 to 2010 percentage.” Population growth is measured by U.S. census data produced every ten years.⁶ **Status:** Below 2020

⁴ <https://vitalsigns.pugetsoundinfo.wa.gov/VitalSign/Detail/15>

⁵ <https://www.pugetsoundinfo.wa.gov/ProgressMeasure/Detail/21/VitalSigns>

⁶ Washington population data was used for this analysis according to the Puget Sound Partnership. 2010 results indicated 83 percent of new population growth from 2000 to 2010 across all 12 counties occurred within the Urban Growth Areas. However, this number is across all 12 Puget Sound counties, with some counties vastly exceeding the

target (as of 6/26/2019). Analysis of new progress towards the growth in UGAs target is pending based on new census data. The value derived from the 2000 to 2010 census data will be used as a baseline reference for basin-wide and county-scale population growth distribution. An overview of UGAs and recent literature that discusses methods of calculating growth in and out of Urban Growth Areas is in Section 2.3.

1.3 Strategies to Meet the Vital Sign Indicator Targets

The Interdisciplinary Team developed three strategies/actions to meet the Land Development and Cover Vital Sign indicator targets. These strategies were developed and recorded through IS workshops with the IDT and the Habitat SIL. They are available in the IS supporting materials and modeled using [results chains](#).

- 4. Protect and restore ecologically important lands.** The primary goal of this strategy action is to identify and protect lands that are considered ecologically important lands. Ecologically important lands are lands “that in their current state either a) provide high hydrological function, with respect to regulating water flows, or b) provide high habitat or biodiversity value.”⁷ The purpose of this strategy is to develop regional definitions of, standards for, and metrics on ecologically important lands to assist decision makers throughout Puget Sound to protect and restore them. Protecting ecologically important lands “directly contributes to progress toward achieving the Estuary, Floodplain and Chinook Vital Signs as well. Similarly...channeling development away from ecologically important lands can maintain open space for outdoor recreation, harvesting local foods, and contribute to air and water quality.”⁸ Lands that were not already developed (such as parcels with less than 35 percent impervious cover) and were not protected from development through regulation or private ownership were identified by the IDT as lands under the greatest pressure from development.
- 5. Reduce barriers to infill and redevelopment in Urban Growth Areas.** The primary goal of the strategy action is to reduce the barriers to urban living, simplify the permitting process, and promote growth in areas away from ecologically important lands and agricultural resources.

Population and economic growth in the region is driving development, but the actual placement of that development depends on a complex suite of factors. This strategy identifies actions to promote compact growth in preferred areas, including identifying those areas and the barriers associated with development on a parcel-specific growth scale. Additional actions include evaluating the underlying costs of developing different areas, and seeking to guide social preferences towards compact growth.

target with some below the target. Information including county-wide breakdown of growth can be accessed at <https://www.pugetsoundinfo.wa.gov/ProgressMeasure/Detail/22/VitalSigns>.

⁷ <https://pspwa.app.box.com/s/mqzyrtt0148o0q6np86uah0iz4hs5kjh/file/103197320087>

⁸ <https://pspwa.app.box.com/s/mqzyrtt0148o0q6np86uah0iz4hs5kjh/file/103197338181>

6. **Support working lands:** The primary purpose of this strategy action is to make progress toward preventing the conversion of forestry and agricultural areas to more intensive land uses. Agricultural lands face many social pressures to keep the land economically viable in the face of development pressures. Preserving working lands for agricultural purposes ultimately reduces land conversion and retains valuable ecological processes, especially in agricultural lands that use best management practices (BMPs). The agricultural sector must be engaged in identifying and addressing the factors that contribute to subdividing or converting their lands. According to the IS, the best way to accomplish this and reduce the pressure on the agricultural community is to develop shared strategic plans to preserve working lands and help to maintain the land base and infrastructure to support agricultural purposes.

1.4 Land Development and Cover Base Program Analysis: Scope and Contents of this Report

This Base Program Analysis (BPA) is intended to provide supporting information to the Implementation Strategy by summarizing and analyzing a variety of cost-share programs at the federal, state, and local government levels, as well as technical assistance programs and established and emerging market-based programs (such as ecosystem services payments or carbon sequestration) that support the Implementation Strategy. This report is one of several appendices to the Land Development and Cover Implementation Strategy Narrative. It is not intended to be an analysis of the Implementation Strategy, the Vital Signs or related processes. The intent is to assess how ongoing programs can help the Habitat Strategic Initiative and key regional partners including the Puget Sound Partnership to further operationalize the Implementation Strategy.

Details of the Land Development and Cover Implementation Strategy planning process, including ranking and prioritization of actions, strategies, lessons learned, monitoring and adaptive management approaches can be found in the Implementation Strategy narrative and supporting appendices [here](#).

This BPA consists of several sections:

- The first section provides an overview of regulatory approaches to the Implementation Strategy including the Growth Management Act, land use planning in and out of UGAs, comprehensive long-range and multi-county planning processes and analysis, and Critical Area planning and protection.
- The remaining sections and sub-sections present the landscape of financial, technical and market-based programs available that can assist in the protection and recovery of ecologically important lands, reduce barriers to infill and development in Urban Growth Areas, and support working agricultural and forest lands. These programs are divided at the organization level (federal/state/local government or similarly-funded technical and financial assistance programs like those offered by the US Department of Agriculture or the Department of Natural Resources) and programs that are more voluntary-type

landowner programs, market-based incentive programs or miscellaneous policy/planning programs and initiatives.

If applicable, recommendations are provided for each program in this document and highlighted in . Recommendations were derived from:

- Expert input. Experts included representatives from governmental and non-governmental organizations (such as regional non-profits, land trusts, conservation agencies, etc.). Experts provided information through interviews, presentations/webinars, agency reports and publications and workshops.⁹ Participant views and recommendations cited herein generally reflect consensus opinion from the IDT and are supported by either a primary and/or secondary source.
- Review of pertinent literature. Literature includes government reports (such as economic analyses published by the Government Accountability Office), agency and non-profit reports and academic literature. Additional literature includes reports published by the Puget Sound Institute, Puget Sound Partnership, Northern Economics and reports associated with NEP grants awarded through the [Watershed Protection and Restoration Grant Program](#) and the accompanying reports from the Department of Commerce and Ecology. The Watershed LO Synthesis, produced by the Puget Sound Institute, provided additional input for this report. It is available upon request.

⁹ Workshops referenced include the [Puget Sound Land-Use Workshop](#) held on 11/6/2019 and the [“Above and Beyond” Land Use Planning Workshop](#) held in 2018, both hosted by the Habitat and Stormwater Strategic Initiatives.

1.5 Navigation Table

A navigation table is provided below to provide ease of access in navigating this report and see the connections between the Land Development and Cover Implementation Strategy actions and associated programs, initiatives, policies and platforms. The actions are described below with an icon depicting the associated action. The table includes a description of the program, highlights programs that offer opportunity for local municipality involvement (including cities and towns) and includes a live link to the corresponding section of the BPA (simply click under the ‘Section’ column to be re-directed to that section of the document).

LEGEND	
Action/strategy	Associated icon
Protect and restore ecologically important lands	
Reduce barriers to infill and redevelopment in Urban Growth Areas	
Support working lands (agriculture)	
Support working lands (forestlands)	
Opportunity for local government engagement (municipalities)	

Program/Policy/Initiative	Type of Funding	IS Actions Supported	Local Government Engagement	Description	Section in Base Program Analysis
Conservation Easements	Federal/state/non-profit/for-profit			<p>Conservation easements directly support all of the Land Development and Cover Implementation Strategy actions. The use of non-regulatory approaches within the context of coordinated acquisition planning is to prevent the conversion of forestry and agricultural areas to more intensive land uses, protect ecologically important and preserve land at the risk of development.</p>	3.1
Option to Purchase at Agricultural Value	State/non-profit			<p>OPAV is a mechanism that gives states “the option to purchase and resell, or assign the sale of, farm property under conservation easement to a qualified farmer at the land’s agricultural use value if it is not being sold to one or transferred to a family member”. OPAV gives the land trust or the holder of an easement the first option to purchase the property at the value assessed specifically for agriculture instead at market demand.</p>	3.2.1
Agricultural Conservation Easements Program	Federal			<p>Through the Agricultural Conservation Easements Program (ACEP), USDA’s NRCS purchases conservation easements from interested landowners, land trusts, tribes, and non-governmental organizations to protect working agricultural lands and restore, protect and enhance wetlands. ACEP offers two distinct program options, Wetland Reserve Easements (WRE) and Agricultural Land Easements (ALE). WRE help entities restore, protect and enhance wetlands through the purchase of a wetland reserve easement. ALE help entities purchase easements on agricultural land including grassland, rangeland and pasture/shrub-land.</p>	3.3

Environmental Quality Incentives Program	Federal			<p>Through the Environmental Quality Incentives Program (EQIP), USDA’s NRCS provides financial and technical assistance incentives to plan and implement voluntary conservation practices. Conservation practices include water, soil, air quality improvement, enhancing wildlife habitat, improving the resiliency and productivity of agricultural lands, treating “natural resource concerns” and helping producers in meeting sustainability measures. EQIP is a cost-share program that covers 75 to 90 percent of the costs associated with implementing conservation measures.</p> <p>3.4</p>
Conservation Stewardship Program	Federal			<p>NRCS’s Conservation Stewardship Program (CSP) offers competitive financial assistance for activities like adoption of cover crops to improve soil health, riparian enhancement for improvements in water quality and quantity, advanced grazing management, development of comprehensive conservation plans, support for and transition to organic production. CSP has enrolled more than 70 million acres since 2010 and will provide \$750 million in federal financial assistance in fiscal year 2020. Each state determines its own geographic priority areas, targeted concerns and list of eligible enhancements. Puget Sound is listed as the number one priority area across Washington.</p> <p>3.5</p>
Regional Conservation Partnership Program	Federal			<p>Through RCPP, NRCS partners with state and local agencies and non-governmental organizations to provide financial and technical assistance to landowners to “design and implement conservation solutions”. In Washington, the Puget Sound RCPP is a partnership with the NRCS and the Washington State Conservation Commission (SCC) with a goal of making coordinated investments that fund conservation practices within specific watersheds in Puget Sound. Entities participating in RCPP include counties, conservation districts, land trusts that apply for competitive cost-share assistance to help landowners in completing BMPs.</p> <p>3.6</p>

Conservation Innovation Grant Program (CIG)	Federal		The Conservation Innovation Grant Program (CIG) offers competitive grants focused on funding innovations in resource conservation. It is funded through the EQIP program to “help develop the tools, technologies and strategies to support next-generation conservation efforts on working lands and develop market-based solutions to resource challenges. CIG awarded 29 recipients \$12.46 million in four project areas: pollinator habitat, urban agriculture, water quantity, and “accelerating the pace and scale of conservation adoption” including pilot projects investigating carbon accounting for small forest landowners.	3.7
Conservation Innovation Grant Program On-Farm Conservation Innovation Trials	Federal		A CIG sub-program, On-Farm Trials offers competitive grants to universities, producers’ associations, conservation district and NGOs for irrigation management, precision agriculture, management strategies and technologies, and soil health management systems. The program provides funding to partners to make incentive payment and offers technical assistance for implementation.	3.8
Healthy Forests Reserve Program (HFRP)	Federal		HFRP is a sub-program of RCPP. HFRP helps landowners restore, enhance and protect forestland resources on private lands through easements and financial assistance. It is currently unfunded for Washington	3.9
Conservation Reserve Program (CRP)	Federal		CRP provides financial assistance to landowners that voluntarily elect to retire (e.g. remove) environmentally sensitive cropland from production for a contract period of 10 to 15 years in exchange for an annual rental payment. CRP is the largest “agricultural land-retirement program” nationally with an enrollment of over 22.3 million acres and a budget of over \$1.8 billion.	3.10

Conservation Reserve Enhancement Program (CREP)	Federal/state		CREP is a joint federal and Washington State-funded program that provides financial assistance to landowners to voluntarily establish and maintain riparian buffers in agriculture with a contract period running 10 to 15 years. The Washington State Conservation Commission (SCC) provides technical support and resources to local conservation districts with the USDA Farm Service Agency administering the program on the federal level. Specific landowner measures funded by CREP include the installation riparian buffers that seek to decrease water temperature in the “decade following riparian restoration” through increasing shade and canopy cover, implementing a variety of BMPs (such as grass filter strip) and enhancing wetlands.	3.11
Forest Riparian Easement Program (FREP)	Federal/state		DNR administers FREP and authorizes the state to pay landowners in exchange for putting a 50- year riparian easement on their land to establish riparian buffers primarily along sensitive aquatic areas. The amount of the compensation is based on the value of the trees left in the riparian buffer.	3.12
U.S. Fish and Wildlife Services National Coastal Wetlands Conservation Grants	Federal		This FWS grant program supports the acquisition, protection and the restoration of tidal and estuarine wetlands.	3.14
Washington Recreation and Conservation Office Grants	State		The Washington State Recreation and Conservation Office (RCO) currently manages several grant programs administered by the RCO’s funding arm, the Recreation and Conservation Funding Board (RCFB). RCO is a state agency that supports outdoor recreation programs (including boating, fishing, vehicle activities, youth athletics, firearms), salmon recovery (including restoration, fish barrier removal activities) and trails and land and water conservation. It supports the protection of ecologically important lands as well as supporting working lands.	3.15

Family Forest Fish Passage Program (FFFPP)	State			<p>The Family Forest Fish Passage Program (FFFPP) is administered by DNR with project funding provided through the RCO. FFFPP was created in 2003 by the legislature to provide technical assistance and a cost-share mechanism for small forest landowners to “remove fish barriers on streams associated with forest road crossings.”</p>	3.16
Voluntary Stewardship Programs	State			<p>The Voluntary Stewardship Program promotes development of locally-directed watershed-scale plans to balance GMA’s environmental and economic goals and “includes goals and measurable benchmarks to protect the functions and values of critical areas and promote agricultural viability along with supporting the voluntary enhancement of critical areas”. The Washington State Conservation Commission (SCC) administers funding to counties to engage agricultural landowners to develop and then implement watershed work plans. 27 of 39 Washington Counties opted-in to VSP including five Puget Sound counties: Mason, Lewis, San Juan, Skagit, and Thurston.</p>	4.1
Conservation Districts’ Programs	Federal/state/non-profit			<p>Puget Sound Conservation Districts have been awarded technical assistance funds from NRCS through the National Association of Conservation Districts (NACD), which provides funding and technical/administrative assistance, promotes soil health, work to conserve forestland, provides resources for managing water quality/quantity and engages with over 300 conservation districts nationally. Conservation districts are an integral part of county planning, including outreach, adoption and implementation of Individual Stewardship Plans supporting counties’ Voluntary Stewardship Plans.</p>	4.2

Farming, Fish and Floodplains Programs	Federal/state/non-profit/private			Local and tribal governments and nonprofit organizations work cooperatively to implement multi-benefit projects that reduce flood hazards to communities while restoring the natural functions of state rivers and their floodplains, benefit agricultural producers, improve flood protection for towns and farms, and restore habitat for salmon and other important aquatic species.	4.4
Land Conservation and Local Infrastructure Program (LCLIP)	State/non-profit/private	 		RCW 39.018 provides a financing tool for cities in designated development rights receiving areas to invest in infrastructure. LCLIP allows cities to receive a portion of future county property tax revenue if they receive a higher percentage of their allocated share of development rights.	4.5
Transfer of development rights (TDR)	State/non-profit/private	 		Regional TDR programs encourage development in UGAs while funding conservation easements. A jurisdiction identifies areas to conserve (“sending areas” such as working lands or open space) and areas to direct additional growth (“receiving areas” within cities or UGAs). Landowners in sending areas can choose to sell their development rights to developers interested in gaining additional development potential in receiving areas. The sending property is protected through a conservation easement and developers get a bonus like additional building height, floor area, or increased units.	4.5
Compensatory mitigation mechanisms for losses of aquatic resources	State/non-profit/private			Section 404 of the Clean Water Act established a program to regulate the discharge of fill material into waters of the United States (including wetlands). 73 FR 19594 authorizes two types of third-party compensatory mitigation mechanisms: mitigation banking and in-lieu fee payments. These approaches can consolidate what would otherwise be several smaller, lower-quality compensatory mitigation projects into a single project that provides greater overall environmental benefit.	4.6

Market-based mechanisms for forest conservation including payment for ecosystem services (Pay for Success, Forest Resilience Bonds, Carbon Sequestration)	State/non-profit/private			<p>Payments for ecosystem services occur when they are quantified as credits and a market is developed to link participating landowners with entities willing to pay for actions that protect/restore services. Entities paying for credits often have a regulatory requirement to meet or service to deliver (e.g., water treatment, drinking water, flooding protection, preserving forestland for carbon sequestration). USFS’s Innovative Finance for National Forests grant program provides grants to investigate market-based mechanisms.</p>	5.2
Current use taxation, public benefit rating systems	State			<p>RCW 84.34 and WAC 458-30 allow counties to reduce property taxes when owners preserve or restore their land. Tax relief is provided when open space, agricultural, or timber lands are valued at “current use” rates rather than the “highest and best use” typically assessed. This can translate into a reduction in the assessed value for the portion of the property enrolled in a county’s current use program. All but three Puget Sound counties (Mason, Skagit, and Snohomish) have established a Public Benefit Rating System (PBRs) that provides standardized criteria from which the reduction in assessed value can be calculated. The higher the public benefit rating, the higher the level of tax relief awarded.</p>	6.1
King County’s Land Conservation Initiative	State			<p>King County’s Land Conservation Initiative demonstrates the extent of local analysis and political support required to implement a large-scale acquisition program. It quantifies the gap between current acquisition funding and revenue needed to meet conservation goals. The initiative began in 2015 with a goal of preserving all remaining high conservation lands in King County within the next 30 years.</p>	6.2
Washington State University Extension	State			<p>WSU Extension provides technical assistance through informal education to meet locally-identified needs of agricultural landowners.</p>	6.3

Regional Open Space Plan	State/non-profit		 <p>Puget Sound Regional Council's (PSRC) Regional Open Space Conservation Plan maps the most important open spaces (about 3.03 million acres of land) within the 4 counties in King, Snohomish, Pierce, and Kitsap counties. The data is intended to be used by local governments, resource agencies, conservation nonprofits, and others to plan and guide conservation actions. PSRC considers 104,000 acres of farmland; 183,000 acres of working forest; and 175,000 acres of intact habitat within their regional open space network to be most at risk of conversion to developed uses.</p>	6.4
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2. Improving Regulatory Effectiveness

Improving regulatory effectiveness is a key tenet of the Land Development and Cover Implementation Strategy. This section outlines the current landscape of regulations and policies that may support the IS. These regulations, at present, are inadequate in the protection and restoration of threatened land, including working land and ecologically important land. Several efforts are underway to analyze and evaluate these regulations with the intention of improving them. If applicable, these efforts are described in each sub-section.

2.1. Overview of the Growth Management Act

The Growth Management Act (GMA) was authorized by the State Legislature in 1990, establishing Urban Growth Areas “along with requirements for growth planning”.¹⁰ GMA is the key state statute addressing land use planning. GMA aims to limit sprawl and ensure sufficient infrastructure is available to accommodate growth. It prescribes comprehensive planning requirements and directs local governments to enact regulations consistent with their plans. GMA requires cities and counties to identify and protect critical areas and conserve natural resource lands. Critical Areas include wetlands, aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas, per [RCW 36.70A.030](#). Development regulations must preserve the functions and values of the natural environment and safeguard the public from hazards to health and safety, per [WAC 365-196-830](#). Natural resource lands are agricultural lands, forestlands, and mining resource lands that have long-term commercial significance and were not already characterized by urban growth at the time of original designation in September 1991, per [RCW 36.70A.170](#). Development regulations must prevent conversion to a use that removes land from resource production, per [WAC 365-196-815](#).¹¹

Washington’s Legislature established 14 goals to guide the development of local GMA plans and development regulations:

- 1) encourage development in urban areas
- 2) reduce sprawl
- 3) encourage efficient transportation systems based on regional priorities and coordinated plans
- 4) encourage availability of affordable housing and preservation of existing housing stock;
- 5) encourage economic development consistent with adopted plans
- 6) protect the property rights of landowners;
- 7) process permits in a fair and timely manner
- 8) encourage conservation of productive natural resource lands and discourage incompatible uses
- 9) retain open space to enhance recreational opportunities and conserve fish and wildlife habitat
- 10) protect the environment, including air and water quality and the availability of water

¹⁰ Sayler and Roberts 2018

¹¹ Kinney 2020

- 11) encourage citizen involvement in planning and coordination between communities
- 12) ensure adequate infrastructure is available at the time of development
- 13) identify and encourage preservation of lands, sites, and structures that have historical or archaeological significance
- 14) protect shorelines of the state¹²

Several articles of the Legislature’s Revised Code of Washington (RCW) relevant to the Land Development and Cover Implementation Strategy include:

- RCW [36.70A.110](#) details urban growth areas and natural resource lands protection
- [RCW 36.70A.090](#) stipulates that urban growth planning should consider “innovative land use management techniques, including, but not limited to, density bonuses, cluster housing, planned unit developments, and the transfer of development rights.”
- RCW [84.34.200](#) details stipulations around the “acquisition of open space, etc., land or rights to future development by counties, cities, or metropolitan municipal corporations” including that “the haphazard growth and spread of urban development is encroaching upon, or eliminating, numerous open areas and spaces of varied size and character, including many devoted to agriculture, the cultivation of timber, and other productive activities, and many others having significant recreational, social, scenic, or esthetic values” [1971 ex.s. c 243 § 1](#).
 - It additionally stipulates the legislature’s findings on the “high levels of property taxation and benefit assessment [of agricultural and forestland], and that such levels of taxation and assessment encourage and even force the removal of such lands from agricultural and forest uses. The legislature continues with the creation of the ‘current use’ taxation program stating that “the owners of farmlands and timberlands were provided with an opportunity to have such land valued on the basis of its current use and not its “highest and best use” and that such current use valuation is one mechanism to protect agricultural and timberlands. The legislature further finds that despite this potential property tax reduction, farmlands and timberlands in urbanized areas are still subject to high levels of benefit assessments and continue to be removed from farm and forest uses.”

Several types of local development regulations can be used to implement GMA requirements. They include zoning code, critical area ordinances (CAOs), clearing and grading ordinances, subdivision regulations, public works standards, and landscaping or vegetation ordinances.

The Washington State Department of Commerce (Commerce) provides technical assistance and financial support to help local governments comply with GMA requirements. Commerce reviews local comprehensive plans (discussed below) for consistency with GMA but does not formally approve them. Enforcement of code violations occurs when a local entity, organization, or citizen brings a legal challenge via a Growth Management Hearings Board.¹³

¹² RCW 36.70A.020 and RCW 36.70A.480

¹³ Kinney 2020

2.2 Comprehensive Planning

GMA requires cities and counties above population size and growth rate thresholds to develop comprehensive plans. Jurisdictions that plan under GMA must adopt development regulations to support implementation of their plan.¹⁴ Comprehensive plans and implementing regulations must be updated every eight years. For optional annual amendments, comprehensive plans can be updated no more than once per year according to [RCW 36.70A.130](#). Commerce has published a guide to periodic updating of comprehensive plans for jurisdictions which should be referenced for further information.¹⁵

Comprehensive plans are required by [RCW 36.70A.070](#) and [WAC 365-196-400](#) to include a:

- Land use element – Designates general distribution and location of land to be used for housing, commerce, industry, timber/agriculture/mineral resources, recreation, open spaces, public utilities, and public facilities. Includes population densities, building intensities, and estimates of future population growth.
- Housing element – Inventories existing and projected housing needs, including the number of housing units necessary to manage projected growth and identification of sufficient land for housing. Some counties and cities are subject to extra review, evaluation, and reporting requirements; these are described later in this section.
- [Capital facilities element](#) – Inventories existing and forecasts future capacity needs for capital facilities including, at a minimum, water systems, sanitary sewer systems, stormwater facilities, reclaimed water. Includes proposed locations for expanded or new facilities and an at least six-year finance plan. Capital facility planning is discussed in more detail later in this section.
- Utilities element – Identifies the general location, proposed location, and capacity of all existing and proposed utilities including, but not limited to, electrical lines, telecommunication lines, and natural gas lines.
- Transportation element – Inventories air, water, and ground transportation facilities. Sets level of service standards for locally owned arterials and transit routes. Forecasts traffic based on adopted land use element to inform location, timing, and capacity needs of future growth. Includes a six-year street, road, or transit program with multi-year financing plan. Documents intergovernmental coordination efforts, including assessment of impacts of the plan on the transportation systems of adjacent jurisdictions. The Puget Sound Regional Council (PSRC) provides specific direction for development and evaluation of transportation elements for jurisdictions within King, Kitsap, Pierce, and Snohomish Counties. Multicounty planning policies guided by the Puget Sound Regional Council are discussed later in this section.
- Rural element – Counties must establish patterns of densities and uses for lands not designated for urban growth and timber/agriculture/mineral resources. The Legislature specified a number of provisions to protect rural character in [RCW 36.70A.070](#).

¹⁴ All 12 Puget Sound counties are required to develop comprehensive plans. San Juan, Jefferson, and Mason could have chosen to opt-out of full planning requirements but elected not to.

¹⁵ <https://deptofcommerce.app.box.com/s/ih7k99b6ars6lsgdje9czjmeq4zk1jjw>

Comprehensive plans may also include optional elements such as conservation, parks and recreation, economic development, natural hazard reduction, historic preservation, and subarea plans.¹⁶ GMA requires protection, but not restoration, of critical areas. Though ecosystem recovery is not a required element, nothing precludes its inclusion into a comprehensive plan (Andrade and Smith 2019).

2.3. Urban Growth Areas

A key tool for limiting sprawl is a requirement of GMA that counties and cities designate urban growth areas (UGAs) sufficient to accommodate the level of growth projected by the Office of Financial Management for the next 20 years.¹⁷ UGAs were authorized in [RCW 36.70A.110](#) to “represent a designated boundary within which high-density, or urban, growth for a particular city or county should be directed. UGAs are intended to house the majority of our region’s population in order to avoid increasing sprawl.” UGA boundaries have been re-established in 2018 from 2012 boundaries.

Adjacent and overlapping jurisdictions must coordinate to identify where growth should occur and set targets for specific areas. Within urban areas, most growth must be allocated with minimum densities of four housing units per acre. Rural areas, outside of UGAs, are typically zoned for not more than one unit per five acres. Outside the UGA, cities are limited in their ability to extend utilities and other governmental services.¹⁸ Exceptions to zoning, establishment of services and density are applied to limited areas of more intense rural development (LAMIRDs). Per [WAC 365-196-425](#), LAMIRDs allow for “small-scale commercial uses, economic development, redevelopment of existing industrial areas” in rural locations or rural areas. According to this WAC, “counties may allow for more intensive uses in a LAMIRD than would otherwise be allowed in rural areas” as long as they have “a logical outer boundary” to “contain the areas of more intensive rural development.”¹⁹

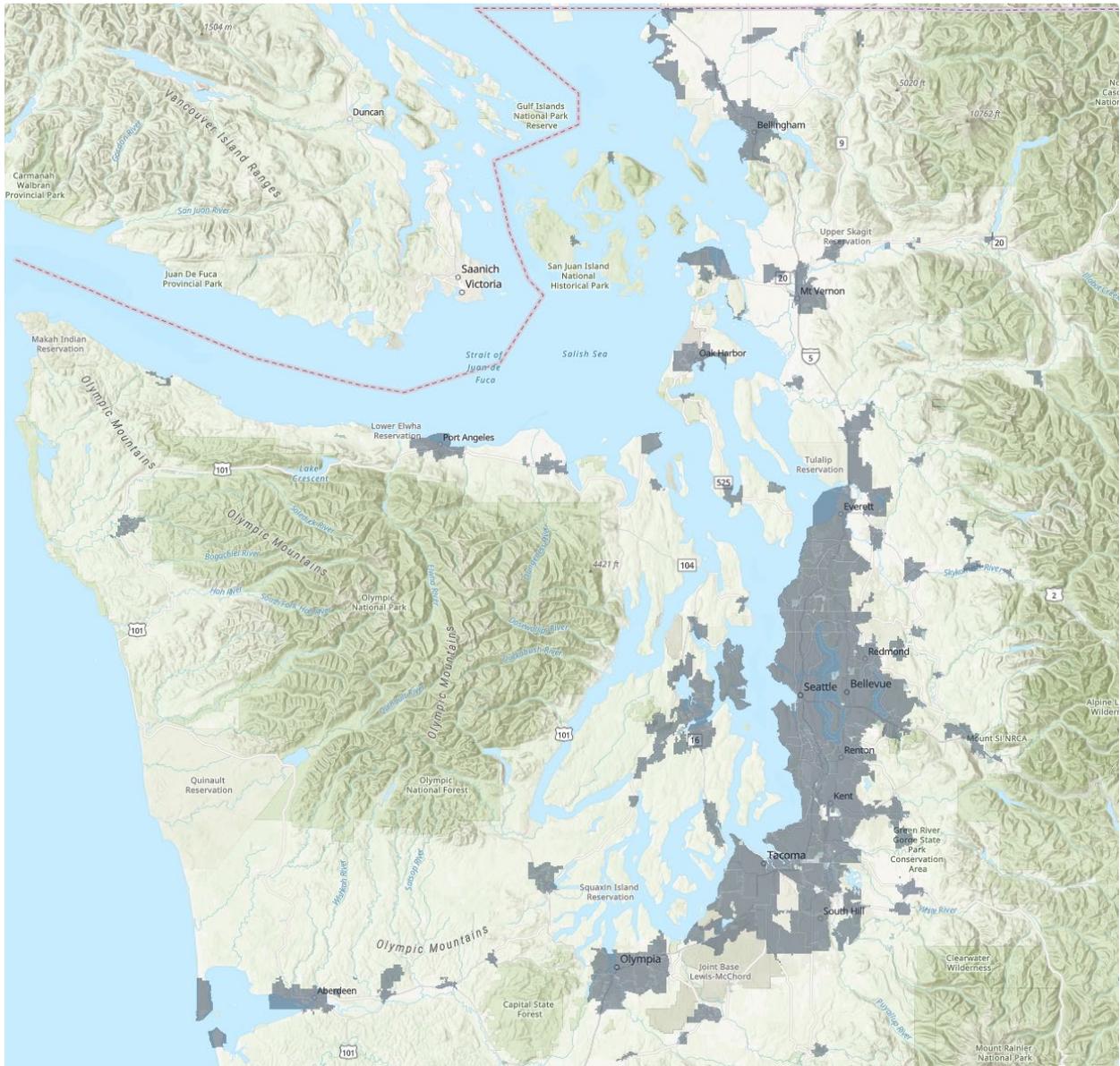
¹⁶ RCW 36.70A.080 and WAC 365-196-445. See <http://mrsc.org/getdoc/d7964de5-4821-4c4d-8284-488ec30f8605/Comprehensive-Planning.aspx>

¹⁷ RCW 36.70A.110(2) and WAC 365-196-310

¹⁸ [RCW 36.70A.110\(4\)](#)

¹⁹ <https://apps.leg.wa.gov/wac/default.aspx?cite=365-196-425>

Figure 1. Designated Urban Growth Areas in the Puget Sound Region²⁰



²⁰ [Washington State City Urban Growth Areas 2019](#) dataset from the Washington Geospatial Open Data Portal

2.3.1 Analysis of Urban Growth Areas

Recent literature has analyzed the growth in and out of UGAs in Puget Sound using a variety of methodologies. Carlson and Dierwechter (2007) analyzed UGAs with a GIS approach called kernel density calculation on building permit data from 1991 to 2002. Their research found that in the pilot area (Pierce County) “building density increased substantially inside the Urban Growth Area boundary” and decreased outside of it. They found that using Census data to measure growth, as used in the [Land Cover and Development Growth in Urban Growth Areas Vital Sign Indicator Target](#), impairs the ability to analyze the data spatially. However, the researchers stopped short of attributing UGAs to a decrease in residential building outside of the designated boundary. Additional predictive research by Hepinstall et al. (2008) finds that, using a land cover change model, in Puget Sound there may be a “conversion from grass, agriculture, and mixed lowland forest to varying intensities of urban developed land cover...inside the urban growth boundary...with most landscape change concentrated in areas surrounding currently developed lands.” These lands are referred to those in the “fringe of current urban development” and may be inside, at, or slightly beyond the UGAs boundaries.²¹

Roberts and Saylor (2018) analyze growth in and outside of UGAs using two geospatial datasets (Puget Sound Regional Council geo-located building permits and Commerce’s [Puget Sound Mapping Project](#) [Small Area Estimates provided by the Office of Financial Management]) from 2011 to 2016 to determine new housing development occurring in the Puget Sound. The analysis defined and reported on high-density growth and assesses external UGA development “within one mile outside of the UGA border”. The report found that five counties have growth occurring outside of UGAs. In total, less than 10 percent of all growth occurred outside of UGAs, which contain only 8.3 percent of all land in the counties analyzed. This analysis did not include the growth rate of LAMIRDS in rural areas.

Figure 2. Analysis of Housing Growth in and Outside of UGAs in Puget Sound Counties from 2011 to 2016

²¹ Hepinstall, Alberti, Marzluff. [Predicting land cover change and avian community response in rapidly urbanizing environments.](#)

2018 Critical Analysis: Housing Growth from 2011 - 2016						PUGET SOUND INSTITUTE					
						UNIVERSITY of WASHINGTON					
1	2	3	4	5	6	7	8	9	10	11	
County	UGA Net Units (PSMP)	exUGA Net Units (PSMP)	% Growth in exUGA (1/2)	% of regional exUGA growth (County exUGA/Basin exUGA)	% of total regional growth (All County / All Basin)	UGA area (sq. miles)	exUGA area (sq. miles)	Total Land (sq. miles)	exUGA Area, % (7/8)	UGA Area, % (6/8)	exUGA: UGA (7/6)
King	55016	429	0.8%	4.0%	50.6%	460.0	1675.7	2135.7	78.5%	21.5%	4
Kitsap	2524	822	24.6%	7.6%	3.1%	100.4	295.6	395.9	74.7%	25.3%	3
Pierce	13615	1849	12.0%	17.1%	14.1%	252.9	1423.9	1676.9	84.9%	15.1%	6
Snohomish	15814	1723	9.8%	16.0%	16.0%	185.3	1910.4	2095.7	91.2%	8.8%	10
Clallam	399	683	63.1%	6.3%	1.0%	33.8	1706.8	1740.6	98.1%	1.9%	51
Island	282	940	76.9%	8.7%	1.1%	16.0	191.3	207.3	92.3%	7.7%	12
Jefferson	205	425	67.5%	3.9%	0.6%	9.0	1804.8	1813.8	99.5%	0.5%	200
Mason	76	783	91.2%	7.2%	0.8%	19.2	943.4	962.6	98.0%	2.0%	49
San Juan	103	421	80.3%	3.9%	0.5%	2.7	172.5	175.3	98.4%	1.6%	63
Skagit	1135	379	25.0%	3.5%	1.4%	53.7	1689.5	1743.2	96.9%	3.1%	31
Thurston	6221	1293	17.2%	12.0%	6.9%	94.4	634.8	729.2	87.1%	12.9%	7
Whatcom	3308	1054	24.2%	9.8%	4.0%	80.5	2047.4	2127.9	96.2%	3.8%	25
Basin Total	98698	10801	9.9%	--		1307.8	14496.2	15804.1	91.7%	8.3%	11

Less than 10% of all growth is exUGA

Less than 8.3% of all land is in a UGA

However, in smaller and less populous counties, growth is occurring outside of UGAs at very high percentages (particularly Mason with over 90 percent and San Juan with 80 percent), along with 30 percent of new units being built within one mile of UGA boundaries. The literature suggests that some growth is occurring outside of UGA boundaries, but that UGA designations may discourage growth in more populous, urban counties. Researchers suggest that predictive analyses of growth patterns can assist in the proper location of UGAs in a growing Puget Sound.

2.3.2 Multicounty Planning Polices Supporting UGAs

The Puget Sound Regional Council’s VISION 2050 draft plan²² provides recommendations to focus regional growth inside of urban growth boundaries through their list of Development Pattern Policies recommended by PSRC’s Growth Management Policy Board. These recommendations are aligned with and echo the three IS actions, particularly reducing barriers to infill and redevelopment in UGAs.

Recommendations from the VISION 2050 draft plan include:

- Avoid new development, particularly fully contained communities, outside of UGAs because of their potential to create sprawl and undermine state and regional growth management goals.

²² <https://www.psrc.org/vision>. The VISION 2050 plan was approved by the GMPB Executive Board on January 16, 2020 and is expected to be finalized fall 2020.

- Use environmentally sensitive land use management and development practices (particularly in rural lands) to improve ecological functions
- Use existing and new tools and strategies to address vested development to ensure that future growth meets existing permitting and development standards and prevents further fragmentation of rural lands.
- Protect and enhance significant open spaces, natural resources, and critical areas.
- Employ programs like transfer/purchase of development rights and conservation programs to conserve valuable rural and resource lands. Focus growth within UGAs to lessen pressures to convert rural and resource areas to residential uses.

PSRC additionally works with more than 80 members including counties, cities, tribes, ports, resource agencies like WSDOT, and tribes to implement the [Regional Open Space Conservation Plan](#) (PSRC 2018).²³ The B-IBI Base Program Analysis (Kinney 2020) details this plan from a watershed planning perspective.²⁴ [Section 6.4](#) of this document details the Open Space Conservation Plan from a Land Development and Cover Implementation Strategy perspective.

2.4. Protections for Critical Areas and Natural Resource Lands

GMA requires all of Washington’s municipalities to designate critical environmental areas natural resource lands then adopt development regulations to protect them. Natural resource lands are agricultural lands, forestlands, and mining resource lands that have long-term commercial significance and were not already characterized by urban growth at the time of original designation of the passage of GMA in 1991, per [RCW 36.70A.170](#). Development regulations must prevent conversion to a use that removes land from resource production, per [WAC 365-196-815](#). Counties and cities must (1) include the best available science in developing policies and development regulations to protect functions and values of critical areas, and (2) give special consideration to conservation and protection measures necessary to preserve or enhance anadromous fisheries.²⁵

According to the Puget Sound Regional Council’s Open Space Plan, the level of protection provided by development regulations like the above and the degree to which they are enforced varies by jurisdiction depending on individual jurisdictions’ regulations and enforcement abilities. The GMA specifies that jurisdictions "may protect critical areas in different ways" ([WAC 365-196-830\(4\)](#)). According to Kinney et al. (2015), there is a wide range of factors influencing implementation of local programs, including jurisdiction size, extent of political interference, and available resources (e.g., financial; data availability and data management systems; number of staff and their experience level). Capacity to plan effectively and enforce regulations may also vary significantly at the local scale. Additionally, not all agricultural and forest parcels are designated as natural resource lands which may allow residential development in those parcels.

²³ <https://www.psrc.org/about/psrc-members>

²⁴ Link forthcoming upon publication.

²⁵ Kinney 2020

2.5 Buildable Lands Analysis and Land Capacity Analysis

King, Kitsap, Pierce, Snohomish, Thurston, and Whatcom counties are required to submit a Buildable Lands Report every eight years per [RCW 36.70A.215](#).²⁶ This reporting requirement, also known as the Review and Evaluation Program, involves conducting analyses to compare previous growth/development targets with actual densities achieved to determine how the current comprehensive plan is functioning.²⁷ The Review and Evaluation Program was established in 1997, updated in 2017 through the passage of [SB 5254](#) by the Legislature, with program guidelines updated by Commerce in 2018.²⁸

Land capacity analyses are required for all jurisdictions that plan under GMA. Comprehensive plans must include areas and densities sufficient to accommodate growth projected to occur for the succeeding 20-year period. The land capacity analysis is used to demonstrate that this requirement is met.²⁹ It is typically completed as an early step of the periodic comprehensive plan update. Commerce notes that land capacity analysis is often confused with buildable land reporting requirements and explains that the land capacity analysis is entirely forward-looking while the buildable lands analysis looks at past performance as well. The buildable land jurisdictions sometimes combine the data collection and analysis portion for these two different requirements even though the planning horizons differ (Kinney 2020).

The *buildable lands analysis* entails identifying lands suitable for development or redevelopment. Suitable land is all vacant, partially-utilized, and under-utilized parcels that are designated for commercial, industrial, or residential uses; not intended for public use; and not constrained by regulations that prevent development from occurring. The next step is determining if urban densities targeted in the previous comprehensive plan are being achieved. If target densities are not being met, jurisdictions must identify measures to achieve them.

Buildable Lands Reports must be completed no later than two (King, Pierce, Snohomish) or three (Kitsap, Thurston, Whatcom) years prior to the deadline for review and update of comprehensive plans. The next buildable lands reporting period occurs in 2021-2022. Commerce has produced a [Growth Management Periodic Update Schedule](#) that visually represents the timeline for county updates.

²⁶ [RCW 36.70A.215](#)

²⁷ <https://www.commerce.wa.gov/serving-communities/growth-management/growth-management-topics/buildable-lands/>

²⁸ <https://deptofcommerce.box.com/shared/static/3admh8ew6olyoqh48js4v6fs4lzcu664.pdf>

²⁹ [RCW 36.70A.110\(2\)](#) and [WAC 365-196-325](#)

Timeline for Counties Required to Complete a Buildable Lands Report

County	Year		
King		2022	2024
Pierce		2022	2024
Snohomish		2022	2024
Kitsap	2021		2024
Thurston	2021		2025
Whatcom	2021		2025

Buildable Lands Report (Every 8 years)	Periodic Review of Comprehensive Plan (Every 8 years)
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According to representatives from Commerce, these analyses provide a discrete point of entry to incorporate recovery into the comprehensive planning process (Andrade and Smith 2019). The first step to identifying land suitable for accommodating growth is to exclude designated critical areas and their buffers, open space, and public roads. This step provides an opportunity to integrate high-priority watershed protection and restoration targets into local land use planning. Removing these key parcels (through regulatory planning or incentive programs) from inventories of areas slated to accommodate growth could help to safeguard them from development pressure according (Andrade and Smith 2019).

3. Federal and State Financial/Cost-Share and Technical Assistance Programs

Preventing conversion of working lands, protecting ecologically important areas, and encouraging growth in UGAs are the key components of the Land Development and Cover Implementation Strategy. According to a 2012 American Farmland Trust report, *Losing Ground*³⁰, “in 1950, the Puget Sound region had nearly 1.4 million acres of farmland. By 2007 less than 600,000 acres remained, a 58 percent loss. The average annual loss over this period has been nearly 14,000 acres of farmland per year. Pierce, King, Snohomish, and Whatcom each lost more than 100,000 acres of farmland between 1950 and 2007, accounting for more than half the farmland loss in the region”. Of those 600,000 acres, only approximately 30,000 acres were protected by conservation easements. According to the Snohomish County Agricultural Resilience Plan, for example, between 2012 and 2017 Snohomish County lost 7,192 acres of farmland from its 2012 high of over 70,000 acres.

Updated national information on the threats to agricultural land was released by American Farmland Trust in their May 2020 report, *Farms Under Threat*³¹. According to their research, in

³⁰ [Losing Ground: Farmland Protection in the Puget Sound Region \(2012\)](#)

³¹ <https://farmlandinfo.org/publications/farms-under-threat-the-state-of-the-states/>

2016 (the last time year was available), Washington had 15,398,200 acres of agricultural land, which is 36% of the state land area.

According to research released from American Farmland Trust, from 2001 to 2016:

- 97,800 acres of Washington's agricultural land was developed or compromised
 - 50,100 acres of conversion was to urban and highly developed land use, including commercial, industrial, and moderate-to-high-density residential areas
 - 47,800 acres of conversion was to low-density residential and use, where scattered large lot development fragments the agricultural land base and limits production, marketing, and management options for the working farms and ranches that remain)

As a technical memorandum to Pierce County's 2016 report *A Fresh Look at Pierce County Agriculture*³², Globalwise, Inc. identified many factors that influence conversion from agriculture land in Pierce County and Puget Sound-wide. With approximately 49,000 acres in agricultural use and over 4,200 parcels in Pierce (as of 2016), and a growing urban sprawl that encompasses Tacoma and its environs, the threat of conversion from agriculture to other uses is affected by:

- Increasing demand for residential land use leading to increased land values.
- Low profit margins for many forms of farming and ranching, particularly small operations and those in ownership transition. According to the USDA, national farm sector profits declined by \$9.8 billion from 2017 to 2018. This represents 13 percent of all profits from farming. Nationwide, production expenses are forecast to increase by \$11.8 billion annually due to increases in costs for fuel, feed, and hired labor.
- Landowner's limited access to capital, credit and lending expertise.
- Government regulations and policies.
- Limited access to local or regional agricultural infrastructure and services.

Participants in the 2018 "Above and Beyond" Land Use Planning workshop³³ emphasized the importance of ensuring the long-term economic sustainability of working lands operations to reduce conversion risk. They additionally identified several factors that need to be considered for a more sophisticated analysis of agricultural viability and resiliency in Puget Sound. These include: addressing continued degradation of the land base, appropriately valuing conservation easements, producer insurance, and heir succession/transition planning (to address heir property issues that can "prevent farmers from accessing loans, grants, and government assistance" or where "a single landowner can force the sale of the property, resulting in unstable land tenure")³⁴.

³² [A Fresh Look at Pierce County Agriculture \(2016\)](#)

³³ Workshops referenced include the [Puget Sound Land-Use Workshop](#) held on 11/6/2019 and the "[Above and Beyond](#)" Land Use Planning Workshop held in 2018, both hosted by the Habitat and Stormwater Strategic Initiatives.

³⁴ <https://www.youngfarmers.org/land-access/land-access-policy/>

The programs detailed below advance Land Development and Cover IS goals, in accordance with local expert input such as the mentioned workshop and discussed literature, because they provide financial and technical assistance to support the *economic viability of working land while incentivizing conservation practices*. The first section provides an overview of conservation easements, the practice of securing land through a non-regulatory approach. The following sections detail different programs, policies, initiatives, and assistance that support the implementation of a variety of conservation tools and techniques to support Puget Sound restoration.

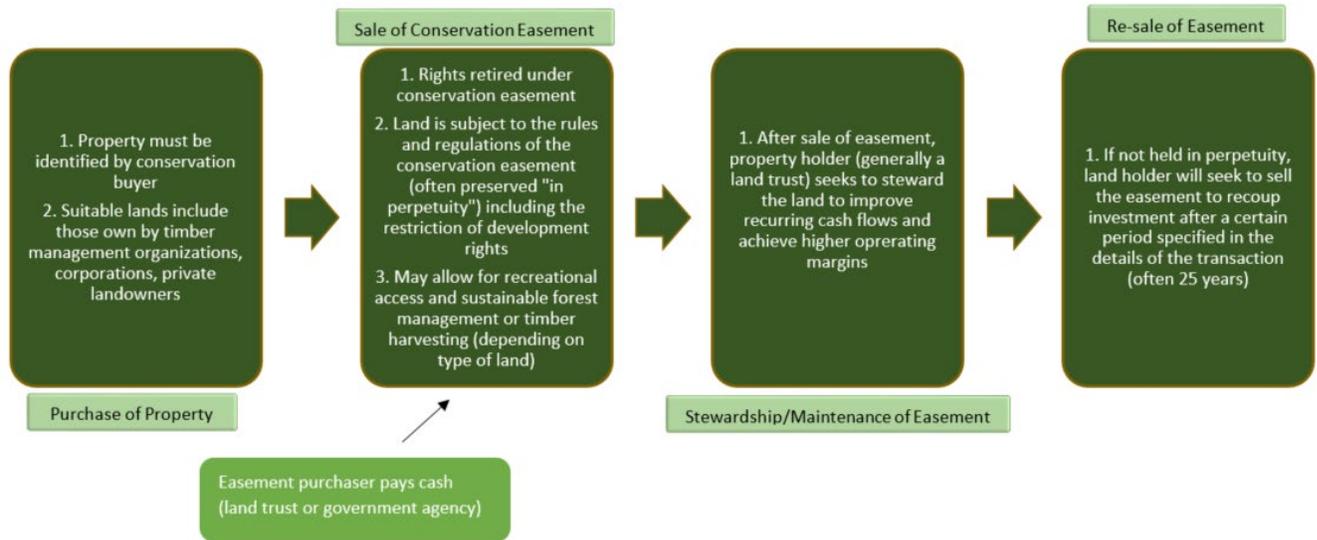
3.1 Conservation Easements

Conservation easements are at the foundation of much of the voluntary conservation efforts in Puget Sound. As a non-regulatory approach for conserving agricultural land, conservation easements directly support all of the Land Development and Cover Implementation Strategy targets as well as complementary approaches to watershed-based planning and maintenance of stream health found in the B-IBI Implementation Strategy. The use of non-regulatory approaches within the context of coordinated acquisition planning is to prevent the conversion of forestry and agricultural areas to more intensive land uses, and to reduce ongoing impacts of working lands on stream health. The B-IBI Base Program Analysis (Kinney 2020, publication forthcoming) describes in detail several approaches to coordinated acquisition planning including some that are described in this document (see: recommendations from the Puget Sound Regional Council’s (PSRC) [Regional Open Space Conservation Plan](#) – section 6.4; King County’s [Land Conservation Initiative](#) – section 6.2).

Financial and technical assistance programs facilitate the placement of conservation easements. Programs as varied as transfer/purchase of development rights (section 4.5), compensatory mitigation programs (section 4.6), the USDA programs and the Recreation and Conservation Office Forestland Preservation Grants (section 3.15) all are used to provide financing for the purchase of conservation easements. The fundamental concepts of conservation easements in Puget Sound have been well documented by regional organizations including Forterra, the Whidbey Camano Land Trust, and in the Land Trust Alliance’s Conservation Easement Handbook, among additional literature.³⁵ It is useful to note that only certain entities certified under federal tax code and state law can execute easement instruments.

³⁵ Several helpful resources on the topic include Puget Sound Institute’s B-IBI BPA (Kinney 2020), the [Final Report from the Advisory Group Process for the NEP Riparian Conservation Program](#) (Canty et al. 2015), the [Land Trust Alliance’s Conservation Easement Handbook](#), [Forterra](#) and the [Whidbey Camano Land Trust](#).

Figure 4. Diagram of a Typical Conservation Easement³⁶



Data and Analysis of Conservation Easements in Washington

Entities that can execute conservation easements in Washington include 26 incorporated land trusts, state or local government agencies (including conservation districts), and federally recognized tribes. Several of the land trusts use easements as their primary method of conservation. For example, Whatcom Land Trust has conservation easements on more than 6,400 acres on 76 properties.³⁷

Washington Farmland Trust (formerly known as PCC Farmland Trust) has conserved 23 farms in Puget Sound — eight are currently owned outright, or "in fee/fee-simple", (a total of 995.9 acres), while 16 farms (a total of 1,506.5 acres) are held through conservation easements.³⁸ Washington Farmland Trust, like most land trusts, holds the development rights to the "eased" land in perpetuity but the land is owned by a private landowner in which the landowner "eases" the land to another entity. A land trust may use a 'buy, protect, sell approach' (for Washington Farmland Trust this is termed "Acquire, Conserve, Transfer") in which the land trust purchases the property, purchases conservation easements on the property (conserving the property) and then sells the property to a qualified buyer (transferring the property) ensuring it stays within agricultural use. However, literature suggests that placing a conservation easement on agricultural land may not make the land value "low enough to be affordable for commercial agriculture use" or affordable for beginning farmers.³⁹

³⁶ This image benefits from the work done by the Conservation Finance Network and their [Conservation Finance Toolkit](#)

³⁷ <http://www.whatcomlandtrust.org/wp-content/uploads/Land-Conservation-Plan-2018-Update.pdf>

³⁸ R. Milholland, personal communication, 2020

³⁹ Schwartz, Steve, Lindsey Lusher Shute, Sophie Ackoff, Eleanor Kane. 2013. *Farmland Conservation 2.0: How Land Trusts Can Protect America's Working Farms*. Tivoli, New York: National Young Farmers Coalition.

Financial, political and economic analysis of conservation easements

Issues around organizational transparency, accountability and potential for tax abuse have been well documented in the usage of conservation easements, alongside advice on how to maximize tax savings from this conservation tool. The potential for abuse of conservation easements may discourage future investors of this conservation tool, integral to the advancement of Land Development and Cover IS goals.

An Urban-Brookings Tax Policy Center⁴⁰ report focuses on the potential of private organizations' tax sheltering practices when using conservation easements — “abuse of the conservation easement deduction reduces tax revenue, raises the appearance of unfairness and inequity in the tax system, hinders conservation goals, and causes a disproportionate amount of IRS enforcement and taxpayer burden.” As landowners and real estate developers donate land to land trusts or other charitable organizations, some are taking advantage, assisted by private organizations, by “donating easements that do little to advance conservation goals”⁴¹ with the GAO claiming that the “IRS has identified taxpayer abuse of conservation easements as a risk area for noncompliance.”⁴²

In 2006, the IRS formally recognized the potential for abuse of easement-related tax provisions with the revision of the [Pension Protection Act](#). The act's language offers guidance on limitations of conservation contributions made by individuals and targets individuals that would “develop the properties in a manner inconsistent with the easement's restriction”. While the IRS has taken an active investigation into the issue, it may have limited power to ensure accountability. In November 2019, however, the IRS issued a press release indicating the “significant increase in enforcement actions for syndicated conservation easement transactions” including investigations “initiated by the IR'S Criminal Investigation division”. The IRS claims that syndicated conservation easements “undermine the public's trust in private land conservation and defraud the government of revenue.”⁴³

The House Ways and Means Committee introduced [H.R. 4459](#), the Charitable Conservation Easement Program Integrity Act of 2017, to amend IRS code to limit “annual tax deduction[s] for qualified conservation contributions”. The bill has been forwarded to Congress, but with no further progress.

Ecological and environmental analysis of conservation easements

A unique ecological challenge for property acquisitions like conservation easements is ‘spatial location’ (Lemieux 2011). ‘Spatial location’ refers to when a conservation easement may be available on a particular piece of land, but there may be another area that has higher ecological uplift potential based on its biodiversity or other ecological attributes. Tradable, or movable, conservation easements allow organizations to change easement locations if a particular

⁴⁰ <https://www.taxpolicycenter.org/publications/charitable-contributions-conservation-easements/full>

⁴¹ *ibid*

⁴² <https://www.gao.gov/assets/710/701198.pdf>

⁴³ <https://www.irs.gov/newsroom/irs-increases-enforcement-action-on-syndicated-conservation-easements>

agreement ends or other factors contribute (such as changing land due to climate change). Tax deductions be “impermissible for donated easements that qualified for a charitable deduction unless the land is still “protected in perpetuity...and all of the donee's proceeds from a subsequent sale or exchange of the property are used by the donee organization in a manner consistent with the conservation purposes of the original contribution.”⁴⁴

To ensure easements provide the most ecological uplift, literature recommends ‘intentionality’ and ‘deliberation’ in choosing easements rather than using easements as a “default” option for conservation (Rissman 2017). Term-terminable easements are another option that allow an easement to be terminated if ecological benefits from a different location supersede the current easement’s benefits as well as endowment easements that if “the agreement ended, the funds [accrued] could be transferred to a new property (Rissman 2017). A Washington Biodiversity Council report⁴⁵ suggests that “it would be useful to have clearer criteria to determine...ways to evaluate benefits to biodiversity [of easements]” based on geographic scope, eligible activities and other ecological uplift factors.

Landowners, partnering and perceptions

Social science literature indicates that landowners agree to conservation easements for a variety of reasons including place attachment with the land, the potential of financial incentives, and “leaving a family legacy”. These types of decision mechanisms have been extensively studied, including by studies specific to Washington State (Canty et al. 2015, Koontz 2011). A study on wetland-specific easements in New York State (Welsh et al. 2018) finds place attachment as the number one reasons why a landowner enrolled in the NRCS’s Wetland Reserve Easement program (see Section 3.3 for details on Wetland Reserve Easement program components in Puget Sound).

A 2015 academic survey of land owners⁴⁶ (Farmer et al. 2015) considers the connection between land ownership, residency, and financial incentives when participating in a conservation easement program. 187 landowners who were participating in a conservation easement program with a land trust in their respective states (Ohio and Michigan) were contacted and surveyed regarding their reasons for adopting an easement. The study found that absentee landowners (those owning a second home, or preserving the land rather than working the land for income) were less likely to require a financial incentive for a conservation easement and more likely to want to preserve the land for “family legacy” (similar to the mention of heir succession/transition planning by “Above and Beyond” workshop participants). For all landowners, economic dependence on the land decreased environmental motives while increasing financial motives.

⁴⁴ <https://www.irs.gov/pub/irs-wd/12-0017.pdf>

⁴⁵ Washington Biodiversity Council’s “Conservation Incentive Programs in Washington State: Trends, Gaps, and Opportunities

⁴⁶ Farmer et al. 2015. Why Agree to a Conservation Easements? Understanding the decision of conservation easement granting. *Landscape and Urban Planning* 138. 11–19

The authors provide several useful recommendations to increase adoption of easements by landowners:

- “When targeting individuals who reside on or adjacent to their property, consideration of nearby and encroaching land development may be a critical discussion point”.
- It may be useful to understand “absentee landowners less constrained by financial barriers” and that “individual’s potential family legacy associated with the property” when discussing easements.
- Creating adaptive marketing to different types of landowners who “possess varying types of land and engage in varying land use activities” is crucial to outreach success.

When engaging with landowners, timeliness of transactions is crucial – particularly with landowners with financial needs tied to the land. According to Forterra, selling or donating land to a land trust requires an organization to “rely on competitive grants and donations to secure funding for the purchase of land at fair market value”.

Washington Farmland Trust adds that conservation funders contribute by providing financial support for the purchase of conservation easements (in addition to any capital contributed by a land trust like Washington Farmland Trust or Forterra) they cannot be successful without federal and state grants or loans. However, according to the organization, “nearly all of the [federal and state] programs require a 50 percent match and have biannual funding rounds” which contributes to “at least two year and easily five to eight years for a project to go from landowner interest to being conserved.” This long time-line presents a challenge for a landowner when presented with the opportunity to sell their land immediately to a developer instead of patiently waiting (sometimes several years) for a conservation easement transaction to materialize.

3.1.2 Option to Purchase at Agricultural Value

An option to strengthen conservation easements by reducing the price of land is the Option to Purchase at Agricultural Value (OPAV). OPAV is a mechanism that gives states “the option to purchase and resell, or assign the sale of, farm property under conservation easement to a qualified farmer at the land’s agricultural use value if it is not being sold to one or transferred to a family member”.⁴⁷ This tool gives the land trust or the holder of an easement the first option to purchase the property at the value assessed specifically for agriculture instead of “non-farming market demand”.⁴⁸

This means the land’s agricultural use value can be assigned for sale to a qualified farmer at a much less expensive price relative to the value of the land for development. Additionally, “state programs to purchase agricultural easements can also use funds to work with farmers to retroactively purchase OPAV provisions on targeted parcels that have already been protected and

⁴⁷ <https://www.youngfarmers.org/land-access/land-access-policy/>

⁴⁸ <https://www.cambridge.org/core/journals/renewable-agriculture-and-food-systems/article/cultivating-opportunity-do-land-transfer-tools-improve-land-access-for-beginning-farmers/F46EC561F6B8D7841BA983EE9CA23323>

are at high risk for sales to non-farmer owners.”⁴⁹ Literature suggests that placing an OPAV on a conservation easement can increase the value per acre as much as 10 to 40 percent.⁵⁰

According to the Vermont Land Trust and literature that has analyzed easements in the Northeast, the Vermont Land Trust (VLT) has 320 OPAV-restricted farms with 32 recent resales of OPAV-restricted farms to farmers. Since 2015, VLT has protected a total of 860 properties with conservation easements.⁵¹ VLT uses a public RFP process to “find and choose the farm buyer” after it has bought the property and “resells the easement and OPAV.”⁵² VLT uses a combination of Vermont Housing and Conservation Board (funded partially by property taxes) and NRCS’s Agricultural Conservation Easement Program funding (detailed in section 3.3), along with local funds to purchase easements and apply OPAV. VLT has only used OPAV in a minority of situations (less than 40 percent of transactions), mostly when “owners have attempted to sell their property at fair market value despite a restriction placed on a property’s sale price.”

Few examples of OPAV outside of Vermont, Massachusetts, and California have been found, but there is potential to adopt OPAV in Washington.⁵³ However, Washington Farmland Trust indicates that OPAV may be difficult to implement in Washington because the Trust received legal advice that “[Washington’s] specific interpretation of the rule against perpetuities would be problematic for using a perpetual OPAV restriction”.⁵⁴ However, the Trust may consider using a similar tool, known as the *right of first refusal* in OPAV’s stead.⁵⁵

Recommendations for successful implementation of conservation easements:

- Ensure transparency and accountability regarding land trusts and conservation easement transactions, in particular to avoid syndicated conservation easement transactions (Rissman 2017)
- Prioritizing the ‘spatial location’ of an easements by intentionally choosing private land that has high ecological uplift. This is not feasible in most cases, however, as it is dependent on land location, landowner preferences, funds availability and partnership/organizational resource capacity (Lemieux et al. 2011). If conserving a property adjacent to a UGA, there is potential a UGA may be authorized to expand and annex the eased land⁵⁶ (currently occurring in King County and the City of Carnation as a Potential Annexation Area)⁵⁷

⁴⁹ <https://www.youngfarmers.org/land-access/land-access-policy/>

⁵⁰ <https://www.cambridge.org/core/journals/renewable-agriculture-and-food-systems/article/cultivating-opportunity-do-land-transfer-tools-improve-land-access-for-beginning-farmers/F46EC561F6B8D7841BA983EE9CA23323>

⁵¹ *ibid*

⁵² *ibid*

<https://www.uvm.edu/farmlasts/conferenceoutline/01LandAccessAndTenure/05Affordability/wyliepresentation.pdf>

⁵³ R. Milholland, personal communication, 2020

⁵⁴ H. Aten, personal communication, 2020

⁵⁵ The right of first refusal is a provision in a real estate lease in which prior to closing on a property’s (in this case, agricultural land) sale a buyer must be determined to be a qualified buyer who would not develop the land. If determined to not be a qualified buyer, the holder of the right may enact the right of first refusal to prevent the sale.

⁵⁶ R. Milholland, personal communication, 2020

⁵⁷ <https://www5.kingcounty.gov/sdc/Metadata.aspx?Layer=paa>

- When engaging with and conducting outreach to landowners, consideration of landowners’ decision mechanisms, particularly regarding financial, family, sense of place and absentee status will improve potential to secure conservation easement transactions (Canty et al, Washington Farmland Trust, Forterra)
- Timeliness is a top priority for both land trusts and landowners – and is hampered by bureaucracy (Washington Farmland Trust, Forterra)
- Encourage alternative appraisal techniques for conservation easements. “Highest and best use” valuations based on federal appraisal standards result in prices too high for conservation programs, as an example, counties’ [Current Use](#) taxation programs assess property values based on a number of alternative criteria (Kinney 2020)
- Consider a feasibility assessment of the Option to Purchase at Agricultural Value mechanism and/or *right of first refusal*

3.2 Natural Resources Conservation Service Programs Overview

The United State Department of Agriculture’s Natural Resource Conservation Service (NRCS) provides financial and technical assistance to landowners, groups, organizations, tribes, and local and state government through voluntary conservation programs for the purpose of conserving and managing soil, water, and natural resources.⁵⁸

The NRCS programs, detailed below in sections 3.3 to 3.9, are the majority of federal cost-share programs available to agricultural and forest landowners to maintain the economic viability of their production while implementing conservation practices. These federal programs support the protection and restoration of ecologically important lands (under private and public ownership) as well as support working lands, two of the goals integral to the success of the Land Development and Cover IS.

The NRCS was created as the Soil Conservation Service and in 1994 changed its name to the National Resource Conservation Service to reflect the breadth of the organization’s activities. NRCS is organized regionally, with the Puget Sound office assisting the King, Mason, Pierce and Kitsap counties. NRCS implements several programs in the conservation component of the Agricultural Improvement Act of 2018 and 2014 (also known as the 2014 and 2018 Farm Bills). The NRCS administers conservation programs including the Environmental Quality Incentives Program, Agricultural Conservation Easement Program, Regional Conservation Partnership Program, Conservation Stewardship Program, the Conservation Innovation Grant Program (a sub-program of EQIP), the Healthy Forests Reserve Program (a sub-program of RCPP) and provides Conservation Technical Assistance (CTA).

⁵⁸ [Landscape 2020](#).

In 2018 NRCS received \$5.2 billion in funding, which decreased to \$4.953 billion in 2020⁵⁹. Overall spending for USDA conservation programs is projected to decrease slightly from 2020 through 2023.

Figure 5. Annual Spending for Major USDA Conservation Programs 1996 to 2023

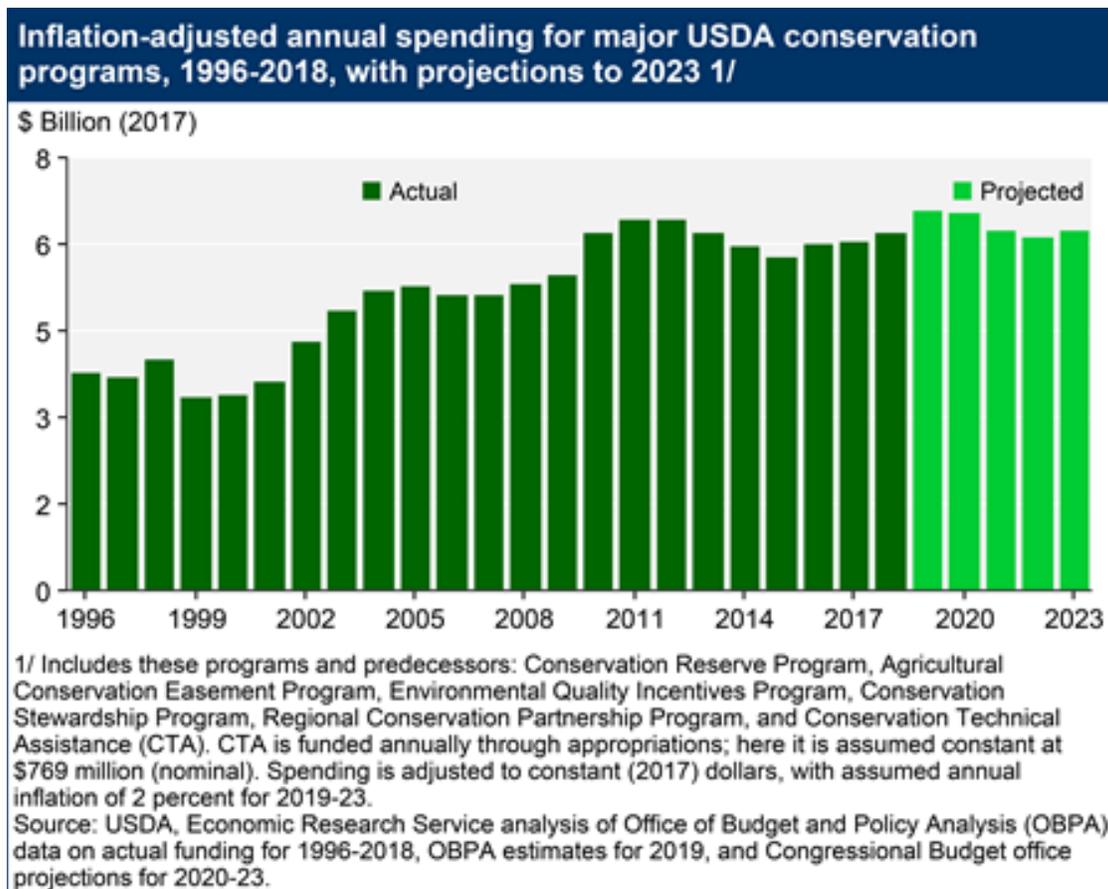
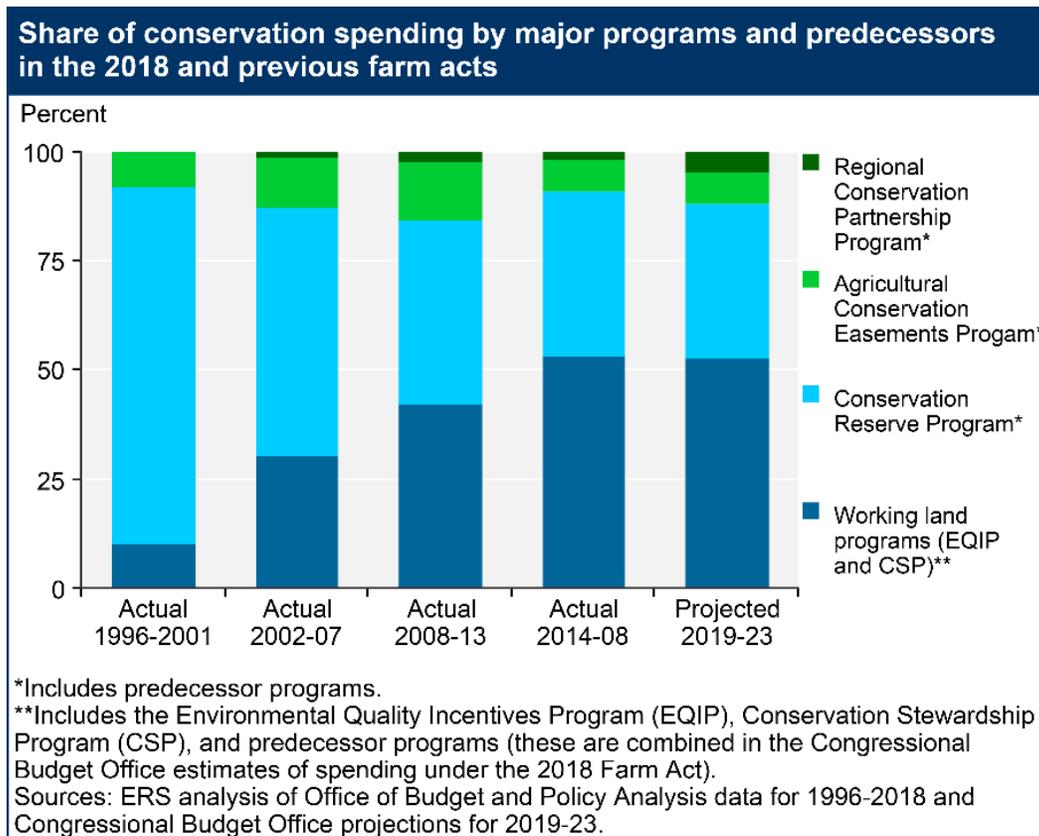


Figure 6 indicates the portion of funding each program has historically been allotted and is projected to receive through 2023. According to the USDA’s Economic Research Service, the “Conservation Reserve Program (CRP) funding is projected to decline slightly (a total of \$189 million) over fiscal year 2019 to fiscal year 2023. Funding will increase for the Agricultural Conservation Easements Program (from \$250 million to \$450 million annually) and the Regional Conservation Partnership Program (\$100 million to \$300 million annually).”⁶⁰ Each program is described in further detail in the sub-sections below.

⁵⁹ <https://www.usda.gov/our-agency/about-usda/budget>

⁶⁰ <https://www.ers.usda.gov/publications/pub-details/?pubid=93025>

Figure 6. Allocation of Spending By Major USDA Conservation Program⁶¹



3.3 Agricultural Conservation Easements Program

Through the Agricultural Conservation Easements Program (ACEP), USDA’s NRCS purchases conservation easements from interested landowners, land trusts, tribes, and non-governmental organizations to protect working agricultural lands and restore, protect and enhance wetlands.⁶² It was authorized by the [2014 Farm Bill](#).

ACEP offers two distinct program options, Wetland Reserve Easements (WRE) and Agricultural Land Easements (ALE). The two program components formally consolidate three separate programs: the Wetlands Reserve Program, the Grasslands Reserve Program and the Farm and Ranch Lands Protection Program.

Wetland Reserve Easements (WRE) help entities restore, protect, and enhance wetlands through the purchase of a wetland reserve easement. According to NRCS, “land eligible for wetland reserve easements includes farmed or converted wetland that can be successfully and cost-

⁶¹ <https://www.ers.usda.gov/webdocs/charts/60997/2018farmactspending.png?v=127.6>

⁶² <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/>

effectively restored. NRCS will prioritize applications based the easement’s potential for protecting and enhancing habitat for migratory birds and other wildlife. WRE types include:

Permanent Easements	Permanent easements are conservation easements in perpetuity. NRCS pays 100 percent of the easement value for the purchase of the easement. Additionally, NRCS pays between 75 to 100 percent of the restoration costs.
30-year Easements	30-year easements expire after 30 years. Under 30-year easements, NRCS pays 50 to 75 percent of the easement value for the purchase of the easement. Additionally, NRCS pays between 50 to 75 percent of the restoration costs.
Term Easements	Term easements are easements that are for the maximum duration allowed under applicable State laws. NRCS pays 50 to 75 percent of the easement value for the purchase of the term easement. Additionally, NRCS pays between 50 to 75 percent of the restoration costs.
30-year Contracts	30-year contracts are only available to enroll acreage owned by Indian tribes, and program payment rates are commensurate with 30-year easements.

Agricultural Land Easements (ALE) help entities purchase easements on agricultural land including grassland, rangeland and pasture/shrub-land. For ALE participants, NRCS enters into an agreement with a cooperating entity, such as a land trust, which monitors the easement in perpetuity. As the easements are voluntary, an interested party comprised of a land trust and a landowner partner must submit an application to NRCS for consideration. For the purchase of the easement NRCS may contribute up to 50 percent of fair market value with the applying land trust paying 50 percent. Where NRCS determines that grasslands of special environmental significance will be protected, NRCS may contribute up to 75 percent of the fair market value of the agricultural land easement.

Prioritization of projects in WRE is determined by criteria such as habitat quality (including presence of endangered species) and existence of riparian areas including eligible degraded or ecologically significant wetlands, among other criteria. Projects are prioritized in an ongoing basis but dependent on funding levels.⁶³ Preference for ALE is given to land that “protects agricultural uses and related conservation values that maximize protection of contiguous acres devoted to agricultural use”.⁶⁴ Although landowners voluntarily enter into an agreement with

⁶³ J. Williams, personal communication, August 2020

⁶⁴ <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/>

NRCS for WRE, NRCS is actively “looking for parcels that were historically converted into agricultural land, [previously] drained or somehow altered.”⁶⁵

Analysis

ACEP’s portion of total NRCS program funding amounts were 7.8 percent from 1996 to 2001, growing to a high of 13.7 percent of the total portion of funding through 2013 and shrinking to a 7.3 percent portion of the projected budget from 2019 to 2023. Nationally the ACEP budget is projected to increase from \$250 million to \$450 million annually from fiscal year 2019 to fiscal year 2023.⁶⁶ From 2014 to 2019, 24 easements were placed in Washington State and 12,789 acres were enrolled. Of these, 12,281 acres were agricultural land and 508 were wetlands.⁶⁷

Following the authorization of ACEP with the 2014 Farm Bill, in 2015 an interim rule was published⁶⁸, public comments were accepted and a final rule was effective by October 2016. The 2018 Farm Bill instituted several changes to ACEP and the USDA accepted new comments on the interim final rule beginning in 2019 with comments extending through 2020. In March 2020, Washington Farmland Trust published public comments to the USDA acting as a project sponsoring entity along with project partners the Land Trust Alliance, American Farmland Trust, and the National Young Farmers Coalition. Relevant comments and associated challenges from the Washington Farmland Trust and their partners to the NRCS include:

- 1) **Challenges associated with the eligibility determination, income, and enrollment process** – “The various procedural changes and policy additions...have made the enrollment process highly cumbersome, overly lengthy, and created significant barriers for participation in NRCS programs by underserved and socially disadvantaged farmers and landowners”. These changes lead to high attrition rates with application withdrawals. Washington Farmland Trust recommends eliminating “duplicitous process[es] and required documentation between the Farm Service Agency and NRCS”, and that “automated certification of [income] eligibility should be developed with the IRS”⁶⁹ to expedite the process.
- 2) **Lack of agency staffing and administration resulting in funding at risk** – A “lack of staff capacity to administer ALE, ACEP, and RCPP programs in Washington State has created a serious backlog of projects...leaving landowners who were awarded funding in the lurch and failing to deliver protection of some of our region’s most threatened, productive prime farmlands.” According to the National Association of Conservation Districts, “data included in the President’s 2019 Budget Request indicated that NRCS will have almost 2,000 less permanent positions in FY 2019 versus FY 2017, and these staffing restraints are compounded by a 61 percent increase in attrition at NRCS between the first quarters of FY 2017 and FY 2018...leaving programs in a persistent and critically understaffed state.” The Washington Farmland Trust also shares that, given the

⁶⁵ A. Hendershot, personal communication, February 2020

⁶⁶ <https://www.ers.usda.gov/topics/natural-resources-environment/conservation-programs/>

⁶⁷ https://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/srpt_cp_acep.html#contracts

⁶⁸ <https://www.federalregister.gov/documents/2016/10/18/2016-24504/agricultural-conservation-easement-program>

⁶⁹ Washington Farmland Trust, Annual Campaign Letter.

“current capacity constraints at the Washington state office, Washington has \$18 million dollars of federal ACEP funding at risk, which is matched by an additional \$18 million of local and state dollars, which are now also at risk.”⁷⁰ As of October 2020 the SCC is hiring an ACEP Project Liaison, hosted by the Skagit Conservation District, to interface with NRCS to support ACEP customers.⁷¹

3.4 Environmental Quality Incentives Program

Through the Environmental Quality Incentives Program (EQIP), USDA’s NRCS provides financial and technical assistance incentives to plan and implement voluntary conservation practices. Conservation practices include water, soil, air quality improvement, enhancing wildlife habitat, improving the resiliency and productivity of agricultural lands, treating “natural resource concerns” and helping producers in meeting sustainability measures.⁷² Nationally, the EQIP budget in 2019 was \$1.75 billion. Based on the 2018 Farm Bill, EQIP is projected to increase to \$2.025 billion by fiscal year 2023⁷³. In 2019, Washington State had a \$15 million EQIP budget with the Puget Sound region apportioned \$1.5 million.

EQIP is a cost-share program that covers 75 to 90 percent of the costs associated with implementing conservation measures. The rates of allocation/distribution are established by NRCS economists based on cost of labor, supplies (cost of equipment, for example) and other economic factors to implement the practices required by EQIP.

Eligible landowners include agricultural producers, nonindustrial private forestland (NIPF) owners and tribes. Eligible land includes cropland, rangeland, pastureland, nonindustrial private forestland and other farm or ranch lands.⁷⁴ EQIP applicants can receive technical assistance services, covered by NRCS, for on-site assessments, site-specific management plans, engineering assistance for designs including irrigation upgrades, practices to upgrade manure management, irrigation, forest management, erosion control/buffers, planting, etc. Certain groups of landowners (termed historically underserved producers) may qualify for additional assistance (up to 90 percent) including increased payment rate and opportunity to receive advance payment of up to 50 percent for the purchase of qualifying materials and services needed. Historically underserved producers include:

- Socially disadvantaged farmers (of or belonging to racial or ethnic groups that have been prejudiced against as according to the 2008 Farm Bill⁷⁵ and further clarified in the 2018 Farm Bill⁷⁶)

⁷⁰ R. Milholland, personal communication, 2020

⁷¹ <https://www.wadistricts.org/2020/10/07/skagit-cd-seeks-acep-liaison-project-position>

⁷² A. Hendershoot, personal communication, 2020

⁷³ <https://www.nacdnet.org/2019/01/08/2018-farm-bill-breakdown-eqip/>

⁷⁴ <https://www.nnrg.org/resources/eqip/>

⁷⁵ http://www.nrcs.usda.gov/programs/farmbill/2008/pdfs/SDRBF_At_A_Glance_062608final.pdf

⁷⁶ <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/people/outreach/slbfr/>

- Beginning and limited resource farmers (landowners with less than 10 years of experience)
- Indian tribes and veterans (who are beginning farmers)

NRCS offers a ‘limited resource farmer/rancher’ tool to determine qualification status based on income and region.⁷⁷

EQIP has several sub-programs with different criteria. These include:

- Seasonal high tunnel initiative⁷⁸ – Improves crop health, irrigation efficiency
- Energy initiative – Assists agricultural producers to conserve energy on their farm through an energy audit and assistance in implemented recommended measures
- [Organic Initiative](#) – Special EQIP funding is available to organic growers and those transitioning to organic production
- Conservation Activity Plans – Covers up to 75 percent (90 percent for historically underserved producers) to develop an overall conservation plan including nutrient management plans with the assistance of a Technical Service Provider (groups or individuals outside of NRCS that assist producers to apply conservation practices such as private forestry consultants like the Northwest Natural Resources Group⁷⁹)
- National Water Quality Initiative – Assists producers in implementing conservation and management practices through a systems approach to control and trap nutrient and manure runoff
- Olympia Oyster Habitat Restoration – Pays eligible producers to assist in restoring Olympia oysters
- [Salmon Recovery Funds](#) – Assists producers with financial assistance to develop “outcome-oriented conservation projects that will lead to improvements in salmon habitat”
- [Sage Grouse Initiative \(SGI\)](#) – Assists with developing “specific conservation practices to reduce threats to sage-grouse

The Puget Sound EQIP local working group, one of three state-wide working groups, meets annually to “discuss natural resource issues, opportunities, and priorities” and provide recommendations to help develop local NRCS conservation programs. The Puget Sound working group covers the same counties as the NRCS Puget Sound regional office: Thurston, Kitsap, Mason, Pierce, and King.⁸⁰ The local working group competitively ranks applications according to national, state and local priorities to “achieve the greatest conservation benefits in coordination with EQIP statutory priorities” (established by the NRCS National Office and

⁷⁷ <https://lrftool.sc.egov.usda.gov/DeterminationTool.aspx?fyYear=2020>

⁷⁸ High tunnels are simple, plastic-covered, passive-solar-heated structures in which crops are grown in the ground. High tunnels create favorable conditions to extend the growing season and may provide environmental)

⁷⁹ <https://www.nnrg.org/resources/eqip/>

⁸⁰ <https://www.nnrg.org/resources/eqip/>

incorporated in individual state priorities).⁸¹ Funding is distributed to Washington’s 10 local groups and one tribal work group.

Analysis

A 2017 EQIP analysis conducted by the Government Accountability Office⁸² recommends several components of the program that need improvement. First, the GAO analysis found that funds allocated for EQIP were not based primarily on environmental concerns but instead “influenced primarily by historical funding amounts” because “data on environmental concerns was not readily available”⁸³. To address this GAO recommends that “data...should be a primary factor influencing allocations within states”. Furthermore, the GAO recommends that EQIP program managers should:

- “Coordinate with Conservation Effects Assessment Project (an assessment of the effectiveness of EQIP programs) leaders to ensure that Conservation Effects Assessment Project studies consider the “practical limitations and trade-offs” faced by EQIP program managers and to assist in better optimization of EQIP fund targets for the most ecological benefit
- Establish a review process at the “regional level for review of EQIP payment rates above a [certain pay-out] threshold” leading to increased efficiency of fund distribution
- Modify [applicant] ranking and guidance so they “more accurately value an applicants’ anticipated environmental benefits”

A 2019 internal study conducted by the USDA’s Economic Research Service examined why EQIP participants dropped certain conservation practices over time.⁸⁴ Analyzing data from EQIP participants in 2010, the study found that participants often substituted practices with higher on-farm benefits (such as conservation tillage and terracing) for practices with lower on-farm benefits (such as installation of riparian buffers and filter strips, costly steel irrigation pipes or practices that have more benefit off-farm such as nutrient management), effectively dropping the lower practices. Additionally, practices scheduled in the “later years of a contract (in year three or later)” were more likely to be dropped than practices implemented in the first two years.⁸⁵ Overall, about 14 percent of all practices are dropped, the study found.

A 2019 report⁸⁶ from the University of Connecticut assessed the influence of EQIP payments in improving the water quality of streams and watersheds nearby to EQIP fund recipients. Existing studies have examined whether conservation programs have an impact on water quality,

⁸¹ <https://www.federalregister.gov/documents/2019/12/17/2019-26872/environmental-quality-incentives-program>

⁸² <https://www.gao.gov/products/gao-17-225#summary>

⁸³ <https://www.gao.gov/products/gao-17-225#summary>

⁸⁴ Wallander, Steven, Roger Claassen, Alexandra Hill, and Jacob Fooks. Working Lands Conservation Contract Modifications: Patterns in Dropped Practices, ERR-262, U.S. Department of Agriculture, Economic Research Service, March 2019.

⁸⁵ *ibid*

⁸⁶ https://www.dropbox.com/s/16g9rygazhmv7ak/EQIP_WQ_10032019.pdf?dl=0

including studies conducted by the USDA Conservation Effects Assessment Project using the Soil and Water Assessment Tool, a watershed-scale simulation model.

The University of Connecticut report used field-level and watershed-scale studies to conduct an econometric analysis. The report analyzed water pollution incorporating the “geospatial relationship in the river/stream network...and the direction of the river/stream flow”. Results indicated that “EQIP payments significantly reduces biochemical oxygen demand, dissolved oxygen deficit and nitrogen...but increases total suspended solids and phosphorous and fecal coliform”. Overall, the study found that a “10 percent increase in EQIP payment reduces biochemical oxygen demand by approximately 0.009 mg/L and nitrogen by 0.004 mg/L, representing 0.26 percent and 0.29 percent reductions of the sample means, respectively, but increases total suspended solids by 0.026 mg/L and fecal coliform by 1.12 CFU/100ml, representing 0.10 percent and 0.33 percent increases of the sample means, respectively.” The authors acknowledge several limitations to this study including the challenge of spatially linking conservation measures and local measures of environmental quality and that EQIP payments are “not randomly distributed across watersheds” so determining overall watershed effects is challenging. The increase in certain types of run-off is associated with various types of agricultural processes but further studies are recommended, the study suggests.

A 2015 study (Boyer et al.) of agricultural landowners, specifically cotton producers in the Southern United States, analyzed the correlation between adoption of best management practices (BMPs) for nutrient management and awareness of and participation in cost-share programs like EQIP and the Conservation Stewardship Program (CSP). The study found that producers’ “participation in EQIP or CSP was positively correlated with the total acres farmed, net household income, and the state where the farm was located.” The study found a negative correlation between adoption of and participation in cost-share programs and age – suggesting that older producers are “less likely to be aware of these opportunities [like NRCS programs]”. The study found no correlation between improved nutrient management BMPs and participation.⁸⁷

3.5 Conservation Stewardship Program

Established in 2002 as the Conservation Security Program, the Conservation Stewardship Program (CSP) has enrolled more than 70 million acres since 2010 and will provide \$750 million in federal financial assistance in fiscal year 2020. CSP eligibility is determined by local NRCS office based on use of the NRCS’ screening tool to address priority conservation needs and producer maximum income requirements. Each state determines its own geographic priority areas, targeted concerns and list of eligible enhancements. Puget Sound is listed as the number one priority area across Washington.

⁸⁷ Based on Boyer et al. study’s survey results of over 1300 landowners, the study could not conclude a correlation between awareness of and participation in a cost-share program like EQIP and adoption of BMPs in nutrient management. However, the study did find a positive correlation between total acres farmed (e.g. farm size) and adoption of BMPS in nutrient management and awareness of and participation in nutrient BMP cost-share program (like those supported by EQIP funds) suggesting that as farm size increases a producer is more likely to look for EQIP funds – and outreach efforts should be producers with larger farms. The study also found, unlike a similar study conducted by Obubafo et al. (2008) that participation was more likely in an EQIP program with household incomes higher than \$150,000.

CSP offers competitive financial assistance for activities like:

- Adoption of cover crops to improve soil health
- Riparian enhancement for improvements in water quality and quantity
- Advanced grazing management
- Development of comprehensive conservation plans
- Support for and transition to organic production

Recipients of the CSP funds are “already farming at a high level of stewardship” and “have to agree to adopt a higher level of stewardship, for example, if already cover cropping, then must adopt particular species into their cover crop.”⁸⁸ CSP participants are often producers who have addressed “most or all of their resource concerns (usually thru EQIP funding) at a certain level” who can then “then apply for CSP to assist with maintaining or enhancing those practices.”⁸⁹

A minimum contract payment of \$1,500 annually is provided to landowners to implement management activities over contract durations of five years. Producers enter contracts for five years. Payment amounts are determined “up-front” and identified in the signed contract. At the end of the contract and if the producer has met the contract requirements they may be eligible to renew for an additional five years based on ranking addressing additional priority resource concerns. According to NRCS, participants who have met the terms of their initial contract and who agree to implement more conservation activities will be ranked and may compete for a renewal contract. To meet the renewal stewardship threshold, a participant must agree to meet or exceed two additional priority resource concerns or agree to adopt or improve conservation activities to achieve higher levels of conservation on two existing priority resource concerns.⁹⁰

For working lands including NIPF and agricultural land, CSP offers continuous sign-ups. Participation in CSP requires producers to be in “compliance with highly erodible land (HEL) and wetland conservation (WC) requirements.”⁹¹ In Puget Sound currently (as of March 2020), there are ten CSP recipients in the NRCS-serving five-county area receiving from \$4,500 to \$22,000 in pay-outs annually.⁹²

Analysis

⁸⁸ A. Hendershot, personal communication, February 2020.

⁸⁹ J. Williams, personal communication. August 2020.

⁹⁰ J. Williams, personal communication. August 2020.

⁹¹ Highly erodible land and wetland conservation requirements are provisions for eligibility in any USDA programs, unless exempted. Compliance is required for programs administered by the Farm Service Agency (FSA) and the Risk Management Agency (RMA). Eligibility is determined by NRCS and the FSA and FSA maintains the records of the land determinations. Producers not in compliance are ineligible for NRCS programs. Additional information can be found in the NRCS [interim rule](#).

⁹² A. Hendershot. Personal communication, February 2020.

In a 2018 study conducted by the Center for Rural Affairs, 829 landowners (farmers and ranchers) were surveyed regarding their satisfaction with CSP⁹³. Across five states in the Great Plains, 88 percent of respondents stated that they would renew their CSP contracts and, on average, 45 percent of respondents indicated that they “would like to renew at least one CSP contract for an additional five years”. 88 percent of respondents (730 of 829 total) indicated that CSP should be “supported as a priority in the next Farm Bill”. The survey did not assess the effectiveness or implementation status of CSP recipients’ activities in terms of ecological benefit.

A 2018 study conducted by the Union of Concern Scientists estimated that for every \$1 dollar of taxpayer money “invested into CSP” there was a return on the investment of \$3.95. Elimination of the program (a possibility prior to the 2018 Farm Bill) would have cost taxpayers nearly \$4.7 billion annually in 2018 adjusted dollars. Similar studies found that programs like EQIP and the Conservation Reserve Program generate \$1 and \$2.19 in return-on-investment, respectively⁹⁴. Value to the taxpayer was determined by a methodology that included using independent research and the NRCS’s net present value analyses of air, water and soil quality improvements, improvements to wildlife habitat, decreases in fertilizer and energy use and reduced erosion through conservation practices.⁹⁵

3.6 Regional Conservation Partnership Program

The NRCS’s Regional Conservation Partnership Program (RCPP) was authorized by the 2014 Farm Bill and funds several program components throughout the country. Through RCPP, NRCS partners with state and local agencies and non-governmental organizations to provide financial and technical assistance to landowners to “design and implement conservation solutions”.⁹⁶

Unlike other NRCS programs, landowners do not apply directly to NRCS for funding for projects, but NRCS selects proposals from partner organizations like land trusts, conservation commissions and other entities. According to Washington Farmland Trust, RCPP is a unique program because it “offers a more coordinated approach with different partners” and offers “more security than programs like ACEP because ACEP requires competition between different projects [to determine what projects are awarded funding]”. RCPP “incentivizes partnerships” and is very “effective in [determining] the ranking process for projects.”⁹⁷ In Washington, the Puget Sound RCPP is a partnership with the NRCS and the Washington State Conservation Commission (SCC) with a goal of making coordinated investments that fund conservation practices within specific watersheds in Puget Sound, like the Puyallup River watershed (see

⁹³ <https://cfra.org/sites/default/files/publications/Apercent20Farmerspercent20Viewpercent20Apercent20lookpercent20atpercent20thepercent20Conservationpercent20Stewardshippercent20Program.pdf>

⁹⁴ Sewell, J. 2014. Return on Investment from Conservation Programs and Best Management Practices. Taxpayers for Common Sense. Online at <https://www.taxpayer.net/agriculture/return-on-investment-from-conservation-programs-and-best-management-practic/>

⁹⁵ https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_007977.pdf

⁹⁶ <https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/financial/rcpp/?cid=nrcseprd1459034>

⁹⁷ R. Milholland, personal communication, 2020

details in table below). Landowners within a specific watershed can request cost-share assistance to complete customized best management practices (BMPs) for improving water quality and salmon habitat.

Funding

Nationally, of the total funding allocated to conservation programs by the USDA from 1996 to 2023, RCPP’s portion increased from 0 percent through 2001 to 1.7 percent through 2007 to 4.7 percent in 2019 projected through 2023. RCPP was allocated \$100 million fiscal year 2019 which is projected to increase to \$300 million annually by fiscal year 2023, as authorized through the 2018 Farm Bill. Before the 2018 Farm Bill, RCPP was funded with a mixed of “dedicated funding and a percentage of funds from donor programs (like EQIP, ACEP and CSP)”⁹⁸ Through the 2018 Farm Bill, NRCS now operates RCPP as an independent program with its own designated funding.⁹⁹

The Puget Sound region, through the SCC, was given \$9 million in RCPP funding over a period of five years beginning in 2015. That funding enables SCC to make “coordinated investments that fund several conservation practices within a specific watershed or portion of a watershed.”¹⁰⁰ Through SCC and project partners, in-kind matching contributions can be made between when a project is selected and when a “formal partnership agreement is signed with NRCS” which allows money to be promised to landowners immediately upon project selection rather than waiting for a project to start or be under-way.

NRCS requires that applicants apply to one of three types of RCPP funding: national, state funding pool or a Critical Conservation Area funding pool. In Washington, the Critical Conservation Area is the Columbia River Basin, which does not include Puget Sound or the Salish Sea.¹⁰¹ In Puget Sound, SCC administers projects in the five selected areas of restoration. The areas were selected in part through the Nature Conservancy’s 2016 report, *Opportunity Assessment for Targeted BMPs in Puget Sound*, for the RCPP steering committee “to direct funding and inform decisions”.¹⁰² According to the SCC, “priority areas” for Puget Sound RCPP projects are organized by watershed.

Table 1. Puget Sound Priority Project Areas Funded by RCPP¹⁰³

Project Area (Watershed)	Project Description	Activities	Partners
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⁹⁸ <https://www.nacdnet.org/2019/01/10/2018-farm-bill-breakdown-rcpp/>

⁹⁹ <https://www.ers.usda.gov/topics/natural-resources-environment/conservation-programs/>

¹⁰⁰ <https://scc.wa.gov/pugetsound-rcpp/>

¹⁰¹ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/rcpp/?cid=stelprdb1254131>

¹⁰² https://scc.wa.gov/wp-content/uploads/2016/06/TechReport_Opportunity-Assessment-for-Targeted-BMPs-in-Puget-Sound_2016.pdf

¹⁰³ <https://scc.wa.gov/pugetsound-rcpp/>

Newaukum Creek (King)	Improve water quality for salmon	Complete streamside restoration projects that lower stream temperature and help reduce nutrients and fecal coliform entering the stream	American Farmland Trust , King Conservation District , SCC, Ecology, NRCS, National Fish and Wildlife Foundation (NFWF)
Nookachamps Basin	Improve water quality and salmon habitat	Lower stream temperature, install bank stabilizing large woody debris (LWD) to improve fish habitat and reduce bank erosion, install livestock exclusion fencing, install small-scale structural BMPs for manure storage	Skagit County Public Works, Skagit Fisheries Enhancement Group, Skagit Conservation District, PIC program of Skagit County
Snohomish / Skykomish Rivers	Improve water quality and fish habitat for ESA-listed salmonids	Reduce nutrient loading through improved nutrient management, remove in-stream fish barriers	Snohomish Conservation District , Tulalip Tribes, City of Monroe, Local producers, Qualco Energy, Adopt-a-Stream Foundation, Ecology, Puget Sound Natural Resource Alliance, Sustainable Land Strategy
Stillaguamish Watershed / Skagit Bay Drainage	Improve water quality, soil health, and fish passage projects for ESA-listed salmonids	Remove in-stream fish barriers, improve soil health through increased organic matter and carbon sequestration, reduce nutrient loading through improved nutrient management	Snohomish Conservation District, Stillaguamish Watershed Council, Stillaguamish Clean Water District, Local producers, SCC, NRCS, Stillaguamish Tribe of Indians
Thomas Creek (Skagit)	Reduce fecal coliform pollution impacting shellfish harvest areas in Samish Bay	Working with livestock landowners to implement BMPs for manure management, preserve farmland through conservation easements, and restore stream-side areas	Skagit Conservation District, Skagit County, Samish Tribe, NRCS, Skagitonians to Preserve Farmland

Since 2014, several projects have been funded by RCPP throughout Washington (including and outside of Puget Sound). These projects are described in the table below. Some projects have closed out as recently as 2019.

Table 2. Washington State Projects Funded by RCPP from 2014 to 2018¹⁰⁴

Title	Description	Lead and Partners	Amount (Funding Pool)	Fiscal Year
Southwest Washington NIPF Lands	DNR and conservation districts will conduct outreach and education activities and provide technical assistance to NIPF landowners to	WDFW, NRCS, DNR	\$1.3 million (state)	2017

¹⁰⁴ https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=nrcseprd1386891&ext=pdf

Conservation Partnership	develop and implement stewardship plans with funding from the EQIP and CSP.			
Yakima Integrated Plan -Toppenish to Teanaway Project	Targets high priority watersheds to accelerate the recovery of threatened Middle Columbia Steelhead. Increases water supply and water quality, restores fish habitat, promotes irrigation efficiency enhancements.	Confederated Tribes and Bands of the Yakama Nation	\$7.54 million (national)	2017
Yakama Nation On-Reservation Lower Yakima Basin Restoration Project	Addresses critical needs for the integrated conservation and restoration of fish and wildlife habitat, water quantity and water quality to accelerate recovery of threatened middle Columbia steelhead.	Confederated Tribes and Bands of the Yakama Nation.	\$4.6 million (Critical Conservation Area)	2014/15
Greater Spokane River Watershed Implementation	Reduces nutrients in region. Supports adoption of conservation tillage operations and BMPs.	Spokane Conservation District	\$7.7 million (national)	2016
Palouse River Watershed (WRIA 34) Implementation Partnership	Addresses total maximum daily load water concerns and reduces water quality regulatory action on producers, offers enhanced incentives for riparian buffers, implements watershed-wide monitoring efforts.	Palouse Conservation District	\$5.5 million (Critical Conservation Area)	2014/15
Unlocking Carbon Markets for NIPF Landowners in the Pacific Northwest	Pilot project for NIPF landowners to participate in a regional carbon crediting program and implementation of pre-commercial tree thinning to enhance carbon stocks.	Pinchot Institute, DFW and NRCS (see section 5.2.3 for more details)	\$1.1 million (national)	2014/15
WRIA 1 Salmon Recovery & Water Quality Improvement	Replaces culverts on farm access roads, restores fish passages in agricultural and rural areas; works with Tribes to construct instream wooden structures to provide habitat for salmon; and integrate and publicize NRCS programs into communities.	Whatcom Conservation District	\$1 million (state)	2016
Puyallup Watershed Partnership	Assist landowners with permanent conservation easements and implement restoration activities through EQIP.	Pierce Conservation District	\$8 million (national)	2017
Precision Conservation for Salmon and Water Quality in the Puget Sound	Targets high priority areas to improve water quality and habitat for at-risk species and conducts outreach to farmers.	State Conservation Commission	\$9 million (national)	2014/2015
Upper John Day River	Improves irrigation efficiency in Confederated Tribal lands.	Confederated Tribes of the Warm Springs	\$4.94 million (Critical)	2018

Flow and Protection Project		Reservation of Oregon; Participating States: Oregon (Lead State) and Washington.	Conservation Area-Columbia River Basin)	
Whatcom County Working Lands Conserving Watersheds	Protects working lands within identified priority watersheds by providing financial incentives to landowners.	Whatcom County	\$1.3 million (state)	2018
Confederated Tribes of the Colville Reservation Water Quality and Habitat Improvement Project	Reduces soil erosion and stream sediment by repairing or removing stream crossings, decommissioning forest roads, installing road drainage and protecting wetland/riparian areas.	Confederated Tribes of the Colville Indian Reservation	\$2 million (state)	2014/15

3.7 Conservation Innovation Grant Program

The Conservation Innovation Grant Program (CIG) offers competitive grants focused on funding innovations in resource conservation. It is funded through the EQIP program to “help develop the tools, technologies, and strategies to support next-generation conservation efforts on working lands and develop market-based solutions to resource challenges.”¹⁰⁵ The CIG program was established in 2003 through Section 2301 of the Farm Security and Rural Investment Act of 2002 with funding from EQIP. Section 2509 of the Food, Conservation, and Energy Act of 2008 and section 2307 of the 2018 Farm Bill reauthorized the CIG program.¹⁰⁶ The reauthorization of CIG allows CIG new projects to involve producers and “community colleges if the demonstration project is carried out on the college’s land”, and “creates new on-farm conservation innovation trials” (detailed in the following section).

Funding

CIG covers up to 50 percent of applicants’ total project cost with applicants matching with non-Federal funding sources. A separate CIG component is administered by each state with each state choosing whether to “hold a state competition and how much of their EQIP allocation to offer (up to 5 percent)”.¹⁰⁷ In 2019 no state-level CIG competition was held in Washington.

From fiscal year 2004 to fiscal year 2018, the CIG program received over 4,331 proposals requesting \$1.918 billion in funding. During that period, the program awarded \$297 million to

¹⁰⁵ https://www.nrcs.usda.gov/wps/PA_NRCSCconsumption/download?cid=nrcseprd1515819&ext=pdf

¹⁰⁶ *ibid*

¹⁰⁷ https://www.nrcs.usda.gov/wps/PA_NRCSCconsumption/download?cid=nrcseprd1515819&ext=pdf

732 projects. In fiscal year 2019 (the most recent year for which data is available), CIG awarded 29 recipients \$12.46 million¹⁰⁸ in four project areas: pollinator habitat, urban agriculture, water quantity, and “accelerating the pace and scale of conservation adoption”. The last project area includes pilot projects investigating carbon accounting for small NIPF landowners in the eastern United States, using market-based incentives to help NIPF landowners in the south-eastern United States, and providing historically underserved producers with targeted assistance in the south-eastern United States¹⁰⁹.

Table 3. Selected Recipients of CIG Funding in Puget Sound/Western Washington Since 2009¹¹⁰

Organization	Project Title	Award Amount	Year
Whatcom Conservation District	Demonstration of the benefits of sub-irrigation using water level control structures for improved agricultural irrigation water use	\$415,291	2019
Stillaguamish Tribe	Stillaguamish Tribe demonstration of an advanced distillation and nutrient separation processor for dairy wastewater	\$1,000,000	2017
EcoTrust Forest Management	Catalyzing public, philanthropic and private capital to make impact investments in forestland	\$150,000	2014
Northwest Natural Resource Group	Monitoring environmental benefits for aggregated small forest landowners	\$185,000	2011
Northwest Natural Resource Group	Assist landowners with quantifying and selling carbon credits from small acreage forest parcels	\$50,000	2009

3.8 Conservation Innovation Grant Program On-Farm Conservation Innovation Trials

Authorized in the 2018 Farm Bill, a CIG sub-program called On-Farm Trials awarded \$24.3 million to 16 projects in its inaugural year of 2019¹¹¹. Priority components of the competition are: irrigation management, precision agriculture, management strategies and technologies, and soil health management systems (billed as the Soil Health Demonstration Trials). The On-Farm Trials program provides funding to partners to make incentive payment to producers to “implement innovation” and offers technical assistance for implementation.

¹⁰⁸ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/cig/?cid=nrcseprd1518814>

¹⁰⁹ *ibid*

¹¹⁰ No grants were awarded to recipients in Puget Sound or Western Washington in 2018, 2016, 2015, 2013, 2012, 2010. Data retrieved from:

<https://www.nrcs.usda.gov/wps/portal/nrcs/cigsearch/national/programs/financial/cig/cigsearch/?svsn=National&projEcoReg=6&recState=WA&sRow=0&sort=awardYear&sOrder=DESC>

¹¹¹ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/cig/?cid=nrcseprd1459039>

Funding

2019 project awardees included several universities, producers' associations, conservation district and NGOs. The 2020 On-Farm Trials is accepting proposals through May 2020. For 2020, up to \$25 million in funding is available with a minimum award of \$250,000 and a maximum award of \$5 million for projects spanning three to five years. By statute, a project partner must provide a minimum of 25 percent in match funding with a specific focus on the 'value-added' of the partner's match for project components like outreach, communications and monitoring of the project. Funding is provided for project partners to evaluate the trials' natural resource, economic and social outcomes throughout the duration of the project. Producers must be EQIP-eligible but participation in the On-Farm Trails does not count against "producers' EQIP payment limitations".

3.9 Additional Programs Offered by NRCS

- Healthy Forests Reserve Program (HFRP) — The Healthy Forests Reserve Program was authorized by the Food, Conservation, and Energy Act of 2008 (the 2008 Act) amended provisions of HFRP in 2009.¹¹² HFRP is a sub-program of RCPP. HFRP helps landowners restore, enhance and protect forestland resources on private lands through easements and financial assistance. It is currently unfunded for Washington¹¹³.
- Conservation Technical Assistance (CTA) — USDA provides ongoing technical assistance to agricultural producers who seek to improve the environmental performance of their farms.

3.10 Conservation Reserve Program

The USDA's Farm Service Agency (FSA) administers the Conservation Reserve Program (CRP). CRP is the largest "agricultural land-retirement program" nationally with an enrollment of over 22.3 million acres and a budget of over \$1.8 billion. CRP provides financial assistance to landowners that voluntarily elect to retire (e.g. remove) environmentally sensitive cropland from production for a contract period of 10 to 15 years in exchange for an annual rental payment. FSA pays 80 percent of the annual rental payment with the USDA state agency covering the remaining 20 percent. After the contract expires, landowners may elect to re-enroll their land. Enrollment is either continuous, in which offers can be enrolled in CRP at any time, or during specific enrollment periods which is subject to a competitive bidding process (used for enrollment in the general CRP or CRP Grasslands).¹¹⁴ The Transition Incentives Program assists with the transition of expiring CRP land from a retired or retiring owner or operator to a beginning, veteran, or socially disadvantaged farmer or rancher by providing landowners with two additional rental payments on land enrolled in an expiring CRP contract.¹¹⁵ Although

¹¹² <https://www.federalregister.gov/documents/2010/02/10/2010-2812/healthy-forests-reserve-program>

¹¹³ https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/easements/forests/?cid=nrcs143_008410

¹¹⁴ https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2019/crp_continuous_enrollment_period_fact_sheet.pdf

¹¹⁵ <https://www.fsa.usda.gov/programs-and-services/conservation-programs/transition-incentives/index>

research on TIP is scant, literature suggests that “an assessment of CRP-TIP is warranted”¹¹⁶ based on its ability to assist in farmer to farmer transfer (see section 4.1 On Individual Agricultural Support Programs for more details).

According to a January 2020 report from the USDA’s Economic Research Service¹¹⁷, in the data studied from fiscal years 2013 through 2016, 36 percent of expired land (when the contract ended for the landowner) was re-enrolled, while 64 percent not re-enrolled. Additionally, 47 percent of forested land (enrolled as “tree-cover practices”) was more likely to be re-enrolled than grasslands (35 percent) and wetlands (39 percent). This suggests there are “large economic costs are associated with removing tree cover on land where it has been established.”

Environmental benefits, like improved water quality from reduced fertilizer and manure run-off, are found when land is enrolled, but “it is likely that many of the environmental benefits are likely lost when land exits” CRP.¹¹⁸

As of February 2019, CRP has 22.4 million acres enrolled, which is the lowest level of land enrollment since the program’s inception in 1988. In 2007, enrollment peaked at 36.7 million acres. The Farm Bill sets annual enrollment caps affecting the amount of land that can be enrolled in the program. Enrollment caps are often dependent on commodity prices as enrollment caps are changed dependent on demand for commodities (crops like corn, soy and wheat). The 2018 Farm Bill increased the most recent enrollment cap to 27 million acres through 2023. Washington State was 3rd highest state nation-wide with the “largest amounts of expiring CRP land”¹¹⁹ from 2013 to 2016. Less than 14.2 percent of land in Washington was enrolled through continuous sign-up in CRP, but Washington was among the states with the highest overall enrolled acres. The below table shows contracts expiring from 2013 to 2016 across the Pacific Northwest in terms of 1) the percentage of total type of contract (e.g. 40.1% of Oregon’s expiring contracts are for annual crop land) and 2) the acres existing overall.

Table 4. State-wide Comparison of Types of Expiring CRP Contracts (2013 - 2016 Fiscal Years)

State	Annual Crop	Perennial forage crop	Perennial specialty Crop	Grass	Tree	Exiting continuous sign-up	Acres existing overall
Oregon	40.1%	20.5%	5.6%	33.4%	0.1%	7.2%	82,389
Washington	68.8%	14.5%	10.6%	6.0%	.01%	6.0%	336,374
Idaho	53.5%	6.9%	19.3%	18.8%	1.2%	3.3%	70,395

¹¹⁶ <https://www.sciencedirect.com/science/article/pii/S0264837718313942?via%3Dihub>

¹¹⁷ <https://www.ers.usda.gov/publications/pub-details/?pubid=95641>

¹¹⁸ *ibid*

¹¹⁹ Data was from 2013-2016 fiscal years only.

3.11 Conservation Reserve Enhancement Program

CREP is a joint federal and Washington State-funded program that provides financial assistance to landowners to voluntarily establish and maintain riparian buffers in agriculture¹²⁰ with a contract period running 10 to 15 years. The Washington State Conservation Commission (SCC) provides technical support and resources to local conservation districts with the USDA Farm Service Agency administering the program on the federal level. Specific landowner measures funded by CREP include the installation of riparian buffers that seek to decrease water temperature in the “decade following riparian restoration”¹²¹ through increasing shade and canopy cover, implementing a variety of BMPs (such as grass filter strip) and enhancing wetlands. SCC reports annually on the “statewide implementation and efficacy of CREP”.

The SCC reports that Washington has over 1,067 CREP projects that cover 11,426 acres along approximately 634 miles of streams. Since program inception, CREP has restored approximately 850 miles (425 miles of stream length). CREP currently has approximately 9,600 miles in the program¹²² with 59 new CREP projects implemented beginning in 2019.¹²³ According to the SCC, approximately 6,336 miles that need to be restored are on private agricultural land. Wetland enhancement acreage numbers nearly 309 acres with nearly 9 acres of grass filter strip implemented in 2019. According to the SCC, projects that are “five to ten years old are already averaging 72 percent canopy cover along small streams”. 93 CREP contracts were re-enrolled in 2019¹²⁴. Based on observations conducted by SCC in 2019, stream canopy cover on large streams at all sites was 71 percent and 78 percent on small streams.

A summary table is below.

Table 5. Individual Puget Sound Conservation Districts and Participation in CREP¹²⁵

Conservation District	Projects	Miles	Acres	New 2019 Projects	Re-enrolled Projects	Notes
King	4	1.25	8.51	N/A	N/A	2015-2018
King	No data available	634.4	11,426	7 ⁺	3	Since all time. *SCC data combines Snohomish and North King

¹²⁰ <https://kingcd.org/programs/better-water/conservation-reserve-enhancement-program/?highlight=crep>

¹²¹ *ibid*

¹²² B. Cochrane, personal communication, August 2020

¹²³ <https://scc.wa.gov/crep/>

¹²⁴ SCC report 2020

¹²⁵ The data presented in this table has been provided by each conservation district. According to the SCC’s “Implementation, Effectiveness Monitoring, and Financial Report for the Washington Conservation Reserve Enhancement Program (CREP) for Federal Fiscal Year 2019”, which used data from the FSA, slight discrepancies in the number of projects and acreage have been reported. Based on input from the SCC, the data provided by the conservation districts is reported here unless it was unavailable. In that case, the data is from the SCC report, indicated by a ⁺.

						County' as one entry.
Pierce ¹²⁶	No projects since 2017	No data available	N/A	None	None	N/A
Thurston ¹²⁷	6	3.2	47.03	1+	None	2015-2018
Lewis	82+	48	818 - 907	4+	3	
Snohomish ¹²⁸	31 new CREP projects (plus 6 re-enrollments) ¹²⁹	98,341 linear feet of stream planted (18.6 miles)	206.47 acres planted	7+*	3	2015-Present. *SCC data combines Snohomish and 'North King County' as one entry.
Skagit	No projects since at least 2015			1+	2	
Whatcom	438	220	2,942	22+	16	
Washington State Totals	845 (since project inception)	425 miles of stream length	13704.85 (cumulative) 645 (new in 2019)	59	93	

Success of CREP in Washington

A 2013 report stated that Washington’s CREP “has demonstrated success at the landowner level to improve riparian conditions for salmon and water quality” by installing riparian buffers.¹³⁰ According to the SCC, CREP projects in Washington have varying buffer widths spanning a minimum of 35 feet to a maximum of 180 with an average of 142 feet. From 2000 to 2018 the mandated buffer width was 35 feet. Since 2018 the minimum width increased to 50 feet as mandated by the NRCS to “promote greater function with respect to shade and stream bank stability”. According to literature, increasing buffer width may not yield clear ecological benefits as varying stakeholders, tribes and agencies support fixed-width buffers versus variable width buffers.¹³¹ Proponents of each claim differing results for their ability to support ecological restoration, such as improving water quality and salmon habitat while supporting agricultural landowners’ preferences.¹³²

In March 2019, [King County’s Fish, Farm, Flood Advisory Committee’s Buffer Task Force](#) published a [report](#) on the “dimensions and locations of voluntary riparian buffer plantings on private property as well as to estimate the potential acreage of farmland that could be converted

¹²⁶ P. Borne, personal communication, April 2020

¹²⁷ M. Healy, personal communication, April 2020

¹²⁸ C. Moscoso, personal communication, April 2020

¹²⁹ C. Moscoso, personal communication, April 2020

¹³⁰ [2013 Implementation and Effectiveness Monitoring Results for the Washington Conservation Reserve Enhancement Program \(CREP\): Buffer Performance and Buffer Width Analysis;](#)

¹³¹ Chapman et al.’s 2020 paper analyzes riparian buffer width controversies from a social science perspective, addressing the ‘science-policy gap’ that often exists in conservation science:

<https://www.sciencedirect.com/science/article/abs/pii/S0006320719306718?via%3Dihub>

¹³² *ibid*

to riparian buffers.” The recommendations in the report provide King County’s Advisory Committee’s Implementation Oversight Committee with a details on how, in what form, and where riparian buffers should be installed while supporting and accounting for agricultural and salmon recovery interests and stakeholders. One of the findings of the report was “for implementation, it became apparent that further incentivization would be important for a landowner to participate in voluntary riparian planting. Members of the Buffer Task Force expressed that payments would likely be needed to make up for lost production potential on active farms.

Regulatory implications were also noted; in particular it was recognized that “once trees get to a 4” diameter at breast height within 165’ of the watercourse they become part of the Critical Area in King County resulting in that riparian area no longer being farmable.” Additionally, it was recommended that the “implementation workgroup...discuss the potential for minimum buffers in order to ensure that plantings funded by public dollars are providing a legitimate ecological benefit and work on identifying incentives that help accelerating plantings.”

According to the SCC, beginning with a minimum buffer width for a voluntary program like CREP can assist with implementation, as landowners may then be in favor of increasing the buffer width after meeting and speaking with technicians and after seeing successful results of the program.¹³³

Future of CREP in Washington

A 2019 SCC analysis suggests that the CREP program should “increase financial incentives to increase participation” and “target contiguous landowners within a watershed”. BMPs, like riparian buffers, implemented through CREP are parcel-based. However, to achieve a watershed-scale effect CREP coverage needs to increase to “60-80% coverage [in a watershed] to get past the biological threshold in order to see how stream function has improved”¹³⁴. The current CREP budget for the 2018-2020 biennium is \$3.7 million. SCC is requesting \$6.8 million in new funding for the 2021-2023 biennium.

Related NTA Name: CREP Expansion NTA ID: 2018-0157 Funding: None Owner Organization: SCC
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3.12 Forest Riparian Easement Program

The Department of Natural Resources’ Forest Riparian Easement Program (FREP) was created in 2002 through [RCW 76.13.130](#) and re-authorized in 2012 through [WAC 222-21-005](#) to allow the state to acquire “easements primarily along riparian and other sensitive aquatic areas from qualifying small forestland owners willing to sell or donate easements to the state.”¹³⁵.

DNR administers FREP and authorizes the state to pay landowners in exchange for putting a 50-year conservation easement on their trees in the required riparian buffers. The amount of the

¹³³ B. Cochrane, personal communication, May 2020

¹³⁴ B. Cochrane, personal communication, May 2020

¹³⁵ https://www.dnr.wa.gov/publications/fp_rules_ch222-21wac.pdf?ddapwu

compensation is based on the value of the trees left in the riparian buffer¹³⁶. The program is available to a qualifying landowner as defined in [WAC 222-21-010](#).

In May 2019, the Washington State legislature passed [SB 5330](#). SB 5330 requests the establishment of a working group to assess impact of the passage of the 1999 Farms and Fish Act and authorizes the University of Washington’s School of Environmental and Forest Sciences to investigate the economic health of forestland owners with “recommendations to improve retention of working forestland held by small forestland owners” by November 2020. The UW-led working group must report the results of the trends analysis and policy analysis to the appropriate committees of the legislature by November 1, 2020, with recommendations to improve mitigation measures for small forestland owners and improve retention of working forestland held by small forestland owners.

Related NTA Name: Enhance FREP 2018 ID: 2018-0813 Funding: None Owner Organization: DNR, Puget Sound Conservation District

DNR received \$3.5 million ear-marked for FREP for the 2019-2021 biennium ending June 30 2021. DNR had originally requested [\\$17.3 million](#) for the program. Since 2002, FREP has successfully purchased 405 easements, including 34 in 2019 and 15 as of August 2020. As of August 2020, FREP has 93 unfunded applications out of a total 134 applications on the program’s waiting list.¹³⁷

Another conservation easement program, the [Rivers and Habitat Open Space Program \(RHOSP\)](#) is available for qualifying landowners wishing to sell permanent easements for some channel migration zones and critical habitat for state listed threatened or endangered species. Qualifying properties are classified as “designated forest land” (RCW 84.33) or “open space” (RCW 84.34). According to the DNR, “two types of land are eligible for the program: 1) forestland habitat critical for state-listed threatened or endangered species (Critical Habitat), and 2) a specific type of river habitat called unconfined channel migration zones (CMZ), which are islands of timber within a river channel that is actively shifting. Since 2002, when funding first became available, the program has protected 1,043 acres of important habitat through 16 conservation easements.”¹³⁸ For the 2019 to 2021 biennium, RHOSP has \$1 million to award applicants through a competitive application process. DNR has requested \$6.1 million in capital funding (as of September 2020).

3.13 U.S. Forest Service Landscape-Scale Restoration Projects Grant Program

The Landscape Scale Restoration Program is a competitive grant program and funds the priorities identified in a state’s Forest Action Plan. The DNR published the Washington State Forest Action plan in 2019.¹³⁹ A detailed analysis of the 2019 Forest Action Plan can be found in

¹³⁶ *ibid*

¹³⁷ M. McDonald, personal communication, August 2020

¹³⁸ <https://www.dnr.wa.gov/programs-and-services/forest-practices/small-forest-landowners/rivers-and-habitat-open-space>

¹³⁹ <https://www.stateforesters.org/districts/washington/>

section 4.6. A sub-component of the grant program focuses on urban forestry – particularly in Puget Sound.¹⁴⁰ The below table provides a list of and links to Puget Sound grant recipients from 2010 to 2019 (the last year for which data is available). These grants focus on urban forestry, forestry outreach and education, and the integration of forest management and technology.

Table 6. USDA Landscape-Scale Restoration Grant Projects in Puget Sound (2010 to 2019)

Year	Partners	Title	Description	Funding (USFS match)
2019	DNR, Forterra, Highline School District, Cities of SeaTac, Des Moines, Burien	UCF Equity	DNR will partner with Forterra and Highline School District to develop and implement urban forestry projects on school grounds and on adjacent city property.	\$600,000 (USFS: \$300,000)
2018	DNR, The Nature Conservancy,	PS Canopy Analysis	Produce a Central Puget Sound Urban Tree Canopy assessment, ecosystem valuation, develop urban carbon credit protocols	\$600,000 (USFS: \$300,000)
2018	DNR, City of Tacoma, Pierce Conservation District, Forterra, Tacoma Pierce County Health Department	Urban Forest Equity	Aims to lead socially and environmentally equitable urban development by engaging Tacoma Mall Regional Growth Center (TMRGC); develop a plan that incorporates green stormwater infrastructure, increases tree canopy cover	\$400,308 (USFS: \$200,154)
2017	DNR, King Conservation District, Ecology, PSP, USDA	Promoting Stormwater Benefits from Urban Canopy Cover in Puget Sound	Promoting and testing USFS' i-Tree Hydro tool to quantify urban forest ecosystem services, including stormwater interception.	\$600,000 (USFS: \$300,000)
2016	DNR	Chehalis River Basin Master Forest Stewardship Landscape Planning Initiative	Develop a Forest Stewardship Master Plan and landowner education programs in Chehalis River basin.	\$778,000 (USFS: \$300,000)
2014	DNR, AmeriCorps, Ecology	Urban Forestry Restoration Project	Urban Forestry Restoration Project (UFRP) will provide a work crew to communities to assist with urban forest maintenance tasks on public land in exchange for a commitment by the community to urban forestry.	\$600,000 (USFS: \$300,000)

¹⁴⁰ <https://apps.fs.usda.gov/formap/public?searchYear=&searchStateAbbreviation=WA&searchKeyword=>

2012	DNR, WSU Extension, NRCS, Conservation Districts, Washington Farm Forestry Association, Washington Tree Farm Program	Absentee Landowner Outreach and Education	Outreach and education to encourage and support long-term retention and sustainable management of forest lands by absentee landowners.	\$300,000 (USFS: \$150,000)
2012	DNR, WSU Extension	A Regional Strategy for Advancing Urban Forestry Programs	Provides funding for outreach and education to encourage and support long-term retention and sustainable management of forest lands by absentee landowners, supports priorities of Forest Action Plan.	\$300,000 (USFS: \$150,00)
2010	Oregon Department of Forestry, WA DNR, Alaska Division of Forestry, Idaho Department of Lands, Pacific Northwest Chapter– International Society of Arboriculture, Oregon State University, Oregon State University Extension	Online Urban Forestry & Urban-Rural Interface Forestry Technology Transfer	Develop online urban forestry training programs, facilitate urban-rural interface forestry technology.	\$105,123

3.14 U.S. Fish and Wildlife Services National Coastal Wetlands Conservation Grants

The U.S. Fish and Wildlife’s National Coastal Wetlands Conservation Grant Program¹⁴¹ awarded \$5,065,268 in 2020 to Ecology and local partners to preserve coastal wetlands in Puget Sound thereby “boosting coastal resilience, reducing flood risk, stabilizing shorelines and protecting natural ecosystems” of the region. This grant program supports the acquisition, protection and in some cases the restoration of tidal and estuarine wetlands, ecologically important areas that support the Land Development and Cover IS.

Table 7. U.S. Fish and Wildlife National Coastal Wetlands Conservation Grants 2020

Partners	Title	Description	Funding (USFWS match)	Total Project Cost
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¹⁴¹ <https://www.fws.gov/coastal/coastalgrants/>

Jefferson Land Trust	Discovery Bay Acquisitions Phase 1	Acquisition and conservation of nine acres of critical wetlands and nearshore habitat in Discovery Bay in Jefferson County, Washington, and nearly 2,173 feet of Puget Sound shoreline.	\$713,268	\$1,179,108
Whatcom Land Trust	Drayton Harbor and California Creek Estuary Coastal Wetland Conservation	Acquisition and restoration of four parcels totaling 54.66 acres of coastal wetland habitat and 6,500 feet of shoreline in Drayton Harbor, Whatcom County.	\$915,000	\$1,378,000
Capitol Land Trust	Lower Eld Inlet Acquisition Phase 3	Acquisition and protection of 55 acres, with 9.5 acres of tidelands and 46.1 acres of wetlands, including 3,250 feet of shoreline on Lower Eld Inlet and the McLane Creek estuary.	\$355,000	\$503,125
Capitol Land Trust	Lower Henderson Inlet Habitat Acquisition Phase 2	Protection in perpetuity of 94.18 acres and 2,100 feet of Puget Sound shoreline in Thurston County through a conservation easement. The project builds on the recent successful acquisition and restoration project on over 150 acres on the opposite shore of Henderson Inlet, funded through a 2017 grant.	\$574,000	\$814,000
Great Peninsula Conservancy	Misery Point Habitat Acquisition	Acquisition of 20.7 acres and approximately 3,500 feet of Hood Canal and barrier lagoon shoreline in Kitsap County.	\$1,000,000	\$1,665,000
Stillaguamish Tribe	Stillaguamish Tidal Wetland Acquisition	Partial funding to support the acquisition of 248 acres of former estuarine and marine wetlands in Snohomish County.	\$1,000,000	\$2,330,000
Northwest Watershed Institute	Tarboo Creek Wetlands Acquisition and Restoration	Protection in perpetuity and restoration of 14.5 acres of wetlands on three adjoining parcels along Tarboo Creek that drain directly into Tarboo-Dabob Bay and Puget Sound.	\$508,000	\$720,000

3.15 State Recreation and Conservation Office Grants

The Washington State Recreation and Conservation Office (RCO) currently manages several grant programs administered by the RCO's funding arm, the Recreation and Conservation Funding Board (RCFB). RCO is a state agency that supports outdoor recreation programs (including boating, fishing, vehicle activities, youth athletics, firearms), salmon recovery (including restoration, fish barrier removal activities) and trails and land and water conservation. It supports the protection of ecologically important lands as well as supporting working lands.

RCO's 2019 to 2021 capital budget¹⁴² is a total of \$327 million in a combination of federal and state grants. Relevant programs to the Land Development and Cover IS include:

- \$85 million to the Washington Wildlife and Recreation Program (includes the Habitat Conservation Account, Farm and Forest Account and Outdoor Recreation Account)
- \$925,000 to a community forest pilot program in Puget Sound
- \$12 million to the Washington Coastal Restoration Initiative
- \$49.5 million to projects related to Puget Sound Acquisition and Restoration program

¹⁴² As of September 2020, a capital budget submitted for the 2021-2023 biennium includes \$22 million for community forest projects, pending OFM approval.

A breakdown of grant programs relevant to the Land Development and Cover Implementation Strategy and their allocations from 2019-2021 for active projects in Puget Sound is below.¹⁴³

Table 8. Allocation of RCO Funding per Grant Area¹⁴⁴

Account	Allocation of Total	Allocation Breakdown Between Category
Habitat Conservation Account	45 percent	35 percent Critical Habitat 25 percent Natural Areas 15 percent Riparian Protection 10 percent (or \$3 million, whichever is less) state lands restoration or enhancement 15 percent Urban wildlife habitat
Outdoor Recreation Account	45 percent	45 percent in total distributed between local, state parks, trails, and water access
Farm and Forest Account	10 percent	90 percent Farmland Preservation Category 10 percent Forestland Preservation Category

¹⁴³ [WWRP Project Funding Comparison](#)

¹⁴⁴ [Funding by Grant Program Category](#)

Table 9. Active RCO Grant Projects in Puget Sound

Program	Description	Active Grants in Puget Sound		
		Grant	Request Match Amount	Recipient
Land and Water Conservation Fund	<ul style="list-style-type: none"> Grants for acquisition and development/renovation of outdoor recreation areas Public agencies and tribes must provide a 50 percent match. Minimum grant award is \$25k, max is \$500k 	Notes: these grants are not directly related to Land Development and Cover Implementation Strategy Vital Sign indicator targets but serve to provide funding for preserving and developing outdoor recreation resources, including parks, trails, and wildlife lands. ¹⁴⁵		
Washington Wildlife and Recreation Program - Habitat	<ul style="list-style-type: none"> Habitat grants include critical habitat for wildlife, natural areas, farmland/forestland preservation, riparian protection and state lands restoration/enhancement. A 50 percent match is required (except agencies). No maximum grant request amount. 	South Sound Prairies	\$3,000,000 \$0 \$3,000,000	Washington Department of Fish and Wildlife
		Oregon Spotted Frog Conservation	\$1,100,000 \$0 \$1,100,000	Washington Department of Fish and Wildlife
		East Hylebos Watershed Conservation Acquisition	\$2,165,500 \$6,726,270 \$8,891,770	City of Federal Way
		Hoh River Recreation and Conservation Area	\$1,487,600 \$1,487,600 \$2,975,200	The Nature Conservancy
		Merrill Lake Natural Resources Conservation Area	\$767,739 \$0 \$767,739	Washington Department of Natural Resources
		Grayland Property	\$1,500,000 \$0 \$1,500,000	Washington Department of Fish and Wildlife
		Saltse Flats Wetland Protection and Restoration	\$473,000 \$475,203 \$948,203	Ducks Unlimited Vancouver
		Skookum Creek Acquisition	\$864,260 \$1,098,000 \$1,962,260	Whatcom Land Trust
		Lower Big Beef Creek Acquisition	\$1,572,330 \$1,847,550 \$3,419,880	Hood Canal Salmon Enhancement Group
		Lake Kapowsin Riparian Phase 1	\$856,187 \$856,188 \$1,712,375	Forterra
		Raging River Natural Area	\$850,000 \$2,950,000 \$3,800,000	King County Water and Land Resources Division
		Lower Elwha River Protection Priority Number 4	\$107,233 \$262,536 \$369,769	North Olympic Land Trust
		Clallam Bay Acquisition	\$38,770 \$94,920 \$133,690	North Olympic Land Trust

¹⁴⁵ Details on recent grants, awarded in 2018, can be accessed at <https://rco.wa.gov/grant/land-and-water-conservation-fund/>.

		Chehalis Floodplain	\$200,000 \$0 \$200,000	Washington Department of Fish and Wildlife
		Salmonberry Creek and Wetland Protection	\$260,000 \$260,000 \$520,000	Great Peninsula Conservancy
		Zackuse Creek Property Acquisition	\$581,325 \$591,325 \$1,172,650	City of Sammamish
Washington Wildlife and Recreation Program – Forestland Preservation Grant	<ul style="list-style-type: none"> • Forestland Preservation Grants include acquisitions (such as conservation easements), development/restoration or combination (easements and restoration) • Local agencies, tribes, nonprofits, state agencies require a 50 percent match (except state agencies). • No maximum grant request amount but restoration cost may not exceed 50 percent of the total acquisition cost, grant limit of \$500k 	Busy Wild Creek Forestland Preservation	\$350,000 \$360,400 \$710,400	Nisqually Land Trust
Washington Wildlife and Recreation Program – Farmland Preservation Grant	<ul style="list-style-type: none"> • Farmland Preservation Grants include acquisition (purchase of development rights to maintain opportunity for agricultural activity upon farmland or to enhance/restore ecological function (restoration project) • Restoration cost may not exceed 50 percent of the total acquisition cost; Grant is available to cities, counties, nonprofit nature conservancy corporations or associations, State Conservation Commission • Farmland Preservation Grants have no monetary limit on grants, requires 50 percent match 	French Slough Farm	\$952,400 \$2,175,600 \$3,128,000	Washington Farmland Trust
		Rengen Ranch	\$527,000 \$527,000 \$1,054,000	Washington Farmland Trust
		Mountain View Dairy	\$778,711 \$793,289 \$1,572,000	Washington Farmland Trust
		McLeod Agricultural Conservation Easement	\$175,000 \$191,300 \$366,300	Whatcom County
		Roper Agricultural Conservation Easement	\$100,000 \$117,800 \$217,800	Whatcom County
		Dungeness Farmland Phase 2	\$559,771 \$559,772 \$1,119,543	North Olympic Land Trust
		Kaukiki Farmland Preservation	\$150,000 \$500,000 \$650,000	Great Peninsula Conservancy
		Getchell Ranch	\$111,200 \$111,200 \$222,400	Washington Farmland Trust
		TeVelde Agricultural Conservation Easement	\$75,000 \$92,800 \$167,800	Whatcom County
		Skagit River Maple Farm	\$69,125 \$69,125 \$138,250	Skagit County
		Bell Farm	\$222,875 \$222,875 \$445,750	Skagit County
		Olson Family Farms	\$60,375	Skagit County

			\$60,375 \$120,750	
		Nelson Lewis Farm	\$57,875 \$57,875 \$115,750	Skagit County
Washington Wildlife and Recreation Program – Natural Areas Grant	<ul style="list-style-type: none"> • Natural Areas Grants include protection of native ecosystems, unique plant and animal communities, threatened and endangered species, rare geological features; • No match is required for state agencies • No maximum monetary amount • For non-profits a 50 percent match required with no maximum grant request 	Mima Mounds Natural Area Preserve	\$2,681,010 \$0 \$2,681,010	Washington Department of Natural Resources
		Kennedy Creek Natural Area	\$1,259,317 \$0 \$1,259,317	Washington Department of Natural Resources
		Dabob Bay Natural Area	\$3,017,883 \$0 \$3,017,883	Washington Department of Natural Resources
		Maloney Creek Old Growth Acquisition	\$1,343,375 \$1,551,500 \$2,894,875	Forterra

3.16 Additional RCO Grants - Family Forest Fish Passage Program

The Family Forest Fish Passage Program (FFFPP) is implemented by three state agencies: Department of Fish and Wildlife, Department of Natural Resources, and the Recreation and Conservation Office. Each agency brings its expertise to oversee the program’s operations, outreach, and project selection processes. FFFPP supports one of the Land Development and Cover actions to protect ecologically important lands such as small forestlands, support working forest landowners, improve water quality and support restoration of fish habitat. FFFPP was created in 2003 by the legislature ([RCW 76.13.150](#)) to provide technical assistance and a cost-share mechanism for small forest landowners to “remove fish barriers on streams associated with forest road crossings.” To small forest landowners, the cost can be substantial and, potentially, influence their decisions about converting their forestlands to other uses. Funding is awarded every 2 years and comes from the sale of state bonds.

Related NTA
Name: Protect and Restore Habitat: Enhance FFFPP
2018 ID: 2018-0811
Funding: None
Owner Organization: DNR, RCO

In sponsorship and partnership with the state’s conservation districts, over ten tribes and non-profit salmon enhancement groups, the FFFPP has helped 311 landowners with 416 fish barrier removal projects and opened more than 1001 miles of stream habitat. There is currently a waiting list of 1,125 projects.¹⁴⁶ According to the DNR, these 1,125 projects may result in 847 miles of gained habitat¹⁴⁷. This estimate of gained habitat includes qualitative benefits including:

- Assisting small forestland owners in keeping their land
- Creating jobs and economic opportunities in rural communities.
- Honoring and implementing tribal treaty fishing rights.

¹⁴⁶ <https://www.dnr.wa.gov/fffpp>

¹⁴⁷ M. McDonald, personal communication, August 2020.

- Sustaining our forest industry and encouraging renewable green products.
- Improving water quality by reducing the amount of sediment entering streams and spawning areas.
- Minimizing flooding and the downstream harm to habitat and property.
- Helping implement salmon recovery plans.

The DNR will be requesting \$10 million to complete the next two years of projects.¹⁴⁸ For 2020, small forest landowners that harvest less than 2 million board feet of timber annually are eligible to apply for the \$5 million in funding available.

4. State Programs and Regional Initiatives

4.1 Voluntary Stewardship Program

The Voluntary Stewardship Program (VSP) was established in 2011 through the recommendations of the Ruckelshaus report as described in [RCW 36.70A.700](#) and through the legislature enacting Engrossed Substitute House Bill (ESHB) 1886. VSP is an alternative to critical area regulations on lands where agricultural activities occur. VSP was developed following several legal challenges to critical area ordinance regulations that directed farmers to remove land from production in order to meet riparian buffer requirements, which would reduce the economic viability of agricultural operations.

The Voluntary Stewardship Program promotes development of locally-directed watershed-scale plans to balance GMA’s environmental and economic goals¹⁴⁹ and “includes goals and measurable benchmarks to protect the functions and values of critical areas and promote agricultural viability along with supporting the voluntary enhancement of critical areas”¹⁵⁰. The Washington State Conservation Commission (SCC) administers funding to counties to engage agricultural landowners to develop and then implement watershed work plans. 27 of 39 Washington Counties opted-in to VSP including five Puget Sound counties: Mason, Lewis, San Juan, Skagit, and Thurston. Within each county, VSP provides opportunities designed to support individual landowners, such as funding to implement specific voluntary conservation practices “directed at certain types of critical area functions” to, at a minimum, maintain the level of critical area functions and values that were in place under GMA as of the baseline time for VSP (July 2011)¹⁵¹; as well as encourage restoration efforts.

The VSP program differs from other conservation programs because it is an opt-in program designed and administered at the individual county level, rather than state-wide. The below diagram provides an overview of a sample work plan development.

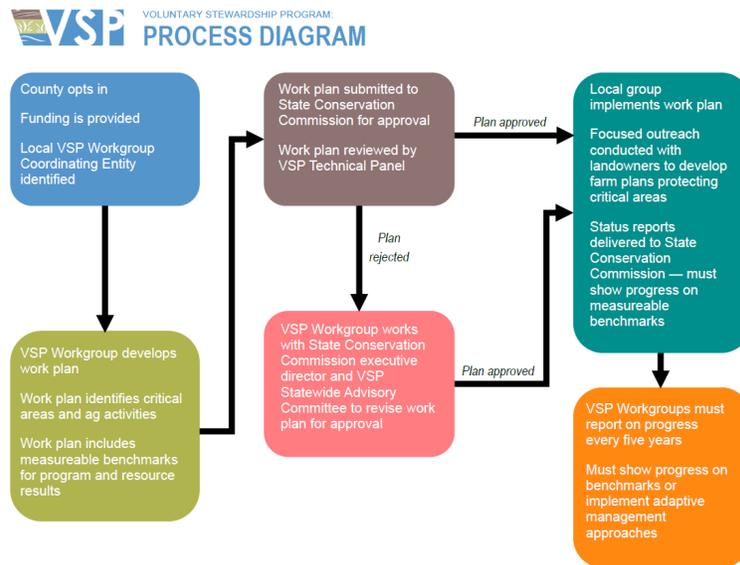
¹⁴⁸ M. McDonald, personal communication, May 2020.

¹⁴⁹ [RCW 36.70A.700](#).

¹⁵⁰ <https://sccwagov.app.box.com/s/wy07h3i3rmsb6jhcfmh7rk07g84aintr/file/502420588771>

¹⁵¹ For example, Skagit County is using \$1,700 of VSP funding for a buffer stewardship project for one landowner (J. Holtcamp, personal communication May 2020).

Figure 7. Washington State Conservation Commission’s VSP Process Diagram¹⁵²



The VSP operating budget for the 2019-2021 biennium is \$9.925 million out of the SCC’s total operating budget of \$45.4 million¹⁵³. The VSP operating budget per county is \$240,000 through 2021 with each county’s work group deciding how to allocate their portion. Each county created a separate work plan and submitted it to the state for approval. As of December 2018, all work plans have been approved by SCC and are in the implementation phase. Each county conducts outreach to landowners in order to implement voluntary conservation measures, like BMPs, as identified in each county’s work plan.

Five year status reports are provided by each participating county to SCC. In those reports, each county must assert whether it is making sufficient progress towards meeting the goals and benchmarks outlined in in their work plan. These goals and benchmarks require monitoring and implementation must demonstrate the effectiveness of maintaining critical areas protections at a watershed-scale, rather than at the parcel-scale, which is the requirement under GMA. As each county’s goals and benchmarks vary, each county must have “appropriate monitoring sufficient to maintain 2011 functions”. However, as VSP is a new program with varying levels of implementation and monitoring, “data used to calculate what has occurred” is challenging.¹⁵⁴

The counties of Chelan and Thurston submitted their five-year reports in the summer of 2019 and the remaining 25 VSP counties will be submitting their five-year reports between November 2020 and April 2021. The Executive Director (ED) of the State Conservation Commission (SCC), in consultation with the Statewide Advisory Committee and with input from the Technical Panel, has to accept or reject each county’s assertion about meeting goals and

¹⁵² <https://scc.wa.gov/vsp-background/>

¹⁵³ https://scc.wa.gov/vsp-counties-workgroups/#tabs_desc_6548_6

¹⁵⁴ Mason County VSP 2 Year Report, <https://app.box.com/s/a0jw23qkcmneqpg97p4l3wj3g2q3b9jz/file/502423312030>

benchmarks. Each county is then provided steps to either a) continue implementing VSP in accordance with their work plan or b) improve upon implementation through adaptive management and/or c) face failing out of VSP. As VSP is a new program with varying levels of implementation and monitoring, “data used to calculate whether or not cessation has occurred” is challenging.¹⁵⁵ Each county publishes their own biennial reports (which are not required to assert attainment of goals and benchmarks, and which the state is not required to review) that include project status, preliminary results and lessons learned.

Table 10. Highlights of VSP Status Reports by County: Actions and Accomplishments¹⁵⁶

County	Data-Related	Outreach and Landowner	Misc.	Next Steps (if stated)
Lewis	Lewis is using High Resolution Change Data produced by the Department of Fish and Wildlife to measure critical area protection measures occurring within areas of agricultural activities since 2011. In particular, Lewis is “examining critical areas to determine if any changes have occurred since 2011 and note any practices landowners have implemented”. Analysis so far has been confined to one basin in the county.	VSP outreach and education efforts involved sending 139 mailers to landowners to increase awareness about VSP as well as referring landowners who contact the county permit office to the Lewis Conservation District for more information on installation of BMPs. A database has been developed to track existing and future BMPs as well as landowners who are not participating.	Lewis County has hired one new planner to assist with VSP	
Mason ¹⁵⁷	Mason has created databases that provide locations and ownership of properties meeting eligibility for VSP inclusion. These properties are used to create contact lists which the Mason Conservation District utilizes to help landowners install BMPs.	Outreach and education has been conducted to landowners (exact numbers were not published)		

¹⁵⁵ Mason County VSP 2 Year Report, <https://app.box.com/s/a0jw23qkcmneqpg97p4l3wj3g2q3b9jz/file/502423312030>

¹⁵⁶ <https://scc.wa.gov/vsp/>

¹⁵⁷ <https://app.box.com/s/a0jw23qkcmneqpg97p4l3wj3g2q3b9jz/file/502423312030>

Skagit ¹⁵⁸	Skagit is using stream typing based on Ecology and DNR hydrology data to gather and map stream information alongside using aerial photography and existing LiDAR data to determine land cover change including measuring wetland loss below the 2011 statutory baseline. Skagit is cataloging projects such as riparian restoration and where it is occurring in the county.	Outreach and education efforts have included a newspaper publication in 2019 on VSP.	<p>Skagit's Natural Resources Stewardship Program (NRSP) is a focus of their VSP work plan with a goal of 10 enrollments in NRSP by end of 2019. Between 2012 and 2018, 44 projects were implemented with 53 landowners.</p> <p>As a part of Skagit's VSP, the County's clean water program, Pollution Identification and Correction (PIC), has ongoing implementation. PIC connects egregious landowners with the Skagit County Conservation District to install BMPs to improve water quality. Thus far (prior to the adoption of the VSP) the CD has helped to restore riparian zones equaling 133 acres.</p>	Skagit is promoting existing programs that "align with the goals set forth through VSP including the Clean Samish Initiative, Natural Resources Stewardship Program, Clean Water Program, Conservation Futures, PIC, and several others".
Thurston ¹⁵⁹	Thurston Conservation District, along with Thurston County, is using monitoring tools and data to determine the change in agricultural areas between 2011 baseline levels to 2017 levels (level at time of report publication). The data includes aerial imagery, surveys, county parcel data, flood and hazard mapping. According to the results, agricultural land in Thurston has increased by approximately 2.3 percent — an increase of 2,100 acres since	<p>30 operators are participating in Thurston's VSP with 15 Individual Stewardship Plans being completed and sent to landowners for review. As of July 2019, three finalized Individual Stewardship Plans have been accepted.</p> <p>Thurston Conservation District has hired two technical staff to increase capacity for VSP and conducted 12 education and outreach events that have reached 345 participants.</p>	As of July 2019, 18 farms have implemented or agreed to implement conservation practices, reaching an overall area of 921 acres with approximately 140 acres treated with conservation practices since 2011.	

¹⁵⁸ <https://sccwagov.app.box.com/s/dz95jvg1244n0aqabuzatdiwv4msjzc/file/519113473373>

¹⁵⁹ <https://sccwagov.app.box.com/s/wy07h3i3rmsb6jhcfmh7rk07g84aintr/file/502413453151>

	2011's 91,668 acres to 2017's 93,770). FWHCA has increased by 1.6% (from 85,404 acres to 86,813 acres), along with critical aquifer recharge areas and wetlands (increasing from 11,795 acres to 12,290 acres).			
San Juan ¹⁶⁰	In San Juan County, three Individual Stewardship Plans have been adopted with a goal of three per quarter and 12 Plans adopted annually. According to the County, there are 100 farm plans covering 2,380 acres in San Juan County which can be converted to ISPs under VSP. The overall participation goal of the County's Work Plan is to have more than 20% of agricultural producers in San Juan County participate in ISPs by 2020, and more than 40% participating by 2040.	In 2020, the County plans on distributing outreach materials via the San Juan Island Conservation District to approximately 250 agricultural producers.		San Juan County is working on developing its "San Juan Islands Salmonid Limiting Factors & Recommended Actions - Eight Basin Report" which will be incorporated in the VSP as it will "provide management goals for freshwater systems within the County" with the management goals that can be implemented via Individual Stewardship Plans.

4.2 Conservation Districts' Programs

Puget Sound conservation districts provide a variety of support for agriculture and forest land owners. Local conservation districts provide technical and financial assistance including:

- Support applicants to NRCS's program such as the Conservation Reserve Enhancement Program (CREP)
- SCC programs and Local Cost Share Programs
- Grant funded cost share programs
- Access to free workshops and trainings

¹⁶⁰ <https://sccwagov.app.box.com/s/pis44bn49rxjou56zkisjk276nmt7ca8/file/531167089881>

- Potential for a certification program
- Land steward recognition
- Access to expert advice including landowner consultations

Puget Sound Conservation Districts have been awarded technical assistance funds from NRCS through the National Association of Conservation Districts (NACD), which provides funding and technical/administrative assistance, promotes soil health, work to conserve forestland, provides resources for managing water quality/quantity and engages with over 300 conservation districts nationally.

According to SCC, approximately “1.42% of agricultural operations statewide have participated in cost-share projects” that conservation districts help to implement.

Conservation districts are an integral part of county planning, including outreach, adoption and implementation of Individual Stewardship Plans supporting counties’ VSPs. Conservation districts additionally receive funds from NRCS administered through NACD for the Urban Agriculture Conservation Grant program. The table below lists Puget Sound conservation districts who are grant recipients since 2016.¹⁶¹

Table 10. Urban Agriculture Conservation Grant Recipients in Puget Sound

Recipient	Project	Year
King	Built a community agriculture mapping tool through KCD’s website	2016
Pierce	Created a cultural ambassadors program to reach multi-lingual gardeners in Pierce County urban community gardens	2016
Kitsap	Established the GRACE community garden project at Kitsap CD’s office and engaged a local women’s correction center	2017
Snohomish	Created an urban agriculture program, assisted homeowners with establishing home owners	2017
Kitsap	Promoted pollinator conservation in urban environments	2020
Pierce	Creates an urban agriculture garden and establishes Tribal sovereignty through a medicine garden in east Tacoma	2020
Thurston	Holds workshops and provides technical assistance to City of Yelm to help produce local food	2020

¹⁶¹ <https://www.nacdnet.org/about-nacd/what-we-do/urban-and-community/urban-agriculture-conservation-grant-recipients/>

4.3 Agricultural Support Programs

Several individual counties have adopted agricultural conservation, acquisition, and protection programs. These programs support the Land Development and Cover IS’s goal to protect working lands.

Skagit County operates the Farmland Legacy Program, funded by conservation futures tax revenues, with additional support from the USDA, Washington State Recreation and Conservation Office, and The Nature Conservancy. Since 1996, the Farmland Legacy Program has protected over 11,000 acres through voluntary easement purchases and by easements acquired by the County’s one-acre subdivision rule. The Farmland Legacy Program Skagit County additionally operates the Natural Resources Stewardship Program which has completed 44 projects in cooperation with 53 different landowners from 2012 through 2018. These projects enhanced 47,087 linear feet of stream on 86.17 total acres. This was accomplished with 35,075 native plantings, 19,977 feet of fencing, placement of 184 pieces of large woody debris, and construction of two livestock crossings.¹⁶²

Skagit County’s Farmland Legacy Program’s Natural Resources Stewardship Program has completed 44 projects that have enhanced 47,087 linear feet of stream on 86.17 acres.

Farm link programs, such as Washington Farmland Trust’s [Farm to Farmer Program](#), active through Puget Sound, aim to connect farms for lease and farmers looking for available land through an online real estate listing. U.S. Department of Agriculture (USDA) forecasted that from 2015 to 2019 one in ten agricultural acres would change ownership, with a quarter of these transfers taking place between non-relatives (2020 data has not yet been released). Literature suggests that farm link programs can assist in facilitating transaction, but a “fully funded suite of farm succession planning assistance services should be available to all farm owners on a permanent basis, incorporating a focus on those without identified successors” (Valliant et al. 2019).

4.4 Farming, Fish and Floodplains Programs

Several programs working at the intersection of flood hazard reduction, salmon restoration and agricultural land protections are related to the Land Development and Cover IS, as well as to the [Estuaries Vital Signs](#) and Implementation Strategy and [Floodplains Implementation Strategy](#). A more detailed analysis of these programs will be covered in a forthcoming National Estuary Program-funded synthesis report of Agricultural River Delta Multi-Benefit Planning (to be published by Puget Sound Institute in winter 2020).

Some programs under analysis include:

- Fish, Farm and Flood (FFF) in [King](#) and [Snohomish](#) Counties – Integrated planning between and within agencies, tribes, and organizations

Related NTA
Name: [Snohomish County Farmland Protection Initiative](#)
2018 NTA ID: 2018-0872
Funding: None
Owner Organization: Snohomish County

¹⁶² <https://www.skagitcounty.net/Departments/NRFarmLegacy/milestones.htm>

- [Floodplains by Design](#) and the Skagit Hydrodynamic Model Project. This project uses a team of experts to look at three ecological indicators (farm, fish, floodplain) and establish a multi-benefit project that assessed impact and benefit of each project concept
- [Farming in the Floodplain](#) “seeks to increase understanding of agricultural needs in Pierce County, including the Clear Creek area, to the level of understanding of fish and flood needs. It supports overall agricultural viability in the Puyallup Watershed by documenting and advocating for the needs of farmers and farms so that they can be incorporated into projects that aim to balance flood, fish, and farm interests in the Watershed”.¹⁶³
- Whatcom County’s Floodplain Integrated Planning (FLIP); Skagit County’s Farm, Fish, Flood Initiative (3FI) and Snohomish County’s Sustainable Lands Strategy

4.5 Transfer of Development Rights (TDR), Purchase of Development Rights (PDR), Land Conservation and Local Infrastructure Program (LCLIP)

[RCW 43.362](#) authorizes regional transfer of development rights programs that encourage development in Urban Growth Areas while funding conservation easements. Transfer of Development Rights (TDR) is a voluntary, incentive- and “market-based tool that can help jurisdictions meet their growth and conservation goals and provide economic and environmental benefits to their communities. In a TDR program, a jurisdiction identifies areas it wants to conserve, known as ‘sending areas’, and areas where it would like to direct additional development and growth, known as ‘receiving areas’.

Sending areas are often agricultural, forested, or open space lands, and receiving areas can be parts of cities, unincorporated urban areas, and rural areas that have the infrastructure and services in place to support higher levels of growth. Landowners in sending areas can choose to sell their development rights (also known as credits) to developers who are interested in gaining additional development potential in receiving areas. The sending property becomes protected through a conservation easement that permanently prohibits residential development but still allows other land uses such as farming and forestry. Developers get bonus incentives like extra floor area or building height on their properties by purchasing and extinguishing [successfully completing] development right credits from the sending areas”.¹⁶⁴ According to the Washington Department of Commerce largest existing transfer of development rights program in the central Puget Sound region exists in King County, which has preserved over 92,000 acres of rural, agricultural and forest land since 1998.”¹⁶⁵

The Land Conservation and Local Infrastructure Program (LCLIP) “allows implementation of new infrastructure projects in exchange for placing development rights into new and planned development”¹⁶⁶. LCLIP allows cities to receive a portion of future county property tax revenue

¹⁶³ <https://cedar.wvu.edu/sssec/2018sssec/allsessions/370/>

¹⁶⁴ King County 2019

¹⁶⁵ Washington State Department of Community, Trade, and Economic Development 2008

¹⁶⁶ [Commerce Final Program Summary Report 2019](#)

for local infrastructure investments if they implement a program to obtain regional development rights. [RCW 39.018](#) authorizes the LCLIP program.

Purchase of development rights (PDR), currently in use in Whatcom and Skagit counties seeks to ensure the “protection of the county’s farmland, enhance the long-term viability of agricultural enterprises within the county and provide public benefit by retaining properties in permanent resource use.”¹⁶⁷ Whatcom County’s secondary objective with PDR is to preserve areas of ecological importance and ensure the protection of “forestry enterprises as well as support healthy ecosystem function throughout Whatcom County.” The PDR program does not transfer rights for development.

Puget Sound Regional Council’s (PSRC) [Regional Open Space Conservation Plan](#) provides several recommendations to increase adoption of PDR including “resetting conservation futures levies to their original rates, expanding the [Real Estate Excise Tax](#), and tapping into additional sources of funds such as the Natural Resources Conservation Service’s Agricultural Conservation Easement Program (see Section 3.3 for details) and the US Forest Service’s [Forest Legacy Program](#). Increasing bonding capacity against conservation futures (see Section 4.8.2 for details) can allow counties to accelerate easement purchase.”¹⁶⁸

Analysis

Six counties and ten cities in the Puget Sound region have adopted or conducted feasibility studies for TDR programs. Thirteen of these jurisdictions received EPA funding via Watershed Management Assistance Grants and the “Watershed Grant Program” to develop or enhance their programs.¹⁶⁹ Eight cities have evaluated the feasibility of LCLIP, but only Seattle has adopted the program.

Between 2011 and 2016 the Environmental Protection Agency (EPA)’s [National Estuary Program \(NEP\)](#) “Watershed grant program” awarded \$1.02 million to seven counties and cities to study, establish and implement TDR and LCLIP programs. The grants were administered by the Washington Department of Commerce and the Washington Department of Ecology.¹⁷⁰

Table 11. Recipients of the 2011-2016 Watershed Grant Program’s TDR and LCLIP Grants

Primary Recipient and Partner Organizations	Project Title	Funds Allocated
King County	Integrating Market-Based Tools for Rural Land Protection and Restoration (Kirkland and Totem Lake)	\$200,000
Mountlake Terrace	Mountlake Terrace Urban Redevelopment and Watershed Protection	\$37,500

¹⁶⁷ <https://www.whatcomcounty.us/573/Purchase-of-Development-Rights-Oversight>

¹⁶⁸ <https://indd.adobe.com/view/45d91790-49b7-4297-9642-033639dd85f5>

¹⁶⁹ [Commerce Final Program Summary Report 2019](#)

¹⁷⁰ <https://ecology.wa.gov/About-us/How-we-operate/Grants-loans/Find-a-grant-or-loan/Watershed-protection-restoration-grants>

City of Shoreline and King County	Implementation of Regional Program Promoting Urban Redevelopment and Watershed Protection	\$42,060
Skagit County and City of Burlington and Forterra	Establish Transfer of Development Rights Program	\$285,223
City of Tukwila and King County	Implementation of Regional Program Promoting Urban Redevelopment and Watershed Protection	\$42,060
City of Tacoma and Pierce County	Urban Redevelopment and Watershed Protection Through Land Conservation Program	\$44,500
Snohomish County	Managing Land Use	\$367,000

A 2019 report from the Puget Sound Institute analyzed the results of the grants by reviewing project documents and interviewing grant recipients including city, county and NGO representatives.¹⁷¹ Implementation of TDR and LCLIP has occurred with varying success rates. Several interviewees cautioned that grantors should only fund cities that have the “greatest likelihood” to succeed by having both city council and leadership support and have upcoming development projects on the horizon (such as light rail stations). One interviewee said that “Commerce [and other organizations] should work with cities as potential TDR receiving areas because cities are the key receiving areas for TDRs. Our county has only limited urban receiving areas and these areas will eventually be annexed to nearby cities.”

Interviewees said that there are many municipalities in Puget Sound would pursue TDR and LCLIP if they had the financial resources to do so. Respondents commented that future rounds of subarea planning-related grants should have a provision requiring incorporation of TDR and LCLIP into any projects. A summarized findings of the program successes and challenges is found below and detailed in Appendix B.

Program successes

King County is the most well-known and successful county in Puget Sound for TDR and LCLIP implementation. King County has an inter-local agreement with Seattle, Bellevue, Sammamish, Normandy Park and Issaquah. King County code allows development right sales for use in cities and unincorporated urban areas of King County. “Rural” development rights are generated from the permanent protection of rural land including land zoned for long-term agricultural use, forest-land and rural open space.

King County’s TDR program has protected over 144,500 acres of rural/resource land from 1998 to 2019 (King County 2019).

“Urban” development right areas are sending areas that generally abut rural land but falls within the urban growth areas of a municipality. These “urban” sending areas are areas that, if preserved, provide a buffer between rural areas in unincorporated King County and true urban areas (like cities). Rural transactions can occur between private individuals and through King

¹⁷¹ In 2019, Puget Sound Institute was tasked with analyzing the results of the grants. To do this, PSI analyzed over 350 documents including final summary reports, financial and progress reports, maps, meeting notes, economic analyses, and presentations provided by the grantees. PSI interviewed representatives of the grants to better understand the grantees’ perspectives on the successes, challenges and next steps for the projects. The full report is available [here](#).

County’s TDR bank. Urban development rights transactions do not currently occur through King County’s TDR bank.

Through its TDR bank, King County has sold 1,024 rights for use in Seattle. In the private market, 254 TDR credits have been sold amounting to \$5.8 million in revenue for King County.¹⁷² Many of the recent transaction for private market development rights in King County are for accessory dwelling units (ADUs), particularly in rural King County. Development rights are purchased so the property owner can increase the size of their ADU above 1,000 sq. ft., the maximum size allowed in rural unincorporated King County. The purchase of a development right allows the property owner to expand their ADU up to 1,500 sq. ft., depending on lot size and zoning area restrictions (slope, gradient, etc.).

Thurston, Snohomish, Kitsap and Pierce counties have all adopted TDR, to varying degrees. Snohomish and Pierce can also sell rights to Seattle, along with King County. Pierce and Kitsap counties have TDR banks. Snohomish County adopted a countywide TDR program in 2013 with plans to create a county-run bank.

In terms of cities, Seattle is the best example of a successful TDR and LCLIP program, with program revenues for Seattle estimated to exceed \$27 million¹⁷³. Seattle has exceeded its development goal of using 800 TDR credits, as specified in the inter-local agreement between the city and King County for LCLIP.¹⁷⁴

Several cities received funding to scope revenue projects and market demand forecasts during the grant period. Some cities, like Shoreline and Tacoma, have further allocated funds to update their previous feasibility studies by hiring Forterra and ECONorthwest in 2019. These studies may result in different rate calculation, code section refinements, or other fine-tuning of their TDR programs, according to Forterra and ECONorthwest. Results of these studies are not yet available.

Program challenges

Some of the challenges facing counties considering implementation of TDR programs involved zoning designations of land for sending and/or receiving areas, a lack of demand in receiving areas (generally urban centers) and political opposition. Three main challenges faced by the cities that received Watershed grant funding to study TDR implementation are revenue uncertainty, particularly from LCLIP, lack of market demand for TDR, and political and

Related NTA

Name: [Snohomish County Farmland Protection Initiative](#)
2018 NTA ID: 2018-0872
Funding: None
Owner Organization: Snohomish County

Related NTA

Name: [Conserve High-Quality Agricultural Lands](#)
2018 NTA ID: 2018-0506
Funding: None
Owner Organization: North Olympic Land Trust

¹⁷² <https://www.kingcounty.gov/services/environment/stewardship/sustainable-building/transfer-development-rights/market-info/sales-data.aspx>

¹⁷³ <https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/SouthLakeUnion/OPCDLCLIPFundingPlan.pdf>

¹⁷⁴ https://www.kingcounty.gov/~media/services/environment/stewardship/sustainable-building/documents/partner-cities/SeattleKC_Interlocal.ashx?la=en

administrative capacity and will. Overall, several cities and counties mentioned the following challenges:

- 1) Competing priorities in urban planning, particularly developing affordable housing, are barriers to widespread implementation of TDR and LCLIP. When developing TDR programs, it is important to design new incentives in such a way as to avoid creating competition between conservation goals and affordable housing goals.
- 2) Despite advocacy organizations describing LCLIP as “risk-free” for the adopters, there is a general perception that LCLIP programs are complex, and there is a lack of understanding around 1) a municipality’s obligations when adopting the program and 2) projected revenue for a municipality if they adopt LCLIP.

An interviewee from one city stated that there is “political trepidation” causing hesitation of full-scale adoption. Other interviewees also said that certain city council members believed that their cities would have to pay the funds back to the lending county for LCLIP. One interviewee found it hard to believe that LCLIP is a “no-strings-attached” funding source for infrastructure improvements. Education is lacking around LCLIP across the region, particularly regarding whether or not there is a penalty for early withdrawal. More details on these challenges can be found in PSI’s synthesis report.¹⁷⁵

Landowner outreach and education

Landowners vary in their receptivity to the TDR programs, according to city and county representatives who were interviewed for the Watershed Lead Organization synthesis report (PSI 2020). TDRs are a tool supporting the adoption of conservation easements (see section 4.3 for details) and do not interfere with other landowner incentive programs like current use taxation (see section 3.14 for details). For farmers in certain counties, extinguishing their rights is not a “hard sell” if they are pleased with the monetary value of their land. In other counties, particularly King County, respondents estimated that around 50% of landowners who are contacted are interested in selling an easement but their **willingness depends on the appraisal of property values**. Landowners may not be satisfied with the appraised value and may hold off on selling. However, TDR programs do allow for a ‘hardship clause’ for a landowner allowing them to re-negotiate the sale value of land over time.

Interviewees confirmed that the best methods of outreach regarding TDR and similar programs is **long-term relationship building and word-of-mouth from neighbor to neighbor**. In King County, Water and Land Resources Division Basin Stewards cultivate relationships with landowners and act as the County’s “boots-on-the-ground staff” providing technical service to do habitat protection and restoration projects. A representative from another county said that if data were available, “the county could map all active farms in rural and resource areas of the county and [then connect with landowners to] provide opportunities for landowners to learn about the benefits of our TDR program.” Cities, counties and regional agencies can assist with education,

¹⁷⁵ <https://app.box.com/folder/88187384742>

negotiations, and understanding and meeting the expectations of landowners to encourage sales, interviewees said. Additionally, organizations need to continue to frame the benefits of TDR and similar land conservation programs to demonstrate how agricultural and forest landowners can use the sale of development rights to, for example, **invest in their land for future generations**.

Moving Forward with TDR and LCLIP

In order to successfully implement TDR and LCLIP, a series of steps were identified which summarize the interviewees' responses. The steps need to occur sequentially as each "piece builds upon the past piece", as one interviewee described. The steps are:

- 1) **Funding:** resource-constrained and cash-strapped cities and counties need funding capacity to pay for TDR and LCLIP (ensure Near-Term Actions are funded).
- 2) **Feasibility Studies:** city and county officials should rely on technical experts to conduct feasibility studies as most do not understand the program's complexity and how to optimize the tools.
- 3) **Advocacy and Support:** cities and counties need advocacy and support, technical expertise to draft any legislation, and "champions on city councils". Without these, failure is likely.
- 4) **Policy and Political Guidance:** cities and counties need guidance and shepherding through short-lived political opportunities and policy windows. Failing to capitalize on continued momentum, or dragging a process out too long alienates supporters and the programs lose relevance to other issues – which are just as important and urgent for elected officials.
- 5) **Market-Based Support:** Once a program is adopted, cities need market-based support. According to the interviewees, it is not a "if you build it they will come" scenario — cities need help cultivating their own markets through outreach and advertising. Moreover, a relationship must be established between the market players to connect them and help to facilitate transactions (using the development rights banks like those maintained by King and Pierce counties helps).

City and county respondents who were interviewed for the Watershed Lead Organization synthesis expressed several additional recommendations which are summarized below.

#1: Enhance Education, Workshops and Outreach Efforts

More education efforts could be helpful to address some of financial, legal and political complexities around LCLIP. Additional outreach and education is needed to connect municipalities with landowners. These efforts should include:

- Hosting a workshop with planners, advocacy groups, city and county representatives, and elected officials to educate them on TDR and LCLIP
- Convening a working group of mediators (potentially comprised of local, trusted organizations like conservation districts) to cultivate, manage and sustain landowner-municipality relationships to facilitate transactions.

- Continuing to direct landowners, municipalities, and other stakeholders to Commerce’s [Growth Management website](#) for information on available resources and who to contact for expert assistance.

#2: Assess the Market Projections of the Feasibility Studies

Real estate market fluctuations (such as future market demand in areas with to-be-completed light rail stations) have potentially made the recommendations and data provided in the feasibility studies conducted in 2011-2013 outdated and inaccurate, according to representatives interviewed.

Recommendation: Administer a survey to gauge whether city and county representatives need another round of feasibility studies. A survey could assess whether they believe if their previous studies are still accurate. If results indicate that another feasibility study is warranted, selectively fund cities that have the right enabling conditions, such as political support, to be recipients of funding. Funding cities that have political opposition may be a non-starter and an inefficient use of funds because a feasibility study is most useful for a city already on the path to implementation.

#3: Evaluate the Current Parameters of the Region’s TDR Programs

The success of TDR varies widely depending on city and county. What works in some regions may not work in every region. For example, the successes of Seattle’s rural sending area-to-urban receiving area TDRs for height density bonuses may not be replicable in areas with less demand for dense development – in those areas TDR may be more effective for rural-to-rural/open space transfers, or for other types of development like accessory dwelling units. In other counties, like Thurston, one challenge identified is that the County currently restricts sending areas to areas zoned for Long-Term Agriculture.

Recommendations: Convene a series of workshops with city and county representatives to address what they consider some of the successes and barriers affecting implementation of TDR in their respective areas, focusing on current zoning and code regulations. Include advocacy groups, development industry professionals, landowners in sending areas, or other stakeholders. Items to address include:

- Innovative uses of TDR (like for accessory dwelling units) and how may these be effectively implemented in receiving areas with less demand for height-based density bonuses
- Changes to regional TDR codes that allow for opening up or re-zoning of sending areas
- Improving the TDR section on the existing [MRSC website](#) and continuing to promote the [Growth Management section](#) of Commerce’s website as a “one-stop shop” for information for municipalities
- Establishing more inter-local agreements (ILAs) or agreements that allow two jurisdictions “to enter into agreements to jointly exercise powers, privileges or authorities exercised or capable of being exercised singularly.”

4.6 Compensatory Mitigations Programs – Mitigation Banks and In-Lieu Fee Programs

Third-party compensatory mitigation projects seek to mitigate negative ecological effects on aquatic resources from development projects that have unavoidable impacts on those resources. Section 404 of the Clean Water Act established a program to regulate the discharge of fill material into waters of the United States (including wetlands). The ‘Compensatory Mitigation for Losses of Aquatic Resources’ rule ([73 FR 19594](#)) authorized in 2008 by the EPA and the Army Corps of Engineers, authorizes two types of third-party compensatory mitigation mechanisms: mitigation banking and in-lieu fee (ILF) payments (Kinney 2020). The ‘Compensatory Mitigation for Losses of Aquatic Resources’ rule builds upon earlier in-lieu fee regulations. This rule clarified the “planning, implementation and management of compensatory mitigation projects by emphasizing a watershed approach” and required “measurable, enforceable ecological performance standards”.¹⁷⁶

Mitigation or credit-based frameworks provide flexibility in meeting regulatory obligations by allowing regulated actions to be offset at other sites or by other parties.¹⁷⁷ According to a 2017 report from the Alberta Land Use Institute out of Alberta, Canada, a distinct feature of US-based compensatory mitigation programs, as opposed to programs in British Columbia and Alberta is the flexibility of US programs to involve “private third parties to assume offset obligations from developers... these in-lieu sponsors have the opportunity to customize program features to particular ecological, economic, or social conditions.”¹⁷⁸ In Puget Sound, organizations include the Hood Canal Coordinating Council and others.

4.6.1 Mitigation Banking

In Washington, the Department of Ecology¹⁷⁹ administers mitigation banks to achieve a ‘no-overall-net loss’ in the “amount and function of Washington’s remaining wetland”.¹⁸⁰ Mitigation banks allow for a development project to “offset unavoidable impacts to wetland” by letting a permittee purchase credits from Ecology’s banks. Ecology, alongside the Army Corps of Engineers certifies and regulates the wetland mitigation banks in Washington.

Table 12. Department of Ecology-Approved Mitigation Banks

Bank Name	County	Acreage	Sponsor
Columbia River	Clark	155-acre	Clark County Mitigation Partners LLC

¹⁷⁶ [2000 In-Lieu-Fee Mitigation Guidance under CWA Section 404](#)

¹⁷⁷ Kinney 2020

¹⁷⁸ Alberta Land Institute, In-Lieu Payments and Fees as a Mechanism of Environmental Compensation. 2017

¹⁷⁹ Ecology additionally offers the Combined Water Quality Funding program that includes both grants and loans for non-point source-water, watershed, and riparian/wetland protection. Further details can be found in Puget Sound Institute’s B-IBI BPA (Kinney 2020) and on the Ecology [website](#).

¹⁸⁰ <https://ecology.wa.gov/Water-Shorelines/Wetlands/Mitigation/Wetland-mitigation-banking/Mitigation-bank-projects>

East Fork Lewis	Clark	113	East Fork Lewis Mitigation Partners, LLC
Terrace	Clark	113	Terrace Mitigation Bank, LLC
Coweeman	Cowlitz County	302	Habitat Bank, LLC
Moses Lake	Grant	12.2	WSDOT Environmental Services Office
Weatherwax	Grays Harbor	120	City of Ocean Shores
Keller Farm	King	75	Habitat Bank, LLC
Springbrook	King	129	WSDOT Environmental Services Office
Chehalis	Lewis	177	WCEI Chehalis MB LLC
North Fork Newaukum	Lewis	230	WSDOT Environmental Services Office
Long Beach	Pacific	76	LBMB, Inc.
Nookachamps	Skagit	310	Nookachamps, LLC/Wildlands, Inc.
Skagit	Skagit	396	Clear Valley Environmental Farm, LLC
Paine Field (Narbeck Wetland Sanctuary)	Snohomish	59	Paine Field Airport
Skykomish	Snohomish	260	Skykomish Habitat
Snohomish	Snohomish	199	Habitat Bank, LLC
Blue Heron Slough Conservation Bank	Snohomish	354	Port of Everett ¹⁸¹
Meadowcroft	Stevens	14	Wetlands Redux
Lummi	Whatcom	1,945	Lummi Nation

Table 13. Department of Ecology Banks Under Review

Bank	County	Acreage	Sponsor	Public Notice Issued
Wapato Valley	Clark	876	Plas Newydd, LLC	2015 (proposed establishment 2020 ¹⁸²)

¹⁸¹ The Blue Heron Slough Conservation Bank arose from a settlement between Commerce, NOAA, Ecology, and the Suquamish and Tulalip Tribes against Jeld-Wen, Inc., Kimberly Clark Corp., and Weyerhaeuser for their actions that caused natural resources damages (release of dangerous chemicals into Port Gardner Bay) under the Model Toxics Control Act. The result of the decision was the creation of the conservation bank in Port Gardner Bay, near the Port of Everett.

¹⁸² K. Jorgensen, personal communication, February 2020

Thom	King	66	Smith Court, LLC	2018
Upper Clear Creek	Pierce	28	Port of Tacoma	2017

Analysis

Banks differ in the types of mitigation habitat available as well as the type of landowner. For example, the [Wapato Valley Bank](#), in Ridgefield, WA has been actively in the approval process with Ecology since 2015 and is to be established in 2020¹⁸³. According to representatives from the Wapato Valley Bank, who agreed to be interviewed for this analysis, the bank will offer credits for fish habitat, wetlands and rare Oregon White Oak Habitat. The Wapato Valley Bank is unique in that it is owned by the landowner out-right as opposed to banks that are generally owned by a land trust or outside entity. Additionally, the bank offers mitigation credits for the Oregon White Oak which differs from a wetland-specific restoration credit. The mitigation bank required review of an inter-agency review team comprised of eight federal state and local agencies following restoration activities on the landowner’s property. The eight agencies are comprised of representatives from Ecology, EPA, national fisheries, Department of Fish and Wildlife, Clark County and Indian Tribes.

Ecology’s Mitigation Banking Credit Guide¹⁸⁴ quantifies the functions of a bank and how many credits a bank can receive over time. The Guide defines credits per type of mitigation activity in wetlands and uplands. According to the Wapato Valley Bank, the approval process conducted by the Army Corps of Engineers is lengthy and there is a “capacity issue” at the inter-agency review team level. The inter-agency review team, particularly the Army Corps, is “under-represented and under-resourced” leaving prospective banks “waiting three years to [just] get a prospectus.”¹⁸⁵ Similar agency challenges are noted below regarding in-lieu fee programs.

4.6.2 In-Lieu Fee Programs

Analysis

According to a 2017 report from the Alberta Land Institute¹⁸⁶, most literature about the US-based compensatory mitigation system are from prior to the 2008 rule, and this “allows speculation and divergent views on the impact of those reforms”. In particular, some literature suggests that, a few years following the 2008 rule it was “too soon to tell” the effectiveness of in-lieu fee mitigation programs in the US and “much depends on implementation at the [Army Corps] district level.” A 2001 Government Accountability Office report states that the “officials

¹⁸³ K. Jorgensen, personal communication, February 2020

¹⁸⁴ <https://fortress.wa.gov/ecy/publications/SummaryPages/1206014.html>

¹⁸⁵ K. Jorgensen, personal communication, February 2020

¹⁸⁶ <https://www.albertalandinstitute.ca/research/research-projects/project/measuring-conservation-offsets-in-lieu-payments-and-fees-as-a-mechanism-of-environmental-compensation>

in more than half of those districts also acknowledged that they have not tried to assess whether mitigation efforts have been ecologically successful. As a result, the Corps cannot be certain that in-lieu-fee mitigation has been effective”.¹⁸⁷

A 2019 report from the Puget Sound Institute¹⁸⁸ analyzes one Puget Sound in-lieu fee program, the Hood Canal Coordinating Council’s (HCCC) program, following their receipt of a Department of Ecology-administered National Estuary Program ‘Watershed Protection and Restoration grant¹⁸⁹. HCCC operates one of the three ILF mitigation programs in Puget Sound. HCCC became the authorized sponsor of an ILF mitigation program in 2012 and HCCC used the grant funding to identify specific mitigation receiving site opportunities in each of the four Hood Canal service areas. The ILF program allows a landowner to voluntarily “make a one-time payment to the ILF program instead of implementing their own mitigation project. The payment funds will be used by HCCC to implement mitigation projects that are strategically sited with respect to a watershed’s ecological needs...to meet the goal for no net loss of aquatic resource functions.”¹⁹⁰

HCCC identifies mitigation areas by developing a roster list of individual mitigation receiving sites. Suitable sites (both marine and freshwater wetlands) are identified for mitigation and added to the roster list following investigation (GIS analysis and field observation). HCCC has successfully implemented several compensatory mitigation projects, including selling of credits to the Washington State Department of Transportation for a [highway widening project in Belfair, WA](#). HCCC used the sale to purchase a 17-acre wetland with the credits with a goal of restoration. In 2017, following the [\\$6.9 million fee](#) paid by the Navy in 2012 to offset the damages caused by their Explosives Handling Wharf construction project, HCCC [bought](#) another site, 6.7 acres near Kitsap County’s Anderson Landing Preserve on Hood Canal, for the first saltwater mitigation site in Washington.

According to representatives of HCCC, an unexpected positive impact of the ILF mitigation program is that private landowners in the target region who intend to make modifications to their own property (such as shoreline projects) that may impact nearby wetland habitat have determined how to avoid the in-lieu fee by modifying the extent of their project (such as location, size, materials, etc.). This has not deterred landowners from impacting wetlands entirely, but avoiding having to pay a mitigation fee may reduce the ecological damages caused because a project is scaled down.

According to HCCC, the benefit of education and outreach around the ILF campaign has served to make landowners more aware of the impacts their land and property management may have on wetlands.

As noted in the mitigation banking section, in-lieu fee programs like HCCC’s have faced challenges with the approving agency, the Army Corps of Engineers, because of staffing and

¹⁸⁷ Government Accountability Office. Assessments Needed to Determine Effectiveness of In-Lieu-Fee Mitigation, 2001. Retrieved from: <https://www.gao.gov/products/GAO-01-325>

¹⁸⁸ Wright, Watershed LO Synthesis, PSI 2019. <https://app.box.com/folder/88089785791>

¹⁸⁹ <https://ecology.wa.gov/About-us/How-we-operate/Grants-loans/Find-a-grant-or-loan/Watershed-protection-restoration-grants/Grant-awards>

¹⁹⁰ [ILF Program](#)

resource constraints the Corps is facing. The Corps assists in approving, monitoring and tracking the status of the projects by quantifying credits sold or generated and their impact.

A secondary challenge for HCCC's ILF program is to identify suitable private property for sale, particularly marine shoreline. Landowners who own suitable sites must be interested in selling their land. As landowners tend to value certainty when buying their land and are only interested in pursuing the project in a limited duration of time, if a project takes too long to materialize, then that property may no longer be available — particularly if the project is delayed by agency delays.

To improve the effectiveness of mitigation banks and ILF programs, literature and primary sources indicate the following recommendations:

- Capacity and staffing issues at the approving agencies (such as the Army Corps) and from members of the inter-agency review team delays the establishment, approval and implementation process of new banks and programs. This can lead to missed opportunities on potential projects on land available offered by willing landowners (Wapato Valley Bank)
- The Alberta Land Institute recommends that “robust mechanisms to assure transparency and accountability, including the use of general government accountability tools, and public reporting” should be used, particularly to avoid any financial issues
- The Alberta Land Institute states that “[mitigation] banking and ILF program design should include extensive stakeholder and expert involvement” throughout the design and through the monitoring stages of a project¹⁹¹

5. Forestry Management Support and Programs for Working Forests

Forestry management programs can help to maintain working forests, a critical component of the Working Lands Strategy of the Land Development and Cover Implementation Strategy. According to the DNR¹⁹², roughly 57 percent of the 22.1 million acres of forestland in Washington is in public ownership, and 43 percent is in private ownership. Approximately 6.5 million acres, or 29 percent, are categorized as nonindustrial private forest land owned by approximately 215,000 NIPF landowners. Of those landowners, approximately 7,900 were receiving educational or technical assistance.

Land ownership patterns differ between Eastern and Western Washington. Western Washington unreserved timberlands are nearly 40 percent held by industrial private landowners, compared to 14 percent in Eastern Washington. Federal lands comprise a much larger proportion in Eastern Washington as compared to western Washington. Tribes also manage a significant amount of the Eastern Washington forest landscape. The below sections detail non-federal and state programs, policies and initiatives to conserve private forest (see [section 3](#) for information on several state

¹⁹¹ Alberta Land Institute, In-Lieu Payments and Fees as a Mechanism of Environmental Compensation. 2017. Retrieved from: <https://www.albertalandinstitute.ca/research/research-projects/project/measuring-conservation-offsets-in-lieu-payments-and-fees-as-a-mechanism-of-environmental-compensation>

¹⁹² https://apps.fs.usda.gov/nicportal/temp/pdf/sfs/naweb/WA_std.pdf

and federal private forest grants). The DNR released the 2019 Forest Action Plan with the following goals, strategies and recommendations related to the support their Forest Stewardship Assistance projects are providing to small, NIPF landowners.¹⁹³ Those strategies that align with the Working Lands component of the Land Development and Cover Implementation Strategy include:

- Reducing the rate of forest conversion
- Restore and maintain forest productivity and carbon sequestration value for climate change mitigation
- Identify and protect priority species and ecosystems
- Restoring “ecological integrity, appropriate density, structure and species”
- “Partner with multiple land owners and managers to achieve landscape-scale forest health restoration objectives”
- Conserve forested wetlands
- Remove barriers to fish passage
- Protect productivity and function in Western Washington forests

DNR also supports Forest Legacy Program projects, which “include the acquisition of fee or conservation easement interest in high-value working forestlands” or priority areas identified within the program’s ‘Assessment of Need’. Criteria for these high-priority areas include parcels that:

- Are at high risk of conversion
- Have water quality, fish, and wildlife habitat concerns
- Have public recreation, scenic or cultural significance
- Have are transaction-ready (e.g. a willing landowner)

DNR works to address the conversion of high-need parcels by acting in a lead role to support programs such as transfer of development rights, tax incentives, the DNR Natural Areas Program, easements and the Washington Wildlife and Recreation Program ([see section 3.15](#)). Several established and emerging programs, incentives and policies that support working forestland are described and analyzed in the sections below.

5.1 Community Forests in Washington

Community forests, defined as having “shared residence, cultural or political jurisdiction”, include “indigenous community forests and town or municipal community forests” (Urgenson 2017). Community forest programs have been shown to increase social and economic benefits to the local communities around them (“wealth creation”), provide access to land and its resources, encourage ownership and sharing of responsibility, and build conservation values in participants (Lyman 2014). Community forests support the Working Lands strategy of the Land Development and Cover Implementation Strategy.

¹⁹³ <https://www.stateforesters.org/districts/washington/>

Nisqually Community Forest

In 2008, The Nisqually Land Trust, a 501(c)(3) nonprofit with a mission to acquire and manage critical lands to benefit water wildlife and people of the Nisqually River Watershed began to initiate work on the development of a community forest. In 2011, the Trust, Nisqually Tribe, Nisqually River Foundation (NRF), and Northwest Natural Resources group, with a planning grant from the National Park Service, convened an advisory group of watershed residents and other stakeholders to engage in “series of conversations about the future of the watershed’s vast network of private forests”. In 2013 the group completed Phase I of the project releasing a summary report and timeline detailing the group’s vision for a 20,000 to 30,000 acre community forest designed to provide forest products, recreation, education, and job opportunities, and environmental benefits such as clean water and healthy wildlife habitat. In 2014, the Nisqually Community Forest (NCF) was formed as a wholly owned subsidiary organization within the existing Nisqually Land Trust (Urgenson 2017). In 2016, the Nisqually Community Forest completed its first property acquisition of 640, followed by recent purchases to a total of 1,920 acres.

In 2015, NRF, the Nisqually Tribe, the Trust, along with partnering organizations Northwest Natural Resource Group, Earth Economics, Washington State University, and DNR received an \$181,599 grant from the Washington Department of Commerce to complete ecosystem services transactions and create an ecosystem services market for the community forest. The grant was to “establish a framework for marketing the environmental and economic benefits that intact resource lands provide, such as habitat protection and reduction in surface water runoff. Providing landowners with compensation for the ecosystem services produced by their land can encourage them to keep those services intact.” The grant also established the NCF to return local forest lands to local control.

Related NTA
Name: Nisqually Community Forest – Acquisition and Stewardship
2018 ID: 2018-0819
Funding: \$3,830,751.00 (Ecology, RCO)
Owner Organization: Nisqually Land Trust

The partners’ ecosystem services-focused grant-funded pilot project resulted in protecting 36.4 acres of land at [Lake Saint Clair](#) near Lacey, WA, as a perpetual easement, held by the City of Olympia, on property purchased by the Tribe. The easement sets minimums for the number of trees and the average basal area per acre that must be maintained on the property and institutes protection of the ecosystem services that benefit the City of Olympia’s drinking water supply. “This ecosystem services purchase was the first of its kind and has paved the way for future purchases in other areas” (Commerce 2019). The forest used the grant funding to acquire more land and to develop forest management scenarios including prioritizing target acquisitions. Additional land purchases have been funded through the Puget Sound Acquisition and Restoration Program and the Washington Salmon Recovery Board, administered by the RCO, and from the Pierce County Conservation Futures program, the U.S. Forest Service Community Forest Grant, and \$500,000 from the Puget Sound Energy Foundation’s Environmental Partners Program.¹⁹⁴

¹⁹⁴ <https://nisquallylandtrust.org/pse-foundation-awards-land-trust-500000-for-nisqually-community-forest/>

In the first carbon credit sale in Washington, NCF received credits from its ecosystem services transaction and is now looking at “other ways to quantify the carbon capture potential”¹⁹⁵ of the forest to model how much carbon will be retained on the property and how much the NCF can sell those credits for if they choose to. One method of carbon capture quantification, offered by the [California Carbon Air Resources Board](#) has been under consideration. NRF is actively engaging with different organizations that do ecosystem valuation, in order to sell their credits by summer 2020, with a goal of focusing on carbon modeling.

Additionally, the Nisqually Tribe received a \$14 million Clean Water State Revolving Fund loan to help buy and protect land in the Mashel River sub-basin which NRF is helping to manage.¹⁹⁶ NRF is also managing a \$2.8 million stream flow management grant to purchase more community forest land. NRF is actively looking at acquiring some acreage of nearby timber-land that is up for auction and looking for funding to conduct this transaction. NRF is also considering applying for funding through the Puget Sound Salmon Recovery Council to help support Chinook and steelhead in the Nisqually watershed¹⁹⁷.

Mt. Adams Community Forest

The Mt. Adams Resource Stewards (MARS) manage a community forest in the Mt. Adams region of southwest Washington, the first non-profit, locally-owned, community forest project in the state of Washington. A recent study¹⁹⁸ published by the Community Forest Trust (2019) for the DNR examines the history, economics, and future of the

In 2011, MARS purchased a 90-acre tract outside of the unincorporated community of Glenwood, WA, the first piece of the MACF. In 2014, MACF expanded to add a nearby 299-acre forest. From 2014 to 2017, MARS secured stewardship agreements with the Fish and Wildlife Service to conduct forest restoration activities on the adjoining 7,000-acre Conboy Lake National Wildlife Refuge. MARS is additionally looking into acquiring 607 acres nearby.

Based on timber harvests and stewardship activities on the community forests, MARS has estimated that it has produced “\$3.25 million in direct timber receipts and contracts, 59 months of FTE direct and indirect jobs at the median wage rate and \$8 million created through countywide economic expansion within Klickitat County. Wages generated include the equivalent of 5.5 months of FTE employment opportunities at the median county wage rate and a countywide economic multiplier of 2.83 which includes all direct, indirect Mt. Adams Community Forest (MACF) and induced effects.” In their analysis, MARS cites American Farmland Trust’s study that considers, for every \$1.00 created by working and open space, communities saved an average \$.63, more than accounting for the deficit created by residential development (American Farmland Trust 2016). The study remarks that “as open and working lands are lost to development, this [economic] surplus is eroded.”

¹⁹⁵ J. Monaghan, personal correspondence, July 2019

¹⁹⁶ <http://ecologywa.blogspot.com/2018/01/funding-supports-jobs-and-clean-water.html>

¹⁹⁷ J. Monaghan, personal correspondence, July 2019

¹⁹⁸ The Economic Impact of the Mt. Adams Community Forests, 2011-2018

Based on their modeling of wildfire impacts, MARS estimates that the creation of and stewardship activities related to the community forest and adjoining properties “correspond to a 1 percent reduction in overall risk of wildfire damages across the landscape” in an area with a “high or extreme risk for damage or loss from wildfire” within the Wildland Urban Interface (McLaughlin 2007). MARS also notes that “the carbon storage on the community forest is equivalent to offsetting the annual emissions of 72 cars” according to EPA CO₂ emissions equivalencies. With the current “harvest regime, in 2035, forest carbon stocks in the [MACF] are expected to store between 4,535 and 5,459 metric tonnes of CO₂ in one tract, and between 1,859 and 2,581 metric tonnes of CO₂ in another tract. The economic analysis of MACF is one example that demonstrates the potential for multiple direct and indirect economic, social, and community benefits of the establishment and stewardship of community forests in Washington.

Teanaway Community Forest

The Teanaway Community Forest’s 50,241 acres was established in 2013 through the DNR’s Community Forest Trust legislation with direction from a large group of stakeholders working together as part of the Yakima Basin Integrated Water Resource Management Plan. The DNR manages the community forest in cooperation with the WDFW (and is the decision-making authority) but considers input from the Teanaway Community Forest Advisory Committee (Committee). The Committee includes representation from Ecology, local community members, conservation organizations, the Yakama Nation, the Kittitas County Commission and local agricultural interests. “Ongoing stream restoration and trail maintenance projects rely on biannual budget approvals and it is uncertain whether funding will remain consistent in the future. This uncertainty makes small earnings from recreation passes (like Discover Passes), grazing leases, and timber receipts (to fund management activities) as well as agency and partnership coordination important sources of revenue to support ongoing forest management.” (Urgenson 2017). The DNR pays revenue in lieu of taxes and additional revenues come from three campgrounds, recreation passes and grazing rights. Unlike several of the other community forests analyzed, the Teanaway does not receive revenues from timber management or sales. The Teanaway will undergo organizational reevaluation in 2025.

Analysis

An analysis of six community forest projects in northern New England using a rural wealth creation framework, developed by the Rural Wealth Creation Initiative (Hoffer and Levy 2010), considers the capital and wealth that community forests generate. The Rural Wealth Creation Initiative includes the following components:

1. Financial capital (revenue from timber, recreation fees, etc.)
2. Natural capital (biodiversity, carbon storage, water and air quality)
3. Social capital (communal ownership, volunteering and growing community cooperation),
4. Individual capital (jobs, increased individual well-being, cultural and spiritual connection and sense of place, etc.)
5. Built capital (recreation trails, campsites, education facilities, etc.)

The study found multiple forms of capital and wealth generated depending on the type of project and recommends creating long-term longitudinal studies in other community forests to determine their creation of these forms of wealth and capital. Applying these forms of wealth and capital to the community forests in the Pacific Northwest would generate definitive evidence as to the benefit of creating and growing the region’s community forests and preserving working forestland (Lyman 2014).

Another study from the University of Washington analysis of twelve North American community forests (Urgenson et al. 2017), including the Nisqually Community Forest and Teanaway Community Forest in Washington, describes some of the “enabling conditions and barriers” of the selected community forests. Several of these components link to other technical and financial assistance programs detailed elsewhere in this document.

Table 14. Summary of Funding and Revenue Generating Conditions and Barriers in Community Forest Programs (Urgenson et al. 2017)¹⁹⁹

Enabling condition(s)	Barrier(s)
Avoiding debt during project acquisition can facilitate greater management options at beginning of forest establishment	Forest type, condition, history of long term industrial management, and lack of local markets/infrastructure may limit potential economic returns from timber management, particularly in the near term
Diverse public and private funding streams are used to support community forest acquisition and management (see section 4.8 for details).	The capacity for private funding of community forests may be less certain in areas of the Pacific Northwest than in the Northeast where projects have benefited from wealthy donors, lower property values, and more private land in conservation. ²⁰⁰
Conservation easements are commonly used to reduce acquisition costs and provide attractive insurance for grant-making organizations. Each of the community forests analyzed in the study have several working forest and/or wildlife conservation easements”. (see section 3.1 for more on conservation easements)	It can be challenging to build local support for a community forest project without the potential for an economic return from forest management in the near term – making easements an attractive option.
Current use tax programs “significantly reduce property taxes on forestlands and allow community forests to maintain broad public support through continued tax payments”. (see section 3.14)	The potential for commercially viable harvest of non-timber forest products may be unknown.
State and federal grants are available to community forests including NRCS’s EQIP and Conservation Stewardship Program (see Sections 3.5 for details).	Funding availability, administrative burden, timeline of payment, landowner willingness may present barriers to successful grant-funded projects.

DNR’s 2017 Forest Action Plan²⁰¹ describes challenges and recommendations to keep working forests working. These include programs like the Forest Stewardship Program, technical

¹⁹⁹ Urgenson et al. 2017

²⁰⁰ A 2020 literature review of private funding sources outside of Washington, including pay-for-success programs, ecosystem services and conservation futures is available from Northern Economics here:

<https://app.box.com/s/c8dsxlp189lman0lt7gczgihkluplgx>

²⁰¹ https://www.dnr.wa.gov/sites/default/files/publications/rp_2020actionplan_handout.pdf?ko7ffe

assistance from the Washington State University Extension (see [section 6.3](#)), the Family Forest Fish Passage Program (see [section 3.16](#)) and market-based mechanisms to generate income generations for forestland owners (such as biomass sales and ecosystem services).

5.2 Market-Based Mechanisms for Forest Conservation

The potential for market-based mechanisms to support the protection of ecologically important lands, a key action for the Land Development and Cover IS, has yet to be realized. These programs exist outside the scope of established federal or state-funded programs (although they do have aspects that involve federal and state agency participation). They are in varying stages of applicability to the Land Development and Cover IS, but warrant consideration by the restoration community for their ability to advance conservation through unique public/private sector partnerships, shared resources and emerging financial mechanisms. To be fully realized, however, several of these programs (such as carbon sequestration for forest landowners) require a significant shift in the market for ecosystem products – a reality that may take time and legislature support to materialize.

5.2.1 Ecosystem Services

According to the DNR, “forest resource lands...provide crucial ecosystem services (including water quality and carbon sequestration) to those communities – services which are likely to become increasingly valuable in the context of emerging ecosystem services markets”. However, forest conservation through ecosystem services and market-based tools is difficult to quantify. Literature suggests that the pricing of ecosystem services, particularly those that working forestlands provide, including carbon sequestration, freshwater, critical habitat for animal, fire protection (when properly thinned and prescribed burned²⁰²) are “fundamentally mispriced” (Forest Trends Impact Report 2019). Economic research presents wide-ranging values for forest-related ecosystem services. However, despite “incomplete estimates...the value of the annual flow of ecosystem services to residents of the Puget Sound is...in the billions of dollar annually” (Earth Economics). According to a WSU Extension report the “benefits of maintaining a [private] forest may be worth far more than the developer paid...” which can lead to “synchronizing private and social optimalities”.²⁰³

At a 2019 conference sponsored by Forest Trends, a non-profit that seeks to meet the “challenges facing forest conservation and promote market-based approaches to forest conservation”,²⁰⁴ attendees produced several recommendations to increase the contributions of markets to forest conservation:

- Increase the interest in natural resource investments on behalf of the insurance industry and impact investors by connecting data, strategic roadmaps, and implementation tools
- Manage forests for multiple uses including resource extraction (timber) but also for carbon and other conservation practices

²⁰² <https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/eap.2104>

²⁰³ [Financial Analysis Principles and Applications for Private Forest Lands. WSU Extension Manual EM030E.](#)

²⁰⁴ <https://www.forest-trends.org/who-we-are/mission-and-history/>

- “Build unusual coalitions” between all of the players (current and future) in the conservation industry ranging from government to universities to investors to philanthropists to the tech sector – and beyond – to build strong partnerships for new investment

DNR’s 2017 Forest Action Plan likewise provides recommendations to address the data and program gaps in market-based conservation including:

- Improve on quantitative data regarding “economic viability” to address the “low level of decision certainty for specific strategies”
- Address data gaps in landscape-scale project climate change scenarios that will affect future valuations of forest landscape

5.2.2 Forest Resilience Bonds, Pay for Success and Equity Investing

Other programs that can support Land Development and Cover Implementation Strategy actions such as supporting working forests and protecting ecologically important areas include forest resilience bonds, private equity investments, ‘Pay for Success’ conservation projects, and carbon sequestration. These will be briefly described below as relevant to the Land Development and Cover Implementation Strategy. A 2020 study from Northern Economics explores market-based mechanisms outside of Washington State and should be referenced for further examples and analysis of these topics²⁰⁵.

Literature (Woolworth et al. 2019) describes forest resilience bonds (FRBs) as “financials tools that enable private investment for forest enhancements on public land”. FRBs focus on forest restoration activities (thinning, prescribe burns, riparian ecosystem restoration, culvert removal, invasive species removal, reforestation) funded through private investment. Additional opportunities for FRBs include production of biomass (which, according to the DNR “can provide income for forest landowners while improving forest health and greenhouse gas emissions”²⁰⁶), bio-char and timber products for construction (such as cross-laminated timber²⁰⁷ produced in Washington or wood fiber insulation products like those produced by Maine-based [GO Lab](#)).

FRBs require a willing investor that “fund the full cost of restoration upfront”. These investors are then reimbursed through fixed cost-share payments or ‘Pay for Success’ (PFS) payments. PFS is an outcome-based funding model that ties payment to service delivery as a type of “social impact bond”. Investors provide money up front and are then repaid upon successful accomplishment of pre-determined project goals and objectives.²⁰⁸ The investors (philanthropies, businesses, high net-worth individuals) contract with “beneficiaries” including utility companies, landowners, and usually federal and state governments.

²⁰⁵ <https://app.box.com/s/c8dsxlpsl89lman0lt7gczihkluplgx>

²⁰⁶ https://www.dnr.wa.gov/sites/default/files/publications/rp_2020actionplan_handout.pdf?ko7ffe

²⁰⁷ <https://des.wa.gov/about/projects-initiatives/cross-laminated-timber-pilot-project>

²⁰⁸ <https://nff.org/invest-in-results>

One example of an FRB is a pilot project launched by [Blue Forest Conservation](#) in 2018 in the Tahoe National Forest in northern California that seeks to “fund management [and removal] of wood debris in publicly owned forests to reduce the [wild]fire potential of these forests”.²⁰⁹ Blue Forest used \$4.6 in upfront investments from impact investment-oriented foundations (including the Rockefeller and Moore Foundations) as well as other private investors (such as an insurance company and an investment group whose investments were coupled with a market rate return) to initialize the pilot project. Not a traditional bond, the FRB is a “fixed income vehicle backed by contracted cash flows.”²¹⁰ Initially the project was slated to use a PFS model in which, upon successful completion of the project, the investors were to be repaid by the State of California and the Yuba Water Agency, a local water utility. Due to challenges in measuring success, such as quantifying hydrologic outcomes and avoided fire suppression costs, Blue Forest instead received implementation assistance from the National Forest Foundation and entered into a five-year fee-for-services contract with Yuba Water Agency. The State of California supports a portion of the project by providing reimbursable grant funding to the National Forest Foundation, allowing for flexibility in implementation, as the project moves forward over its five year duration. According to Blue Forest, it intends to “scale the FRB model...shifting towards purely commercial rate capital from investors [and] is currently developing its project pipeline with eight National Forests across the western U.S.”²¹¹

According to Woolworth et al. an FRB “matches investment-ready capital with on-the-ground restoration projects”, accelerates the pace and scale of restoration work and does away with “irregular” funding from public entities (such as restoration work that relies on grants). William Ginn (of The Nature Conservancy’s NatureVest) in his 2020 book, [Valuing Nature: A Handbook for Impact Investing](#), describes the potential of FRBs to “abate the forces undermining the health of US forests while saving billions of dollars’ worth of valuable natural infrastructure.”²¹²

The literature identifies recommendations to implement a Forest Resilience Bond program:

- Expand wood markets to generate new demand (for example, the biomass extracted through recreation activities like thinning) to support private sector investment
- Provide education/job training in “forest-based communities” to promote restoration activities and generate job growth
- Provide grants/loans to assist in infrastructure and equipment for forest management and restoration
- Pay-for-performance metrics are not always appropriate or necessary (as they may not be “sufficiently grounded in data” and may “create excessive complexity for stakeholders” (Convergence 2020)

²⁰⁹ [Ginn, William. Valuing Nature: A Handbook for Impact Investing](#)

²¹⁰ [Convergence 2020. The Forest Resilience Bond Case Study.](#)

²¹¹ *ibid*

²¹² [Ginn, William. Valuing Nature: A Handbook for Impact Investing](#)

- “Blended finance can pave the way for public agencies to finance projects” (Convergence 2020).

Innovative market-based mechanisms like Forest Resilience Bonds may be worthwhile to pursue in Puget Sound because of unique regional opportunities creating the ingredients for success. Interest in innovative finance models have led to the development of the USFS’s [Innovative Finance for National Forests grant program](#). As of May 2020, the grant program has given \$127,000 to the Mount St. Helens Institute to investigate the feasibility of an outdoor recreation Environmental Impact Bond (EIB) at the Mount St. Helens National Volcanic Monument in Washington, and \$125,000 to a consultant to assess the feasibility of leveraging outcomes-based financing to finance improvements to recreation infrastructure on Mt. Baker-Snoqualmie National Forest’s Mountain Loop Highway in Washington.

5.2.3 Carbon Sequestration

Legislative Efforts to Advance Forest and Agriculture-Related Carbon Sequestration

Nationally, the Waxman-Markey House American Clean Energy and Security Act (ACES Act), passed in 2009, renewed the possibility of a “market for land use offsets that store or remove greenhouse gas emissions” – an attempt to establish an industry-wide cap-and-trade system. The Clean Energy Jobs and American Power Act ([S.1733](#)) proposed in 2010 (but ultimately not passed by the Senate) included provisions for providing financial assistance to “owners and operators of agricultural land...forest land for projects and activities that measurably increase carbon sequestration” as well as “provides cost-share grants to communities for...forest restoration that accomplishes fuel reduction”. The bill also proposed amending the Clean Air Act to change allocations related to emissions reductions from “reduced deforestation”. Eligible practices for carbon sequestration included reduced deforestation, avoided conversion, restoration of wetland and other methods complementary to the Land Development and Cover Implementation Strategy. The Clean Energy Partnerships Act of 2009 likewise introduced carbon-specific language with the inclusion of the Carbon Conservation program, but this bill failed to pass²¹³. The 2008 Farm Bill “further expanded the application of forestry practices” but none of the federally-sponsored land conservation programs (detailed in sections 3.1 – 3.11) explicitly provide payment for carbon sequestration activities occurring on forest or farmland.

Washington State, despite being a leader in conservation activities nationally, still struggles with legislative progress related to the above. However, Washington’s HB 2815, passed in 2008, established a process for participating in the “development of a regional process to design a multisector, market-based system for regulating greenhouse gas emissions”²¹⁴. To do this, 2815 also includes the recommendation to develop “how forestry and agricultural lands and practices may participate voluntarily as an offset or other credit program in the regional multisector market-based system” including addressing setting aside of forest and agricultural land for

²¹³ <https://www.ecosystemmarketplace.com/articles/us-senate-leaves-massive-body-legislation-countless-landowners-lurch-climate-cop/>

²¹⁴ <http://lawfilesexxt.leg.wa.gov/biennium/2007-08/Pdf/Digests/House/2815.DIG.pdf?q=20200303152253>

conservation, “reforestation and afforestation projects.”²¹⁵ Several bills were proposed subsequent to HB 2815, particularly focused on establishing a carbon pollution tax (such as SI-732, HB 1314, HB 1487, HB 1144) and emission reductions programs, but few explicitly described carbon sequestration measures related to forestry and agriculture and most were not selected²¹⁶.

Recent legislative efforts to more formally develop “valuing the carbon in forest riparian easements” ([HB 2714](#)) show promise, passing the House and Senate legislature as of March 3rd, 2020. Amending the previous RCW including 76.13.120 and 84.33.035, the bill allows “forestland owners, for all existing riparian easements, to market the carbon stored in the easement” and “provides that if the state develops methods, protocols and markets for valuing carbon, future riparian easements must include the full value of carbon stored in all the qualifying timber, and must allow the landowner to market the value of the carbon separately.” The bill states that “working forests and the forest riparian easement program may be part of the state’s overall carbon sequestration strategy” and that funding for ecosystem services must be promoted.

Analysis and recommendations

Despite legislative challenges to formally adopt forest and agriculture-related carbon sequestration measures several recent studies show promise in developing carbon markets on private forest-land. A Regional Conservation Partnership Program (see [section 3.6](#) for an overview) undertaken by NRCS and the Pinchot Institute for Conservation concluded in December 2019. This project demonstrated “how cost-share resources and forest management planning and assessment tools can help landowners prepare to access markets for carbon credits produced through forest stewardship commitments.”²¹⁷ The project focused on identifying the challenges Washington and Oregon NIPF landowners may encounter when selling carbon credits through a regional carbon crediting program. The Institute conducted “low-cost carbon inventories on small family owned parcels” using a smartphone application developed by Ecopartner’s [Forest Carbon Works](#) to measure inventory plots. The data gathered using the app was provided landowners with the “potential revenue from the sale of carbon offsets”. The analysis resulted in Forest Carbon Works providing detailed breakdowns of the carbon output potential of private forest parcels. The landowners could then enroll with the California Air Resource Board for credit issuance.

The project found, however, that several factors contributed to only one landowner (of the 46 volunteer landowners who were inventoried) going through the process of carbon offset accreditation. Challenges included:

- Problems with technology particularly with the smartphone application to measure forest inventory

²¹⁵ <http://lawfilesext.leg.wa.gov/biennium/2007-08/Pdf/Bills/Sessionpercent20Laws/House/2815-S2.SL.pdf?q=20200303152253>

²¹⁶ http://192.211.26.78/masterstheses/Accession86-10MES/Thorkildsen_Thesis_2018.pdf

²¹⁷ <http://www.pinchot.org/PDFs/RCPP-2pager.pdf>

- A lengthy accreditation process (up to three years). Most landowners dropped out of the study and the only landowner to continue throughout until payment could so do because they were not reliant on the payment for income.
- A large financial gap between sale of carbon offsets as compared to the sale of harvested timber. For example, 2019 price levels for carbon were roughly \$15 per metric tonne of CO₂e in the California Compliance market. The price for timber, however, was approximately \$350 per one thousand board feet for Douglas fir which generated 6 metric tonnes of CO₂e. One thousand board feet of Douglas fir equates to only \$90 when selling for carbon offsets – a \$260 revenue loss per one thousand board feet.²¹⁸
- Factoring in additional carbon emissions from decaying logging residue following a complete harvest which can result in tree stands being net source of emissions “for up to 15 years following clear-cutting” practices. Depending on harvest techniques stands may take “50-60 years...to recover pre-harvest carbon storage levels”.

Despite these challenges, particularly the “persistently low carbon prices in the voluntary markets [that] remain a barrier to market expansion” the Institute’s study finds that carbon offset projects have “facilitated some positive ecological outcomes, have become a conservation finance mechanism” and assure the “integrity of these forests into the future”.

Recommendations for the advancement of carbon sequestration:

- Continue to fund innovative projects like the Pinchot’s Institute NIPF landowner pilot project
- Consider additional studies that factor in other incentives (such as PBRs programs) as well as other valuation methods (such as factoring in recreation or other ecosystem services payments for not harvesting) into a landowner’s carbon offset payout
- Remove barriers that speed up the timeline of the accreditation process – whether political, regulatory or financial
- Diffuse risk to investors by “stacking revenue from a variety of sources” including timber, agroforestry products and carbon offsets²¹⁹
- New and on-going projects and resources support the growth of forest and agriculture-based carbon sequestration. These tools and projects should be consulted as they are developed. They include:
 - NRCS’s [COMET-Farm Tool](#) (a farm and ranch carbon and greenhouse gas accounting system) to quantify the impacts of adopting carbon practices
 - IBM’s emerging carbon credit management system through a [block chain platform](#)
 - Start-up firms like [Nori](#) that pay farmers for carbon removal
 - The City of Astoria’s [voluntary carbon program](#) with the Climate Trust
 - Apply carbon accounting techniques from relevant carbon sequestration projects in Puget Sound, such as those analyzed in Western Washington University’s 2019

²¹⁸ <http://www.pinchot.org/PDFs/RCPP-2pager.pdf%20>

²¹⁹ Hamrick, Kelley. State of Private Investment in Conservation 2016. Forest Trends’ Ecosystem Marketplace.

6. State Policies, Planning and Technical Assistance

6.1 Open Space Taxation Act, Current Use and Public Benefit Rating System

In Washington State, properties are to be assessed for property tax valuation based on their highest and best use, regardless of their actual use. The Washington State Open Space Taxation Act²²¹ provides relief for certain land uses, allowing open space, farm and agricultural, and timber lands to be assessed based on their current use (CU), rather than their highest and best use. The Act, which dates back to 1970, recognizes that such land uses are inherent to the vitality of Washington State and provides an incentive to maintain such land uses by reducing the tax burden associated with ownership. Current use tax programs offer an incentive in the form of property tax reductions to landowners who “voluntarily preserve open space, farmland or forestland on their property” ([King County 2016](#)). The Land Development and Cover Implementation Strategy recognizes that CU and the Open Space Taxation Act’s programs can help to reduce conversion of working land by providing a disincentive for transferring lands to non-eligible uses. In most cases, once a property is sold, or the use is no longer eligible, the difference between the full assessed value at the highest and best use and the assessed value of the eligible use must be paid back for the last seven years, in some cases with interest equal to that levied upon delinquent taxes (Washington State Department of Revenue 2017).

Local counties and cities administer the Open Space Taxation Act. For example, King County has four CU programs. Two options are the Public Benefit Rating System program and the Timber Land programs, administered by the Department of Natural Resources and Parks. The [Public Benefit Rating System](#) (PBRS) and the Timber Land programs help landowners lower their property taxes by 50 to 90 percent by assessing land at its current use. Participating landowners receive tax reductions of up to 90 percent of land value in the 16 of Washington’s 39 counties that participate. More than 1,000 King County landowners are currently participating in these programs. All but three Puget Sound counties — Mason, Skagit, and Snohomish—have established PBRS to guide their CU programs.

PBRS are based on point systems developed by individual counties. These systems can differ widely from county to county (Faghin and Mateo 2014). Points are awarded for qualifying resource categories (e.g., fish/wildlife habitat, geological hazard, aquifer protection, flood storage, riparian buffers not required by regulations, recreation access, etc.) and some systems provide bonus points for public access, restoration activities or conservation/historic preservation easements. The higher the public benefit rating, the higher the level of tax relief awarded.

²²⁰ <https://wsg.washington.edu/research/a-blue-carbon-assessment-for-the-stillaguamish-river-estuary-quantifying-the-benefits-of-tidal-marsh-restoration/>

²²¹ RCW 84.34, rules at WAC 458-30. Open space includes land that, if preserved in its present use, would conserve important scenic, historic, recreation, and natural resource values.

Two other CU programs are the Farm and Agricultural Land and the Forestland programs, administered by the Department of Assessments and defined in RCW [84.33](#). These programs are “for landowners who own revenue generating farm property or larger commercial forests”. The Farm and Agricultural Land program is for land “used for the production of livestock or agricultural commodities for commercial purposes” and the Forestland program is “for property containing more than twenty acres of eligible forestland primarily devoted to the growth and harvest of timber”. The applications for the latter two programs are different than the PBRs and Timber Land programs.

Related NTA

Name: Strategic Outreach to Encourage Owners of Priority King County Land Conservation Initiative Properties to Enroll in PBRs/CUT
2018 NTA ID: 2018-0968
Funding: None
Owner Organization: King County

The relative financial impact of CU programs to county budgets appears to be small. As part of Pierce County’s *A Fresh Look at Pierce County* report, E.D. Hovee & Co. prepared a technical memorandum on the fiscal impacts on taxing districts²²² county-wide. According to the report, lands zoned for agricultural use “comprise a total assessed valuation estimated at \$446 million while the assessed of valuation of properties with farm-ag *current use* designated lands is estimated at \$353 million. That value is “less than 1 percent of the approximately \$60 billion assessed value of the taxing jurisdictions that include agriculture resource land and CU properties within [Pierce County].”²²³ The exceptions to this were several small fire districts where CU valuation reached 8 to 1 percent of the taxable valuations and the Yelm school district, where it reached 6 percent. The programs were found to have little financial impact to the county, but for some small tax authorities, such as rural fire and school districts, the relative impacts may be higher. According to research completed by NatureServe, in 2005 more than 50,000 parcels were enrolled in Current Use taxation programs, resulting in a decrease in the taxed value of enrolled property of more than \$9 billion in Washington.²²⁴

To increase the enrollment and impact of the CU programs, literature indicates the following recommendations:

- Provide technical assistance to landowners seeking to apply for CU status in order to increase enrollment.
- Train assessors and CU staff on the program’s potential as a conservation tool during Washington Department of Revenue’s annual CU training.
- “Leverage the programs to better serve the needs of young and beginning farmers and increase tenure security for farmers leasing land by focusing on income—rather than acreage—limits to determine agricultural use” (National Young Farmer’s Coalition)

²²² <http://piercecountywa.gov/DocumentCenter/View/44327>

²²³ *ibid*

²²⁴ <http://www.landscape.org/washington/programs/incentives/indirect/>

6.2 King County's Land Conservation Initiative

King County's [Land Conservation Initiative](#) demonstrates the extent of local analysis and political support required to implement a large-scale acquisition program. It also quantified the gap between current acquisition funding and revenue needed to meet conservation goals.

The initiative began in 2015 with a goal of preserving all remaining high conservation lands in King County within the next 30 years. County staff has identified, mapped, priced, and prioritized 60,600 acres (5,400 parcels) of critical natural lands and green spaces. Staff also assessed each parcel to determine best preservation mechanism (purchase, conservation easement, current use tax incentive²²⁵).

King County estimates a cost of \$4.14 billion to fund high conservation land from 2019 to 2048. According to King County, the estimated funding gap is \$893 million not including operations and maintenance (King County Land Conservation Advisory Group 2017). Financial modeling was used to analyze various acceleration strategies and identify options to fill the funding gap. King County Land Conservation Advisory Group (2017) has described alternatives for increasing acquisition funding sources including:

- Raising existing Conservation Futures Tax to its maximum levy rate
- Lifting the property tax lid
- Issuing general obligation bonds supported by a property tax increase; and/or establish a new Real Estate Excise Tax (REET 3).²²⁶

Some of these changes would require approval by voters or the Washington State Legislature. A study is currently underway to investigate the expansion of the Conservation Future Tax program in Puget Sound (PSP's Salmon Recovery Council May 2020).

In 2018, the King County Council approved the sale of bonds secured by the Conservation Futures Tax to raise as much as \$148 million through 2022 via an ordinance that lets the County sell bonds based on 80 percent or Conservations Futures Tax revenue rather than 50 percent.²²⁷ This new funding allowed three times more acquisitions activity relative to previous years.²²⁸ In August 2019, King County voters approved a six-year parks and recreation property tax with annual increases.²²⁹ Currently, the Conservation Futures tax levy has about \$11 to 12 million annually in funding for awards.

²²⁵ Kinney 2020

²²⁶ [RCW 82.46.070](#) authorized counties to impose an excise tax (not to exceed 1percent) on real estate sales with proceeds used for acquisition and maintenance of conservation areas. This tax must be approved by county voters. REET for Conservation Areas measures have appeared on ballots in several counties but were approved only in San Juan County. King County attempted to pass a REET measure in 1990, without success.

²²⁷ <https://kingcounty.gov/elected/executive/constantine/news/release/2018/July/30-land-conservation.aspx> and <https://www.seattletimes.com/seattle-news/constantine-wants-to-leverage-conservation-fund-to-buy-65000-acres-of-last-best-places/>

²²⁸ <https://www.seattletimes.com/seattle-news/king-county-seeks-to-preserve-5000-acres-for-parks-open-space-by-the-end-of-2020/>

²²⁹ [https://ballotpedia.org/King_County_WA_Proposition_1_Parks_and_Recreation_Property_Tax_\(August_2019\)](https://ballotpedia.org/King_County_WA_Proposition_1_Parks_and_Recreation_Property_Tax_(August_2019))

6.3 Washington State University Extension

A resource that provides technical assistance to agricultural landowners, extensions like WSU Extension are a valuable tool to keep working land working, according to members of the IS Inter-disciplinary team, because “multigenerational succession farming is another element that can ensure an agricultural practice sees a return on high investments. These investments include costly infrastructure, equipment, tools and labor. The ability to pass farming practices from generation to generation builds on these investments and distributes their costs. Farming knowledge plays a key role in ensuring investments are made wisely and in recognizing and implementing farming best practices. University extension services are a great example of industry-leading information made available to the public.” Informal education includes workshops, conferences, field days, online learning and distance education, and direct consultation.

WSU County Extension provides applied research and informal education to meet locally-identified needs. The Extension system was initially authorized in 1914 to diffuse useful and practicable information related to agriculture and home economics into rural areas.²³⁰ The nationwide Cooperative Extension system is part of USDA’s National Institute of Food and Agriculture (NIFA). Local Extension programs are funded through a partnership with NIFA, the state of Washington through WSU, and county government. Washington State University Extension has offices in every county and offers programs as varied as the Master Gardener program, Watershed Stewardship and Rain Gardens to agricultural production, stewardship forestry and 4-H Youth Development. WSU Extension offers forestry stewardship workshops and classes that focus on developing healthy forests and succession planning to maintain healthy forests for future generations. Succession planning workshops, beginning rancher and farmer workshops, and many other classes are offered through a network of faculty and program staff for community-based programs and interactions with conservation districts, cities, and counties. In addition, there are a cadre of volunteers including Master Gardeners, watershed stewards, 4-H leaders, and other engaged in teaching the community about environmental stewardship. Over 2,100 volunteers return more than 153,000 hours of service to the community.²³¹

USDA’s Sustainable Agriculture Research and Education (SARE) provides a variety of competitive grants for research, education, and outreach activities that support sustainable agricultural systems. The program encourages site-specific experimentation, and many grants have focused on organic production or marketing. In Washington, SARE is part of WSU’s Center for Sustaining Agriculture and Natural Resources (CSANR). SARE also offers a grant to assist in event hosting and event attendance for Extension educators, agricultural professionals and conservation district personnel. Since 1894, much of the agricultural research for the south Puget Sound has been conducted at the WSU Puyallup Research and Extension Center. Much of this agriculture research has shifted to the WSU Mount Vernon Research and Extension Center due to increased urbanization. WSU Puyallup increasingly focuses on research and outreach that

²³⁰ [7 U.S.C. §341](#)

focuses on natural resource stewardship, including stormwater management and green stormwater infrastructure.²³²

6.4 Regional Open Space Plan

The Puget Sound Regional Council's (PSRC) [Regional Open Space Conservation Plan](#) is a significant resource for the Land Development and Cover IS in the plan's areas of King, Snohomish, Pierce, and Kitsap counties. PSRC (2018) used existing plans and datasets, as well as extensive input from numerous stakeholders, to compile a geodatabase that delineates the most important open spaces in the central Puget Sound region. The resulting regional open space network includes 6 types of open spaces—natural lands, farmland, working forest, aquatic systems, urban open space, and regional trails—grouped by watershed/WRIA. This data is intended to be used by local governments, resource agencies, conservation nonprofits, and others to plan and guide conservation actions.

The mapped network covers about 3.03 million acres of land within the 4 counties.²³³ 96 percent of this open space network is located outside of the Urban Growth Area. PSRC (2018) estimated that approximately 70 percent has long-term protection through public ownership and conservation easement. An additional 1.3 million acres of privately-owned farms and working forests—representing 64 percent of farmland and 81 percent of timberland—has some protection via zoning designations in county comprehensive plans.²³⁴ The remaining acreage is subject to environmental regulations but may lack sufficient protection. PSRC (2018) considers 104,000 acres of farmland; 183,000 acres of working forest; and 175,000 acres of intact habitat within their regional open space network to be most at risk of conversion to developed uses.

PSRC (2018) provides 10 strategies and describes tools that address barriers to protecting these areas from development. Lack of funding was identified as the largest barrier to long-term protection. Other barriers are land availability/landowner willingness, existing regulations/cost-prohibitive permitting requirements, and public agency capacity to broker land/easement acquisition. There are significant similarities between several of PSRC's proposed strategies/actions and the approaches recommended in the Land Development and Cover IS. The Open Space Conservation Plan advocates for:

- Integrating land use and infrastructure planning (in particular multi-benefit green infrastructure)
- Conducting watershed planning and use of watershed characterization.
- Integrating planning across departments.

²³² Kropf, J., personal communication, August 2020

²³³ The maps can be viewed at: <https://www.psrc.org/sites/default/files/osplan-appendixd-maps-watershed.pdf>

²³⁴ PSRC (2018) provides data on the effectiveness of working lands designations in the 4 counties. Between 2010 and 2015, lands designated for agriculture and forestry experienced much less development than areas with other designations: over 103,500 housing units were permitted in UGAs; almost 4,800 in rural areas; 82 in designated farmland and 8 in designated timberland. However, these designations are not necessarily permanent. Between 2000 to 2008 6.5 percent of designated agricultural land (6,690 acres) was re-designated as rural residential or another use that allows additional development.

- Keeping working lands working.
- Advancing the use of incentive tools like transfer of development rights, the Land Conservation and Local Infrastructure Program, and ecosystem service markets.

7. Appendices

Appendix A: Near-Term Actions Related To the Land Development and Cover Implementation Strategy

Title	Description	Owner Organization	Funding Secured	2018 ID
Strategic Outreach to Encourage Owners of Priority King County Land Conservation Initiative Properties to Enroll in PBRs/Cut	Develop a process to prioritize parcels for enrollment and launch a targeted outreach effort that contributes directly to the Land Conservation Initiative. This would be accomplished by developing a prioritization program and increasing staff capacity for a targeted outreach program.	King County	None	2018-0968
Infill - Land Use Planning to Direct Growth Into The UGA	Analysis to identify infill sites within current UGA boundaries, infill sites associated with planning for light rail and use of TDR.	Snohomish County	None	2018-0531
Riparian/Land Cover Change Analysis And Decision Support System	Development of a GIS-based tool to support protection and restoration of riparian corridors, floodplains, and nearshore habitats in WRIA 10.	Pierce County	\$195,000 (Funder: WDFW)	2018-0636
Snohomish County Farmland Protection Initiative	Protecting high priority farmland in Snohomish County through removal of development rights by supporting multi-benefit floodplain planning efforts through the Sustainable Lands Strategy.	Snohomish Conservation District	None	2018-0872
Conserve High-Quality Agricultural Lands	Conserve farmland in the Sequim-Dungeness Valley, by permanently protecting high-quality agricultural lands from development through the purchase of development rights and other conservation methods.	North Olympic Land Trust	None	2018-0506
Forest Health Management For Reduced Stormwater Runoff And Land Conversion (Phase I)	Support small acreage forest landowners protect forest areas from land conversion, addressing this resource concern by funding forest health management efforts when these are identified as a priority by a conservation district.	Puget Sound Conservation Districts Caucus	\$595,000 (WDFW)	2018-0701
Conservation Reserve Enhancement Program (CREP) Expansion	Expand CREP implementation in the Puget Sound by identifying landowner barriers and motivators to increase program participation - matching landowners who would likely be incentivized to participate with the additional funds required for incentives to inform future budget requests. Three pilot projects are planned based on the above analysis	Washington State Conservation Commission	None	2018-0157
Nisqually Community Forest – Acquisition and Stewardship	The Community Forest will pursue acquisition of commercial forest lands in the Mashel River watershed and initiate management of 1,920 acres acquired in 2016, 2017, and 2018 along Busy Wild Creek	Nisqually Land Trust	\$3,830,751.00 (Ecology, RCO)	2018-0819
Social Marketing to Improve Forest Health Through	A social marketing campaign in the Snoqualmie and WRIA 8 Watersheds will aim to increase private property owner support for salmon habitat projects and increase participation in stewardship	King County	\$36,000 (King County)	2018-0601

Private Property Stewardship	activities on private lands to complement and help protect investments made to restore salmon habitat			
Upper Snoqualmie River Riparian Restoration and Stewardship	This project addresses fundamental processes that are degrading water and habitat quality in the headwaters of the Snoqualmie River. This project will restore and maintain healthy riparian ecosystem functioning through a comprehensive replacement of invasive weeds with native vegetation, both planted and through natural regeneration.	King County	\$82,500.00 (King County Flood Control District)	2018-0162
Urban And Rural Residential Forest Health Management And Stewardship to Reduce Stormwater Runoff Impacts to Puget Sound	Skagit Conservation District (SCD) will partner with Department of Natural Resources (DNR) to assist communities to improve tree and forest health across the landscape, increasing their functional capacity to mitigate runoff. Roles: DNR Washington Conservation Corps (WCC) crew training in tree care and planting, natural area restoration, and Fire Wise education	Department of Natural Resources	None	2018-0193
Riparian Restoration Throughout the Greater Puget Sound	Riparian restoration by: 1) plant native trees and shrubs to restore riparian function to include riparian establishment, buffer expansion, and later seral stage forest facilitation; 2) perform maintenance to ensure project success through reducing competition from unwanted vegetation, invasive control, and replanting when necessary; 3) systematically inventory and control knotweed (from the upstream extent to the downstream extent) at the watershed scale, implementing revegetation strategies when appropriate.	Puget Sound Conservation Districts Caucus	Washington State Conservation Commission	2018-0246
Enhance FREP	FREP helps to keep small working forests on the landscape by purchasing conservation easements for working forestlands disproportionately affected by the Forests and Fish law. Funding FREP at \$3.5M for 3 FTEs will purchase 30 conservation easements and determine the easement values of 20 applications.	DNR	None	2018-0813
Enhance FFFPP	Seeks funding for FFFPP at \$5M for 2 FTEs. This will result in correction of an estimated 44 fish passage barriers, opening an estimated 101 miles of stream habitat.	DNR, RCO	None	2018-0811
Protect and Restore Habitat: Fund Small Forest Owner Assistance	\$500,000 for 2 FTEs within the DNR Small Forest Landowner Office (SFLO) will allow staff to educate and enroll small forest landowners into programs like Family Forest Fish Passage Program (FFPP) and Forest Riparian Easement Program (FREP).	DNR	None	2018-0817
Design a Feasibility Study for a Multi-Criteria Adaptive Framework for Assessing Ecologically Important Lands	Proposes the development of a multi-tiered ecologically important lands framework that would provide an improved assessment of statutorily protected lands and a system for identifying and discussing lands of intrinsic ecological value integrating three types of land assessment, simple protection based on ownership, regulatory protection for described locations (shorelands, wetlands, critical area ordinances, etc.) and the results of regional ecological models which address importance from myriad different perspectives.	WDFW	\$100,000 (WDFW)	2018-0772
North Sound Riparian Modeling and Monitoring	A project based on this NTA will deliver two inter-related habitat models to guide habitat restoration and protection in the Skagit: 1) Temperature modeling, 2) Large woody debris census, and 3) complete work with the PSP common indicators effort to design riparian protocols for status and trends monitoring.	Skagit River System Cooperative	\$125,000	2018-0167
Hood Canal Landscape Assessment & Prioritization Tool	Expanding upon the pilot project (2016-0397), this NTA will focus on further developing the mapping tool with an expanded geographic scope, enhanced functionality, analysis, and technical capability, and pursuing refinements and recommendations developed during consultation with partners and HCCC member governments.	Hood Canal Coordinating Council	\$200,000	2018-0388
Map Viewer of ecologically important areas in the Puget Sound basin	This NTA will build on the Wetlands of High Conservation Value Map Viewer by adding the locations of rare and high quality upland ecosystems and rare plant species in the Puget Sound Region, as well as the Ecological Integrity Assessment score of each ecosystem.	Washington Department of Natural Resources	\$40,000	2018-0692

Effectiveness Monitoring of regulations regarding shoreline, critical areas, and stormwater requirements	This NTA builds on current investments to include shorelines and wetlands, by 1) identifying and reviewing existing permits 2) review permit process for accuracy and consistency, 3) confirm implementation and monitoring plans for site specific permits, and 4) validate that regulations are implemented as prescribed in the code and to inform adaptive management.	Kitsap County	\$270,000	2018-0713
Improved Landowner Development Decisions to Protect Critical Areas and Manage Stormwater	Building off existing investments, Kitsap County will expand their social marketing approach to proactively improve landowner decisions affecting land cover, stormwater, and critical areas. By reaching permit applicants before they apply, site designs will improve and resource impacts reduce.	Kitsap County	\$209,080 (as funds allow)	2018-0641
Improving the resilience of natural resources and communities on the Kitsap Peninsula to the effects of a changing climate	Kitsap County will coordinate with agencies, tribes, and stakeholders to complete a climate change vulnerability assessment and adapt existing plans and ongoing practices to improve the resilience of communities and natural resources to the effects of a changing climate.	Kitsap County	\$136,700	2018-0782

Appendix B: Summary of TDR and LCLIP Status for Watershed LO Grant Recipients

Location	Current Status of TDR/LCLIP Programs that Received NEP Grant Funds	Completed Transactions (Funded through the NEP Grant)	Challenges	Next Steps
King County	Adopted and successful. King County’s TDR program has protected over 144,500 acres of rural/resource land between 1998 to present. Has inter-local agreements with Bellevue, Issaquah, Sammamish, Seattle and Normandy Park.	The grant did not fund transactions/property acquisitions but did identify properties for acquisition. The grant also helped King County to conduct a feasibility study for the City of Kirkland. Note: Through its TDR bank, King County has sold 1,024 development rights for use in Seattle, 22 for use in Sammamish and 23 for use in Bellevue but these were not part of the NEP grant. Acreage conserved for these is unknown.	<i>See individual King County cities for details.</i>	Sammamish has identified development projects to complete 22 TDRs, but the credits are not fully completed. Normandy Park has a TDR program, but no transactions have occurred. Development rights sales are increasing in King County, particularly for size bonuses for accessory dwelling units in unincorporated rural areas of King County.
Skagit County	Not adopted	None	TDR was not adopted. Reasons for not adopting include political opposition, lack of advocacy and a pre-existing conservation easement program already existing in the county.	Unknown
Snohomish County	Adopted. In 2017, the City of Arlington and Snohomish County both agreed to terminate the Arlington Pilot Program at the city’s request	None		Snohomish county officials are considering drafting code language that would create a county-run TDR bank as well as may certify its first TDR credits. Snohomish may issue 19 TDR

	in order to expand receiving TDR certificates from all eligible TDR sending areas in the county, which the pilot program prevented.			certificates in 2019. <i>See also: City of Mountlake Terrace.</i>
Thurston County	Adopted TDR only for sending areas zoned as Long-Term Agriculture.	None	Sending areas are limited to parcels that are zoned as Long-Term Agriculture. No other types of land can apply for TDR certification under the current rules, including land in agricultural use that is not zoned as LTA. The LTA zoning designation in Thurston has a minimum lot size of 20 acres, but the majority of farms in Thurston County are 10 acres or less and not zoned as LTA. An Additional challenge is a lack of market in areas designated as receiving areas, including the cities of Olympia, Tumwater and Lacey.	Re-examining effectiveness of County’s TDR program (including both sending and receiving area requirements) has been part of annual Comprehensive Plan amendments for many years. Lack of funding has prevented re-examination.
Pierce County	Adopted	None	TDR continues to be of interest in the City of Fife but next steps are unknown. <i>See also: City of Tacoma.</i>	Continues to operate bank of available credits for sale or purchase.
City of Kirkland	Not adopted	None	Kirkland had challenges with updating zoning code to accommodate LCLIP despite the Kirkland City Council formally adopting and recommending TDR for their	Continues to investigate TDR and LCLIP.

			<p>Totem Lake Business District in 2014. Kirkland does not have an inter-local agreement with King County.</p>	
<p>City of Mountlake Terrace</p>	<p>Not adopted</p>	<p>None</p>	<p>Market uncertainty</p>	<p>Light-rail station may provide opportunity for increased density in urban core. Has 3 development projects in varying stages of completion. City leadership is amenable to adoption.</p>
<p>City of Tukwila</p>	<p>Not adopted</p>	<p>None</p>	<p>Market uncertainty. Tukwila has not progressed past the feasibility stage.</p>	<p>Unknown</p>
<p>City of Tacoma</p>	<p>Recent transactions have occurred. Accepts development rights from King, Pierce and Snohomish banks and maintains own bank. Primary receiving areas are Downtown and Tacoma Mall area.</p>	<p>None</p>	<p>Market uncertainty. Current development projects have not required height density bonuses. City representatives are not convinced LCLIP is good fit for Tacoma. Unsure if city can pay back Pierce County if funds are borrowed for LCLIP.</p>	<p>Hired consultants for a revised feasibility study in 2019. Results are forthcoming.</p>
<p>City of Shoreline</p>	<p>Not adopted</p>	<p>None</p>	<p>The City of Shoreline does not yet have an inter-local agreement with King County.</p>	<p>Hired consultants for a feasibility study in 2019. Actively discussing next steps with King County. Light-rail stations provide an opportunity for increased density in the urban core. Development in the downtown core may use the TDR program to achieve height bonus.</p>

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