WASHINGTON STATE UNIVERSITY

THE POLICY CONSENSUS CENTER

UNIVERSITY OF WASHINGTON

Agricultural Pilots Project

Guidelines for Implementation

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This document was prepared by the WSU-UW Policy Consensus Center (PCC), whose mission is to act as a neutral resource for collaborative problem solving in the Pacific Northwest. The PCC advisory board supports the preparation of this and other independent reports produced under the Center's auspices; however, the findings and conclusions contained herein may or may not necessarily reflect the individual views or opinions of the Center's staff, university administration, or advisory board members or the organizations they represent.

Executive Summary

The Agricultural Pilots Project is a voluntary effort that could contribute to the agricultural and environmental legacies of Washington State. The project will solicit, select, and evaluate individually funded activities (pilots) that promote the application of innovative new ideas and approaches on a small scale, but which show promise for wider dissemination and large scale impact. The project has been developed through research and consultations with over 150 experts and leaders in the agricultural and environmental arena.

The implementation of the Agricultural Pilots Project is dependent upon funding from the Washington State Legislature. If there are a sufficient number of promising projects, the Governor may seek funding for the Agricultural Pilots Project. In the interim, the Governor has encouraged the application process to go forward in the fall of 2006. This early pre-proposal stage will allow the Governor and Legislators to gauge the type of pilots that might be implemented, and the commitment they might draw from those who would be involved. The most promising pre-proposals will be ranked according to established criteria, and will inform the budget request to the Legislature.

The Agricultural Pilots Project is based upon two goals - ensuring continued vitality for Washington's agricultural economy while enhancing environmental benefits. In an effort to simultaneously address these important goals, the project draws upon well- established agricultural and environmental research in order to bring forward new opportunities for innovation and collaboration.

The project recognizes the wide diversity of agriculture, climates, and unique local conditions in Washington. It seeks to draw upon the practical problem solving skills, imagination and commitment that agricultural producers and others can bring to bear. It seeks to promote the profitability of agricultural producers throughout the state while restoring or enhancing natural resources and rural landscapes. Unlike most past efforts, it is not regulatory, does not limit what can be tried, and does not compel anyone to participate.

The Agricultural Pilots Project will be managed by an Oversight Committee representing diverse perspectives and expertise. The Committee will solicit proposals from agricultural producers, watershed groups, tribes, counties and other entities across the state. The application process will consist of a simple pre-proposal, with the most promising afforded the opportunity for technical assistance in developing a full pilot proposal. The Oversight Committee will use standards and selection criteria established for the project and will develop a data collection and evaluation regime. It will draw upon technical expertise for use in the selection and evaluation process.

The Oversight Committee will be responsible for disseminating the results and lessons learned from pilots for purposes of promoting the voluntary adoption of promising opportunities and approaches based on their merits. It will prepare a report for the public

and the Legislature in each biennium the project operates, so that others can make use of new innovations that may emerge as a result of the project.

During the preparation of this report, the PCC staff consulted with stakeholders representing a wide range of perspectives. These conversations revealed a high level of interest in the principles underpinning the Agricultural Pilots Project and were instrumental in shaping this effort. Safeguards, such as the way the pilots are solicited, selected and measured, will require careful attention, but there are many in the agricultural and environmental communities who seem eager to roll up their sleeves and work together to preserve the heritage and economic value of agriculture and the environment in this state.

Contents

Overview

Purpose of the Report

This document describes the major features of the Agricultural Pilots Project, and serves as a resource document to guide the implementation of the project by an independent Oversight Committee. It is based upon a draft assessment that was produced by the PCC in January 2006. It more specifically describes how the solicitation, selection and monitoring of pilots will work and defines the role of the Oversight Committee. It also briefly describes the underlying problems the project seeks to address as well as the opportunities that can be leveraged.

The development of this implementation plan was funded by the Legislature via a budget proviso in the 2006 Legislative session. The Governor intends to submit a budget request to fund individual pilots and fully implement the project in the 2007 Legislative session. In the interim, the Governor has expressed an interest in seeing a pre-proposal process move forward in order to gauge the types of pilots that may be implemented.

The Agricultural Pilots Project concept was developed based on discussions with interested parties and experts, research on similar types of efforts, and review of sound agricultural and scientific practices. The report's appendices provide examples of existing programs and similar efforts, and examples of potential ingredients for pilots.

A Promising Opportunity

Conversations between the PCC staff and people from the Palouse to Puget Sound indicate that economic activities and preservation of natural resources have often been perceived to be at odds. However, many citizens in the state are increasingly recognizing that a vital agricultural economy and conserving natural resources are not competing interests. Many now believe that working lands and a thriving agricultural economy can go hand in hand with open space and environmental benefits.

At the same time, many challenges still exist, and the Agricultural Pilots Project should not be expected to address them all. Nonetheless, based upon the response by stakeholders, the project appears to hold possibilities for harnessing the energies of leaders in the agricultural and environmental communities, state and local governments, and tribes.

Recognizing that agricultural producers can best provide environmental benefits when their economic prospects are strong, an effort aimed at promoting the economic well-being of producers as well as environmental stewardship on working lands is very appealing. The Agricultural Pilots Project seeks to do just that.

The key to the Agricultural Pilots Project's success will be in selecting innovative pilots that both hold the promise for real gains to the agricultural producer and the environment, and are sustainable beyond the pilot stage. In addition, the project tries to encourage the relationships and forums necessary for continued problem solving and innovation.

Rather than simply funding some interesting ideas that benefit a localized group, it is hoped the project will contribute to develop new partnerships among farmers and environmentalists, retailers and marketers, regulators and policy makers. At its best, the Agricultural Pilots Project could result in dialogue at the community and state levels that would magnify the possibilities for cooperation, problem solving, and progress in the pursuit of mutual goals.

A New Approach

The Agricultural Pilots Project is designed to recognize the contributions of agricultural producers to the overall economic health of the state as well as the environmental stewardship benefits that working lands can provide. The proposed project, while drawing on a variety of proven approaches, is innovative compared to existing efforts in several important ways:

- It seeks to promote approaches that benefit agriculture and the environment *simultaneously*. It seeks to reframe the debate away from agriculture versus the environment, to demonstrate that agricultural production and environmental stewardship can be mutually reinforcing and mutually beneficial.
- Unlike many programs aimed at one or both sectors, it is voluntary and does not regulate, compel participation, or limit the ideas that can be tried.
- The project taps the ingenuity and creativity of agricultural producers and other locally interested people who want to improve agricultural and environmental outcomes.
- It steps outside the usual categories and encourages new combinations or adaptations to fit local agricultural or environmental circumstances. It offers an alternative to past attempts at "one-size-fits-all" prescriptions.
- It seeks to combine and leverage successful approaches by bringing existing technologies and practices to bear in new and expanded ways.
- The project approach emerged from the ideas of more than 150 people familiar with agriculture and related environmental challenges around the state, as well as from well-regarded studies.
- An Oversight Committee, drawn from knowledgeable people who have a stake in these issues and who are interested in working together, are responsible for the solicitation, selection, and funding of pilots and making the results widely known.
- The project seeks to establish channels for addressing current and emerging issues facing agriculture and the environment by encouraging collaborative problem solving, implementing new ideas on the ground, and objectively evaluating the results.
- Widely sharing and disseminating the results, outcomes, and lessons learned from the portfolio of pilots will encourage others to adopt promising, innovative new approaches based on merit and potential for impact.

Features of the Agricultural Pilots Project

What is a Pilot?

A pilot is an opportunity to translate innovative ideas into reality, and allows for promising new approaches to be evaluated for feasibility and effectiveness. The pilot approach tests a project's assumptions, verifies projected costs and benefits, yields lessons for further dissemination, and minimizes risks associated with broader implementation. Pilots will be selected, in part, based upon their potential for broad applicability and replication. Therefore, successful pilots hold the possibility for broad impact.

Three general types of pilots will be considered:

- Pilots that test an innovative new idea or approach to increasing agricultural profitability and enhancing environmental benefits, such as the adoption of new agricultural technologies/practices, marketing strategies, and/or collaborative planning approaches.
- Pilots that demonstrate how an approach that has succeeded in one location can be applied to one or more new places.
- Pilots that combine proven practices in unique new ways which may respond to new challenges or opportunities.

Who is Eligible to Apply?

The Agricultural Pilot Project is open to any individual or group wanting to put forth proposals that meet the selection criteria and achieve the dual goals of the project. A pilot can involve any agricultural sector within the state. Successful proposals will represent collaborations of affected parties, including a leading role or significant participation from the agricultural community.

Categories of Potential Pilots

Pilots that could advance the goals of the project fall into a number of categories provided below. These categories are not intended to restrict other combinations or possibilities in actual proposed projects. For example, pilots that combine activities across categories to leverage impact would be considered. Pilots that add an evaluation component to already-funded activities would also be considered if it meets the goals of the project. The following list is intended to illustrate the range of potential pilots.

- **On-farm operations.** Pilots that support adoption of specific agricultural practices or systems, such as direct seeding, conservation farming practices, or intensive pasture management.
- **Technology applications.** Pilots that support adoption of specific technologies, such as anaerobic digesters, bio-fuel production, and precision agriculture technologies (e.g., intensive soil moisture management).

- **Market-based incentives.** Pilots that support the development, adaptation, or dissemination of stewardship labeling/certification programs that provide added value in the marketplace to agricultural products. Examples include programs to identify products grown using environmentally sustainable practices and beneficial for farm workers, such as Food Alliance and Salmon Safe.
- **Financing and financial planning.** Pilots that help ensure funding for agribusiness through sound financial, business and succession plans. Examples may include combining farm plans and incentive programs with business plans, risk reduction through regulatory agreements, and pooling self insurance funds.
- **Conservation incentive and technical assistance programs.** Pilots that use new combinations, adapt, develop, or further disseminate voluntary, incentive-based programs. Examples include programs such as Environmental Quality Incentives Program (EQIP), Conservation Reserve Program (CRP), and the Conservation Security Program (CSP). Appendix E provides a listing of existing conservation incentive and technical assistance programs.
- **Collaborative efforts.** Pilots that foster voluntary participation and collaboration between agricultural producers and others (e.g., environmentalists, local watershed and planning authorities, tribes, or concerned citizens) to achieve economic and environmental benefits. Examples include Coordinated Resource Management (CRM), the Ground Water Management Area process in the Columbia Basin, and the VINEA effort in Walla Walla.
- **Local planning processes.** Pilots that disseminate a promising local planning process or approaches. Examples include Whatcom County's approach to developing a Critical Areas Ordinance and the unified approach to supporting agriculture in Snohomish County.
- **Agricultural land preservation.** Pilots that aim to preserve farmland and have meaningful environmental benefits. These might include purchase of development rights (PDR) programs, transfer of development rights (TDR) programs, and other means.

Examples of potential pilots are described in Appendix D of this report.

Agricultural Pilot Project Implementation

This section outlines the key components for project implementation. They are as follows:

- The Oversight Committee
- Publicizing the Project and Soliciting Proposals
- Applying for Funding
- Assistance for Project Applicants
- Selecting Pilots for Funding

- Acquiring and Distributing Funds
- Collecting Data and Evaluating the Pilots
- Disseminating Results

The Oversight Committee

Oversight Committee Framework & Criteria for Membership

The Oversight Committee will represent a neutral and balanced body whose members bring credibility to the Agricultural Pilots Project. The Committee will oversee the solicitation, selection, and monitoring of pilots. It will also submit a project assessment report to the Legislature at the end of any biennium in which the project operates.

The Oversight Committee will be comprised of approximately fifteen to twenty voting members who are selected based upon:

- the perspective, knowledge and experience they bring to the committee; and
- their stature as a trusted person who is effective in interacting with involved constituencies, state agencies, the Legislature and the public.

Committee membership will be drawn from a broad spectrum of perspectives, including leaders from various types of agriculture and areas within the state, leaders in the environmental community, and knowledgeable local officials and citizens. Tribal members will also be invited to participate. In order to be effective in promoting change in practices and approaches that meet the dual goals, the committee will require a high proportion of members with agricultural expertise.

Representatives from the relevant state agencies such as the Departments of Agriculture, Ecology, and Community, Trade and Economic Development, and the Conservation Commission will be asked to serve as ex-officio members. Ex-officio membership will be non-voting, but will provide opportunities for experienced agency staff to contribute to and learn from the discussions in ways that can advance the implementation quality and impact of pilots. Ex-officio participation can also inform agencies about opportunities and needs in the field, and the Oversight Committee may enlist their support in disseminating results and lessons learned. Legislative staff may also be invited to serve as ex-officio members, as the progress and results achieved through this project may provide useful insights and policy perspective about processes for future problem solving.

Collectively, the Oversight Committee should possess credibility with constituencies, an understanding of public policy and the private sector, the knowledge/expertise to examine promising pilots, and the perspective to develop a balanced portfolio of pilots that meet the dual goals of the project.

Oversight Committee Responsibilities

With staff support to be provided by the PCC, the central tasks of the Oversight Committee members include:

1.) encouraging people to put forth high potential, high-impact pilots from different agricultural sectors and geographic areas of the State;

2.) selecting pilots for funding;

3.) ensuring pilots are evaluated based upon the evidence of individual results as well as the aggregate benefits of the project;

4.) reporting on the project at the end of each biennium in which the project operates and at the conclusion of the project (these reports will highlight pilots that demonstrate the greatest potential for impact and self sustaining results in order to encourage broad dissemination of successful practices and approaches);

5.) promoting the project and encouraging opportunities for replication throughout the state;

6.) developing recommendations on the future of the project, and as warranted, recommend to the Governor and Legislature subsequent rounds of solicitations and funding.

Time Commitment

The Oversight Committee is expected to convene approximately 6-8 times during the upcoming biennium. These meetings will be 4-8 hours in length. Additional time commitments include occasional phone conferences and possible sub-committee meetings, and individual members may be asked to assist in outreach activities to groups with whom they are familiar.

Conflict of Interest

The Oversight Committee will have a policy of recusal of any member during discussion and selection of any pilot in which the member may have an interest, financial or otherwise, direct or indirect.

Members will be expected to recuse themselves, but any member of the Oversight Committee can and is expected to bring up potential conflicts for consideration by the group. The Chair of the Committee may recuse any member from a decision based on his or her judgment of real or perceived conflicts of interest.

Investing in Opportunity

Oversight Committee members will have an opportunity to assist in the overall advancement of Washington's agricultural economy, while at the same time contributing to environmental stewardship. Members will be able to encourage and help shape pilots that may have a significant and lasting impact, possibly affecting long-standing dilemmas or frustrations in practice or policy. It is hoped that Oversight Committee members will

see their responsibilities in this light, and will make the requisite personal investment required by their position.

Oversight Committee Staff Support and Outside Technical Assistance

The Oversight Committee's time will be reserved for focusing on the selection of proposals and evaluation of pilot results, plus meeting the policy goals of the Agricultural Pilots Project.

The PCC will provide staff support for the Oversight Committee during the initial implementation of the Agricultural Pilots Project. The committee will receive support in soliciting pilot proposals, processing applications, and obtaining technical support necessary to the committee's work. The PCC staff will also provide support for committee meeting arrangements, establishing a web presence, conducting outreach, managing correspondence, and report drafting.

The Oversight Committee will be responsible for all aspects of soliciting, selecting and monitoring of projects. However, since it is difficult to anticipate the specific types of agricultural and environmental benefits that may be unique to each pilot proposal, the Oversight Committee may choose to seek the advice of outside individuals or groups. Specific advice may be sought in determining the feasibility and cost effectiveness of proposed projects, setting measurement standards and protocols for projects, and evaluating individual pilot results and lessons learned across the project.

PCC staff will be available to help the Oversight Committee acquire needed outside technical expertise. The Oversight Committee may seek advice as needed, from universities, agencies, tribes, agricultural and environmental organizations, and the private sector. Outside experts may be selected from a list developed with assistance from agricultural and environmental stakeholders. Alternatively, the Oversight Committee Chair (on the behalf of the committee) may seek advice from sources relevant to the questions under consideration.

Because the evaluation of individual pilots is central to the overall credibility of the project, the Oversight Committee may seek the assistance of a group of outside consultants on issues specifically related to monitoring and evaluation of projects. These technical consultants would be generally experienced in data collection and protocols, evaluation methodology, and statistical analysis. Taken together, they would also provide a balanced representation of specific expertise in evaluating agricultural profitability, environmental data, and social benefits.

Publicizing the Project and Soliciting Proposals

The ultimate value of the Agricultural Pilots Project rests on the quality and effectiveness of the pilots. In an effort to encourage innovative and practical pilot ideas that meet the selection criteria, the Oversight Committee will actively stimulate proposals from interested individuals or groups with the help of staff.

This outreach will include direct email where available, a press release widely distributed to agricultural and other organizations that may have an interest in the project, and materials posted on the PCC web site. Website materials will include a summary of the project and documents which can be downloaded and used in the application process. In addition, the Oversight Committee may also sponsor workshops or presentations at association meetings and other venues where potentially interested agricultural producers and others are present (such as watershed councils, tribes, conservation districts or environmental groups).

Applying for Funding

Applications for funding under the Agricultural Pilots Project will involve a pre-proposal submission and a subsequent full proposal. The initial round of pre-proposals will be due in the fall of 2006. (See Appendix B for application requirements and dates) Depending upon legislative authorization, the Oversight Committee may open an additional round of applications during the 2007-2009 biennium.

Pre-proposals in the Fall of 2006

The Oversight Committee will seek pre-proposal applications in the fall of 2006. This approach is intended to simplify the proposal process for the applicant and minimize the initial effort. Because funding for the project is based on approval in the 2007 Legislative session, it also allows the Oversight Committee to see the range of possible and promising pilots and provide appropriate examples to the Governor and Legislature. Pre-proposal applications will require only a summary of the project, estimated cost of the project, amount of funding requested from the Agricultural Pilots Project, and partners who will help implement and evaluate the pilot.

Full Proposals in the Summer of 2007

If funding is approved in the 2007 Legislative session, the Oversight Committee will seek full proposal applications in the summer of 2007. This submittal date will allow time for project proponents to develop full proposals following a decision about funding by the Legislature. (For those pre-proposals that rank highest according to the selection criteria and possess a very high degree of readiness for implementation, the Oversight Committee may request a full proposal prior to the 2007 Legislative session to provide more detailed examples for the Legislature to consider.)

In an effort to ensure the consistency and quality of proposed projects, the Oversight Committee and its staff will offer a modest amount of consultation and assistance in developing full proposals for submission. Full proposals will require a detailed description of the objectives of the pilot, location and scope, implementation plan and budget, partners involved in the pilot, proposed methods for collecting data, and criteria against which the pilot will be evaluated.

The period between pre-proposal and full proposal deadlines will also allow time for project proponents to assemble needed partnerships, seek outside sources of funding (if appropriate), and make needed preparations for implementation. The Oversight

Committee will rank full proposals based on the pilot selection criteria, and authorize disbursement of funds from this first round, likely in the fall of 2007.

See Appendix B for the pre-proposal and full proposal requirements and deadlines.

Assistance for Project Applicants

One of the objectives of the Agricultural Pilots Project is to promote partnerships and encourage pilot proponents to utilize existing sources of technical assistance. As part of the pre-proposal process, each project proponent will be asked to name a technical partner to provide needed expertise and support for the project.

These technical partners will be expected to:

- help design a data collection and evaluation plan,
- assist in the implementation of the project as needed,
- assist in the monitoring and collection of data.

The project proponent may request funds for their technical partner as part of their project proposal. PCC staff will be available to assist pilot proponents in areas such as identifying a potential technical partner or answering questions about pilot applications.

There may be cases where a pre-proposal has a high probability for achieving the goals of the project, but could use additional help in finalizing the components of the proposal. Because it is the intent of the project to encourage high impact pilots, staff will be available to provide such applicants a modest amount of consultation in the development of their full proposal applications.

A number of resources are available to ensure that the goals of the project are met. For example, the PCC has compiled a database of pilot examples, funding programs and technical resources (see Appendix E) which are available to provide additional support to the development of proposals and implementation of pilots.

Selecting Pilots for Funding

The Oversight Committee will be responsible for selecting the pilots. Final endorsement for the pilots will be given by the PCC Advisory Board. The Oversight Committee will also strive to maximize the value of the overall portfolio of pilots by including a variety of agricultural products in different climate zones, different types of government entities, and an array of non-governmental participants. The scale and types of pilots proposed will determine the number of pilots that can be supported and funded.

Selection Criteria

Pilot proposals will be assessed and prioritized based on how well they meet two sets of criteria: 1) likely pilot results and outcomes and 2) conditions that are likely to yield a successful pilot. Each set of criteria is outlined in more detail below.

Likely Pilot Results and Outcomes:

- **Enhanced agricultural viability.** Pilots must be designed to measurably benefit agricultural viability. Expected outcomes might include improved profitability for the producer through increased efficiency, reduced inputs or costs, or increased market share. Or the pilot might seek to conserve the agricultural land base, improve planning and regulatory approaches, or develop new applications or new markets for agricultural products.
- **Enhanced environmental stewardship.** Pilots must be designed to measurably benefit the environment. Expected outcomes might include helping agricultural producers meet or exceed existing standards for water or air quality, or make meaningful progress toward achieving targets established by technically sound processes such as watershed planning, salmon recovery, or other efforts.
- **New or improved working relationships and problem solving forums.** The pilot creates opportunities for working with other growers, environmental advocates, and regulators toward common goals. Outcomes might include enhanced communication and cooperation with others in the community, mutual agreement about the value of shared resources, increased access to monitoring and scientific data, and opportunities for leadership at the local level.
- **Innovation, Impact and Replication.** The pilot contains innovative ideas or new ways of combining or implementing known techniques which can have a significant impact if scaled up or applied to other geographic areas or agricultural sectors. The expected agricultural, environmental, and social outcomes should show promise for voluntary replication, expansion or continuation beyond the initial pilot, and encourage replication or expansion based on the economic and environmental protection merits of the activity.

Conditions Likely to Yield a Successful Pilot:

- **Builds upon acceptable approaches and promising opportunities.** The pilot builds upon current or emerging technology, field-tested success elsewhere, or broadly accepted research results and knowledge, or less well-known but credible concepts.
- **Low risk of harm.** The pilot should outline expected results, but take into consideration the unproven nature of a pilot, and protect against additional cost or unexpected harm to the agricultural operation and the environment. Because economic or environmental harm can be difficult, expensive, or impossible to reverse, the proposal should strike an appropriate balance between innovative new ideas and environmental and economic risks.
- **Technical feasibility.** The needed expertise and technology should be available, along with the organizational capacity to manage the pilot. Where appropriate, pilots should build on existing structures, institutions and delivery mechanisms rather than create new ones.

- **Supported by affected parties.** The pilot should enjoy broad support among local interested and affected agricultural producers, environmentalists, tribes, and local government entities. For example, if regulatory flexibility were to be considered as part of a pilot, it should be undertaken with appropriate risk management, careful monitoring, and explicit assent and cooperation of affected parties. These issues should also be considered in terms of the possible replication of the pilots features on a larger scale or different location.
- **Financial leverage.** The pilot should have sufficient resources for success and should have the ability to be financially self-sustaining after the initial investment, with ongoing agricultural and environmental benefits. Where appropriate, it should leverage support from other programs or sources (such as salmon recovery funding, watershed planning support, USDA, or other sources of support for conservation or altered practices).
- **Favorable cost to benefit relationship.** The pilot should efficiently leverage the financial or other costs associated with the pilot relative to the potential benefit. The likely agricultural, environmental, and social outcomes, which if replicated, should elicit widespread benefits and impact compared to the cost.
- **Realistic goals and benchmarks.** The pilot should be expected to deliver meaningful improvements to agricultural and environmental outcomes, and the benefits should be measurable (recognizing that full results might not be available within a 2 to 3 year time frame). Individual project applications should propose specific criteria against which their project could be measured.
- **Readiness to proceed.** Applicants should be prepared to implement the pilot soon after funding is granted. Pilots that have sufficient data, have the necessary endorsements and partners, and build on existing systems and capacities are more likely to be ready.

The criteria have been organized into a matrix, which will be used to weight and rank the degree to which each pilot meets the selection criteria. This matrix is available in Appendix C of this report.

Acquiring and Distributing Funds

The implementation of the Agricultural Pilots Project is dependent upon funding from the Washington State Legislature. If there are a sufficient number of promising projects, the Governor may seek funding for the Agricultural Pilots Project, which would fund a portfolio of individual pilots. In the interim, the Governor has encouraged the application process to go forward in the fall of 2006. The Oversight Committee will prepare a report with a set of recommendations to the Governor's Office which is expected to form the substance of the funding request. The report is expected to draw upon pre-proposals submitted to-date in providing examples of pilots that may be put on the ground. Funding for the project is expected to be in the range of several million dollars.

If initially funded, and depending upon the success of the project, the Oversight Committee may open another round of funding for additional pilots during the 2007-2009 biennium and could recommend in the 2008 Legislative session continuation of the

program into 2009-2010. If so, additional application and funding dates will be added to the Agricultural Pilots Project. Funds appropriated by the Legislature will likely be held by a state agency who in turn would release individual pilot funds as recommended by the Oversight Committee, and in accordance with state regulations.

Collecting Data and Evaluating the Pilots

Approach to Evaluation

The Oversight Committee will be responsible for establishing a data collection and evaluation regime for the individual pilots. The Oversight Committee will seek to formulate an approach that is perceived as credible, draws upon established measurement standards and protocols, is financially feasible for the pilot proponents, and allows for the distillation of lessons learned across pilots.

Each pilot must have a data collection and evaluation plan approved by the Oversight Committee before funds are dispersed. The Oversight Committee will work with the project proponent and the proponent's technical partner to ensure a sound design of the evaluation plan as well as consistency across the portfolio of pilots. This can allow for comparisons across pilots, where appropriate, against a consistent set of criteria.

In order to ensure consistent standards and measurement protocols, the Oversight Committee may seek input from outside technical consultants during the process of evaluation plan design. Technical consultants may help ensure that a standardized and valid approach to setting evaluation criteria is in place, that broadly accepted measurement protocols are used in the collection of data, and that data is collected in a manner consistent with other projects.

Individual pilot monitoring will be done through periodic reports, site visits, or other means appropriate to the pilot. These activities will be aimed at increasing the likelihood of success and sharing of useful information. Evaluation data will be submitted to the Oversight Committee by the pilot proponent and their technical partner as part of each pilot's interim and final reports.

The Oversight Committee will review the data from all pilots and provide a summary in biennial reports to the Legislature and Governor. Summary results and lessons learned will also be shared with state agencies, interested stakeholders and the public. When possible, the Oversight Committee should work with ex-officio agency members to note opportunities for improving or standardizing the data that are collected and available.

Evaluation Challenges Associated with the Project

The Agricultural Pilots Project has a number of inherent qualities which should be acknowledged. They include:

1.) *The inability to hold variables constant*. This is a problem for all field-based studies, but it is worth noting here the various outside forces that could come into

place. For example, unusual changes in weather, disease, markets, public policy and global events can all influence pilot effectiveness and confound the results.

2.) *The minimization of risk.* Care must be taken to minimize the risk of environmental degradation and financial exposure related to the pilots, and to minimize the risk of regulatory liability among pilot participants.

3.) *The collection and use of data must safeguard individual business information*. Recognizing that pilots are a small scale experiment, the data collection and evaluation regime must respect the privacy of individual businesses and other related confidential information.

4.) *The results must be trusted by all stakeholders.* This project encourages objective evaluation of data by stakeholders with diverse perspectives. Because in some cases mistrust among stakeholders has affected their ability to trust data and evaluate it collaboratively, the Oversight Committee will ensure that acceptable protocols and standards are employed in the evaluation process.

5.) *The expectation of results in a short time frame*. It will be important to be mindful of the challenges involved in assessing pilot impacts over a short timeframe of two to three years. Appropriate and accepted interim indicators will need to be used when necessary, as surrogates for end outcomes.

6.) *Extrapolating from a small number of pilots of limited scale*. Due to the small-scale nature of pilots, their impacts may be limited and difficult to measure, especially in isolation from other events occurring in the area.

In order to take these challenges into consideration, the evaluation plans will focus on assessing pilot inputs and outputs. Measuring inputs will indicate how closely the pilot implementation plan is followed. Outputs will serve as indicators of likely long-term outcomes.

- **Inputs.** Evaluations would measure the extent to which pilot activities have been implemented as proposed. This might include a review of actions taken, a count of participants involved in the pilot and their interactions, or an assessment of how closely the pilot adhered to the original plan and proposed budget.

  For example, an input measurement might be to count the number of agricultural producers or acres of farmland allocated to the pilot, time or dollars spent, or a combination of these and other measures that are relevant to the projected activities of the pilot.

- **Outputs.** Products or services delivered as the means of achieving the pilot outcomes represent the outputs. Although the outputs themselves aren't necessarily an indicator of success, they do represent actions that may lead to beneficial outcomes. Measuring the resources used to produce these outputs

(inputs indicated above) will help determine the cost/benefit relationship of the end outcomes, or outcome indicators.

For example, outputs might be the number of acres planted using direct seeding, amount of data gathered and reviewed collaboratively as part of the pilot, the number of items sold using a new label, or number of gallons of soft pesticides which have replaced conventional pesticides.

- **Outcomes.** Most evaluation plans will be predicated on the assumption that a certain set of pilot inputs and outputs will lead to specific agricultural and environmental outcomes. It may not be possible to measure the final pilot outcomes, as they are generally long-term in nature. It could take years to determine whether an innovative idea might increase long term profitability, successfully preserve farmland, improve water quality in a river system or watershed, or increase the diversity and abundance of threatened species. In addition to the long term nature of these evaluations, the evidence may never be conclusive enough to attribute change to a single pilot or approach. As such, indicators of outcomes will be measured as a means to determine success.

  For example, increasing market share, creating a supply chain that allows for larger margins at the farm, price premiums in the marketplace due to "green labeling," reductions in soil erosion due to changed tilling practices, or cutbacks in water usage due to a local or regulatory agreement might produce long-term impact and results.

Evaluating the outcomes for individual pilot will be based on the pilot application evaluation plan and the selection criteria (See Appendices B and C).

Four Important Touchstones for Evaluation

Both individual pilot and the overarching evaluation of the project will need to pay attention to the following central aspects of the Agricultural Pilots Project.

Agricultural Benefits

At its core, this project seeks to find innovative new ways to sustain profitability for individual farmers and the agricultural sector as a whole. However, profitability may be influenced by many different factors and be difficult to determine conclusively over a short period of time. As such, the potential outcomes of individual pilots will be measured by collecting input, output, and outcome indicators as described above. These measurements may include actual reductions in production costs, increased productivity per acre, expanded production area, value added to products or product premiums, increased market access or market share, additional time available to focus on production, and increased short-term profits.

Depending on the type of pilot, the evaluation might also extend to improvements in the local community and economy or reductions in risk. For example, it might take into

account the possibility of increasing acres of agricultural lands in production, protection of productive agricultural lands, or reductions in fragmentation of agriculturally productive lands. It might also look at the likelihood of increases in agriculture-related jobs or businesses, or increased financial investments by agricultural producers, banks, or other financial institutions. Another example might be to consider increased regulatory responsiveness or other approaches to improving regulatory certainty.

Environmental Benefits

Environmental benefits are also likely to be influenced by a number of factors, and expected outcomes may not become evident over a short time period. Similar to the agricultural benefits, input, output and outcome indicators will also be utilized to determine the effectiveness in achieving environmental benefits. The approach to evaluating environmental benefits will depend on the goals and anticipated outcomes of the specific pilot.

For example, if improved air quality is a goal, the pilot might measure reduced airborne particulate matter (PM-10[1]) resulting from tillage practices. If reduced soil erosion and improved water quality are goals, the pilot might measure the amount of organic matter added to the soil, or reduction in synthetic fertilizers or pesticides. In some instances, it may be possible to measure total suspended solids or turbidity if the project area is the sole influence on the target water body. If improved wildlife habitat is a goal, the pilot might measure the increase in acres of habitat accessible to the target species.

Working Relationships and Forums

Although positive working relationships and forums are not an end unto themselves, they can be indictors of significant progress. One of the hoped for outcomes of this project is that groups who were once isolated or alienated from each other might work with one another to define problems, evaluate data, and develop solutions. Research conducted by PCC staff indicates that building trust, opportunities for developing local leadership, and emphasizing shared values can help to create working forums that sustain even as challenges and opportunities change.

Measurement of these kinds of outcomes is commonly done through surveys or questionnaires which allow participants to evaluate the relative success of the pilot in terms of the relationships and partnerships developed. For this project, a uniform questionnaire will likely be used across pilots, and the results will be compared with the actual agricultural and environmental outcomes achieved. Enhanced communication and trust, increased access to scientific data and joint evaluation of it by disparate groups may provide useful indicators.

[1] PM-10 refers to airborne particles less than 10 micrometers in diameter, including both fine and coarse dust particles. These particles pose significant health concerns because they can pass through the nose and throat and get into the lungs.
Source: EPA PM 10 Fact Sheet: http://www.epa.gov/wtc/pm10/pm_fact_sheet.html

Comparing these outcomes with the tangible agricultural and environmental results could reveal positive correlations. Even if a pilot does not succeed in achieving tangible agricultural or environmental outcomes, new partnerships and relationships established during the course of the pilot may prompt continued collaborative efforts and innovative new approaches that do achieve meaningful results in the future.

Innovation

Throughout the research and outreach process in developing this project, the opportunity to encourage innovative pilots with broad applicability has elicited support for the project. Innovative new ideas which are credible yet cutting edge will have an opportunity to be implemented and evaluated. Innovation in this case might represent new approaches or practices, or it might simply combine tried and true practices in new ways. In short, this outcome represents the likelihood of replication and the degree to which results of the pilot, if successful, are likely to impact the agricultural sector.

Key indicators might include the applicability of the pilot to other areas, how straightforward replication would be, the degree to which the pilot builds on accessible knowledge, available technical assistance, and effective delivery mechanisms. Considerations such as benefits relative to the risk and investment, support for the approach and potential for controversy among interested and affected parties, and satisfaction among pilot implementers and participants may also provide useful insights. Finally, an estimation of the impact the pilot might have for agriculture in the state, if it were replicated, will help provide focus and priority in making the results of individual pilots known to those who could benefit from the lessons learned.

Disseminating Results

A report summarizing the results of each pilot and overall project progress will be submitted by the Oversight Committee to the Legislature and Governor in December, 2008, and for any biennium in which the project operates. If further rounds of funding are sought by the Oversight Committee, the project may be extended and a final report will be completed at the conclusion of the project.

To encourage the dissemination of successful practices or approaches demonstrated during the course of the project, the Oversight Committee will ensure the results are broadly known. Through dissemination of its report and outreach to the agricultural and environmental communities, the Oversight Committee will play a central role in highlighting opportunities to replicate successful pilots and create self sustaining results.

Conclusion

The challenges facing agriculture and the environment in this state are palpable, and the possibilities for progress lie in the abilities of those with on-the-ground knowledge to bring forth solutions. This report describes the impetus and goals for an Agricultural Pilots Project, as well as the guidelines for its implementation. Based on the study team's

research and discussions with interested parties, it is evident that the proposed project holds promise as a realistic means for translating innovative ideas into real progress. The pilots that succeed, and relationships that develop around them, could create opportunities for ensuring enhanced economic prosperity for agriculture, and the associated benefits of preserving the heritage of working rural lands and natural resources in Washington State.

Appendix A. Research Methodology and Bibliography

Research Methodology

Researchers from the WSU-UW Policy Consensus Center used a data-gathering approach that involved examining written materials as well as interviewing more than 150 knowledgeable people. A joint team from Washington State University (WSU) and University of Washington (UW) conducted research and vetted the information, drawing on expertise from the WSU Center for Sustaining Agriculture and Natural Resources, WSU Extension, UW Urban Design and Planning, and others at both universities.

In conducting interviews and examining written materials, the team typically sought the following information:

- Examples of activities or approaches that could improve both agricultural viability and environmental outcomes
- Approaches for designing and implementing the agricultural pilots project
- Essential qualities of pilots
- Ways to assess whether projects will merit replication beyond the pilot
- Additional sources of information (people, organizations, or written materials) that could provide helpful perspectives or ideas for pilots

Starting in September 2005, PCC staff conducted extensive interviews with people from a wide spectrum of constituencies in the state. Staff also investigated approaches used in other states and other countries, and in various types of agriculture and growing conditions. The constituencies were as follows:

- **Agricultural interests.** Local, statewide, and regional organizations, commodity groups, and individual agricultural producers representing a range of crops, growing conditions, and geographic areas in the state.
- **Environmental interests.** Local, statewide, and regional organizations concerned with land, water, air, habitat, wildlife, and other environmental concerns.
- **County and city officials and staff.** Elected officials as well as planning, policy, and other staff from Washington counties and cities in which promising activities had reportedly been tried.
- **State officials and staff.** Legislative leaders, legislative staff, and staff from a range of agencies involved in environmental and agricultural activities.
- **Tribal leaders, members, and staff.** Representatives from tribes with identified interests in the Agricultural Pilots Project and others who had engaged in environmental protection activities, particularly in relation to agriculture.

- **Federal officials.** Staff from the Natural Resources Conservation Service, Farm Service Agency, U.S. Department of Agriculture (local and national), and others with knowledge of federal programs relevant to agricultural and environmental goals.
- **Scientific researchers and practitioners.** Faculty and staff at WSU and UW, including WSU Extension faculty and those with knowledge of agricultural research, environmental science, policy, and economics, as well as some scientists from out of state.
- **Knowledgeable observers.** People with broad experience in and insight into the relevant issues.

A draft report that summarized the outcome of the initial project research and outlined the structure and purpose of the project was released for public review in January 2006. Comments were submitted to PCC staff via e-mail, teleconference, and in-person meetings from a broad range of communities and interested parties. Due to the short time frame for the preliminary assessment phase of this project, the PCC staff did not have the opportunity to consult with everyone who might have contributed valuable insights and information. Therefore, consultations were continued to solicit input on the proposed structure of the project after the release of the draft report.

In order to facilitate more specific input on the draft report and ensure that the program would be effective and create the desired impact, a series of small focus group meetings were held across the state. The meetings were held in locations that would likely result in the greatest attendance by representatives from both the agricultural and environmental communities. Two broad-level policy focus group sessions were held to facilitate input on the overall structure and purpose of the project at the following locations:

- **Focus group session (1)**: held on Tuesday, May 9th from 2:30-5:00 pm at the WSU Thurston County Extension Office in Lacey.
- **Focus group session (2)**: held on Wednesday, May 31st from 12:00-3:00 pm at Big Bend Community College in Moses Lake.

A technical focus group session was held to facilitate specific input related to the data collection and evaluation component of the project. Scientists and technical experts from both the agricultural and environmental communities were invited to attend the following session:

- **Technical focus group session**: held on Wednesday, August 2nd from 12:30-3:00 pm at the UW Center for Urban Horticulture.

The draft report was revised to reflect the input received at the three focus group sessions. Upon finalization, the report was submitted to the Oversight Committee in August 2006 for their use as guidelines for implementation of the proposed Agricultural Pilots Project.

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Wondolleck, Julia, Yaffee, Steven. *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*. Washington, D.C.: Island Press, 2000.

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BJA Center for Program Evaluation – Guide to Program Evaluation: http://www.ojp.usdoj.gov/BJA/evaluation/guide/index.htm

Cascade Harvest Coalition: http://www.cascadeharvest.org/

Center for Sustaining Agriculture & Natural Resources (CSANR): http://csanr.wsu.edu

CSANR Climate Friendly Farming: http://cff.wsu.edu/

Challenge Cost-Share Program: http://www.nbc.gov/cci/matrix.cfm

Columbia Basin Groundwater Management Area (GWMA) Plan: http://www.gwma.org/

Comprehensive Irrigation District Management Plan (CIDMP): http://afw.scc.wa.gov/files/index.php3

Coordinated Resource Management (CRM):
http://www.rangelands.org/education_crm.shtml

Cultivating Success: http://cultivatingsuccess.ag.uidaho.edu/

Department of Interior (DOI) Landowner Incentive Program (LIP):
http://www.doi.gov/initiatives/landowner_incentive_program.html

DOI Private Stewardship Grant Program:
http://www.doi.gov/initiatives/private_stewardship_grant.html

Environmental Protection Agency (EPA): National Strategy for Agriculture:
http://www.epa.gov/agriculture/agstrategy.html

Farming and the Environment: http://www.farmingandtheenvironment.org

Interagency Committee, Farmland Preservation Grant Program:
http://www.iac.wa.gov/iac/grants/farmland_description.htm

Farm Service Agency (FSA): http://www.fsa.usda.gov/dafp/cepd/crp.htm

FSA Conservation Reserve Enhancement Program (CREP):
http://www.fsa.usda.gov/dafp/cepd/crep.htm

Food Alliance: http://www.foodalliance.org

Food Safety and Inspection Office (FSIO) Office of Program Evaluation, Enforcement, and Review: http://www.fsis.usda.gov/about_fsis/Program_Evaluation/index.asp

Gently Grown Label: http://entomology.tfrec.wsu.edu/pearent/pcg.htm

Government Accountability Office Performance Measurement and Evaluation: Definitions and Relationships (April 1998):
http://www.gao.gov/special.pubs/gg98026.pdf

King County Farm to School Connections: http://www.metrokc.gov/dchs/csd/wsu-ce/FoodSystems/Index.htm#F%20to%20S

King County Farmland Preservation Program (FPP):
http://dnr.metrokc.gov/wlr/LANDS/farmpp.htm, http://www.farmland.org/pnw/index.htm

King County Local Food Policy Council: http://www.metrokc.gov/dchs/csd/wsu-ce/FoodSystems/Index.htm

King County Public Benefit Rating System:
http://dnr.metrokc.gov/wlr/lands/incentiv.htm

King County Puget Sound Fresh: http://dnr.metrokc.gov/wlr/farms/

King County Stewardship Planning Programs: http://dnr.metrokc.gov/wlr/cao

King County Transfer of Development Rights (TDR) Program:
http://dnr.metrokc.gov/wlr/tdr/

Model Watershed Plans: http://www.efw.bpa.gov/publications/h36208-1.pdf,
http://www.efw.bpa.gov/publications/H36266-1.pdf,
http://www.efw.bpa.gov/publications/H12585-1.pdf

Natural Resource Conservation Service (NRCS) Conservation Innovation Grants (CIG)
http://www.nrcs.usda.gov/programs/cig/

NRCS Conservation of Private Grazing Land Initiative (CPGL):
http://www.nrcs.usda.gov/programs/cpgl/

NRCS Conservation Reserve Program (CRP): http://www.nrcs.usda.gov/programs/crp/

NRCS Conservation Security Program (CSP):
http://www.wa.nrcs.usda.gov/programs/csp/06ws/index.html

NRCS Environmental Quality Incentives Program (EQIP):
http://www.wa.nrcs.usda.gov/programs/eqip/eqip.html,
http://www.state.gov/g/oes/rls/fs/2004/39485.htm,
http://www.nrcs.usda.gov/programs/cig/

NRCS Farm and Ranch Lands Protection Program (FRPP):
http://www.nrcs.usda.gov/programs/frpp/

NRCS Grassland Reserve Program (GRP):
http://www.wa.nrcs.usda.gov/programs/grp/grp.html

NRCS Wildlife Habitat Incentives Program (WHIP):
http://www.wa.nrcs.usda.gov/programs/whip/whip.html

NRCS Wetlands Reserve Program (WRP):
http://www.wa.nrcs.usda.gov/programs/wrp/wrp.html

Open Space Taxation Act: http://dor.wa.gov/docs/pubs/prop_tax/openspace.pdf

Oregon Country Beef: http://www.oregoncountrybeef.com

Sensor-webs/AgWeatherNet: http://agweathernet.prosser.wsu.edu/index.html

Shepherds Grain: http://www.shepherdsgrain.com/

Stewardship Partners Salmon Safe Certification: http://www.salmonsafe.org, http://www.stewardshippartners.org/

United States Department of Agriculture (USDA) Conservation Reserve Enhancement Program (CREP): http://www.scc.wa.gov/programs/crep/

USDA Sustainable Agriculture Research and Education (SARE) Western Region Grants: http://wsare.usu.edu

VINEA: Winegrower's Sustainable Trust: http://www.vineatrust.org/

Washington Salmon Recovery Funding Board Grant Program: http://www.iac.wa.gov/srfb/grants/salmon_recovery.htm

Washington State Conservation Commission Dairy Program: http://www.scc.wa.gov/programs/dairy/; http://filecab.scc.wa.gov/Dairy/DNMP_Approval_Checklist_020900.html

Washington State Department of Agriculture (WSDA) Small Farm & Direct Marketing Program: http://agr.wa.gov/Marketing/SmallFarm/default.htm

Washington State University (WSU) Extension: http://ext.wsu.edu/

WSU Farm Family Support Network: http://ffsn.wsu.edu/

Whatcom County Open Space Taxation Program: http://www.co.whatcom.wa.us/pds/planning/openspace/os_index.jsp

Appendix B. Pilot Project Application

Any group or individual who can meet the selection criteria and achieve the dual goals of the project is encouraged to apply. The Oversight Committee encourages those with on-the-ground knowledge and experience to come forward with innovative new ideas. Although applications can be initiated by any individual or organization, agricultural producers are normally expected to be central partners in any pilot project.

Submit your material electronically (either via e-mail or by mailing a CD along with a hard copy) to the WSU or UW office of the Policy Consensus Center

WSU - WASHINGTON STATE UNIVERSITY EXTENSION
Academic Center, Suite 309 * PO Box 1495 * Spokane, WA 99210-1495

UW - DANIEL J. EVANS SCHOOL OF PUBLIC AFFAIRS
327 Parrington Hall * PO Box 353055 * Seattle, WA 98195-3055

E-mail agpilots@u.washington.edu Phone: (206) 616-6962

Pre Proposal Requirements (See following page for full proposal requirements)

Application Due Date: October 15, 2006

Pre Proposal Summary:

Please include the following information:

- Applicant information including name, address, phone, e-mail, website (if any), project manager (if different from applicant).
- Executive summary describing the pilot, including work to be completed and the expected outcomes. (Please limit to two typed pages in length)
- Type of pilot, and name and affiliation of other partners in the project. A technical partner who is available to help outline potential pilot outcomes and a plan for measuring them is required. (For assistance in locating a technical partner, please contact PCC Staff)
- Estimated cost of the pilot.
- Other sources of funds – proponent cost share, or funds from other granting institutions.
- Total dollars requested from the Agricultural Pilots Project.

Full Proposal Requirements

Application Due Date: June 15, 2007

Include a pre-proposal summary and a full description narrative as outlined below (Please limit proposal to 10 typed pages):

- **Pilot objectives**: Using qualitative and quantitative measures specify the pilot's objectives. Describe how the objectives will contribute to the central goals of the Agricultural Pilots Project –profitability for an individual producer or for the agricultural sector in general, and benefit to the environment. Also, provide an explanation of why it is likely to be replicable and sustainable. (See evaluation criteria)
- **Pilot feasibility**: Discuss the evidence of past success of the type of techniques or practices to be used in the proposed pilot, or the science and research that underpins a new innovative practice or technology that indicates a reasonable probability for success of the pilot. Explain how the pilot will help to broaden the dissemination of these practices or new technology. (See evaluation criteria)
- **Location and scope**: Describe the location of the pilot and the relative size and scope (e.g., acres, agricultural sectors, number of producers who will be involved) of the project area. Explain whether the pilot seeks to test new on-the-ground practices, systems or processes.
- **Partnerships:** List the parties who will be involved in the pilot, and describe the extent of their involvement. Explain whether it will include parties or interests which have not previously worked together, if it will involve regulatory agencies, and what data (if any) is needed to evoke collaborative efforts. Are these collaborators ready and willing to participate?
- **Project management:** Provide a timeline of project activities and milestones over the length of the pilot. Describe the key personnel who will manage the pilot and their qualifications. If you or your organization has applied for grant funding in the past, describe any past projects similar in size, scope or relevance that you have completed within the past few years.
- **Budget:** Include a proposed pilot budget which includes other funding sources or cost sharing, as well as funds requested through the Agricultural Pilots Project. The proposed budget should also project estimated costs for completing the pilot. The proposed budget will be evaluated based on the extent to which it demonstrates clarity about how the funds will be used, reasonableness of costs associated described activities, and the extent to which the pilot leverages other sources of funding.
- **Pilot evaluation**: Propose the methodology and data points to be used to evaluate the pilot. This section should be completed with the assistance of the pilot proponent's technical advisor.

Appendix C. Pilot Selection Criteria

The criteria and point system outlined below is designed to quantify and rank pilots in terms of their potential ability to fulfill the goals of the Ag Pilots Project. The criteria centers on the project's dual goals of enhancing benefits for agriculture and the environment.

Pilot Selection Criteria: Likely Pilot Results		*Points*
Enhance Agricultural Viability		
Increase profitability	The pilot outcomes are likely to include a decrease in the cost of inputs, increase efficiency, attain higher on-farm revenues, create additional access to markets, achieve product differentiation and price premiums, and/or increase vertical integration.	of 30
Regulatory approach	Results of the pilot are likely to include activities that provide regulatory certainties or risk reduction, reduce paperwork, streamline regulatory compliance and/or match regulatory standards with certification, or propose alternative solutions to preserving agricultural land.	of 30
	Category total	***of 60***
Enhance Environmental Stewardship		
Tangible environmental benefits	Measurable environmental outcomes or indicators may include improved terrestrial or riparian habitat, improved air quality, reduced soil erosion, increased use of conservation farming practices, and/or improved water quality and soil fertility.	of 30
Coordinated efforts	The pilot furthers existing efforts such as watershed planning, salmon recovery, CIDMP, Coordinated Resource Management, or cooperation between tribal and local governments.	of 30
	Category total	***of 60***
Encourage Positive Working Relationships		
Foster trust and reciprocity	The pilot is likely to enhance communication and cooperation with others in the community, promote agreement about the value of shared resources, increase access to monitoring and scientific data, and/or promote a shared understanding of how all users affect a shared resource such as a local watershed, air-shed, or irrigation district.	of 15
Promote local leadership	The pilot creates opportunities for working with other growers, environmental advocates, and regulators toward common goals.	of 15
	Category total	***of 30***
Achieve Innovation and Sustainability		
Innovation	The pilot is likely to achieve significant impact through innovative new ideas or unique combinations of ideas and practices which are likely to effect long term change beyond the scope of the pilot itself.	of 15
Sustainability	The pilot is applicable on multiple scales or across agricultural sectors, and is likely to sustain and replicate based on the merits of the results and outcomes.	of 15
	Category total	***of 30***
	Total for likely pilot results	***of 180***

The criteria outlined below are designed to objectively quantify and rank the likelihood of success for an individual pilot.

Pilot Selection Criteria: Conditions Likely to Yield a Successful Pilot		*Points*
Builds upon accepted approaches	The pilot builds upon field tested success elsewhere or broadly accepted research results, existing technology and/or documented knowledge, or less well-know but credible concepts.	of 10
Low risk of harm	Pilot outlines expected results, but takes into consideration the unproven nature of a pilot, and protects against additional cost or unexpected harm to the agricultural operation and the environment.	of 10
Technical feasibility	The pilot is doable. It utilizes technology and/or expertise that is available and affordable, applicant has the skill, knowledge, and organizational capacity to implement the pilot.	of 10
Politically supported	The pilot demonstrates probable or established support from agricultural producers, environmental advocates, community members and regulators. The pilot demonstrates secured support of any who are likely to be affected by the pilot, and a plan for joint evaluation of progress or risk where appropriate.	of 10
Financial viability	The funds requested are adequate for the term of the pilot and where possible, leverages support from other programs or sources.	of 10
Favorable cost to benefit relationship	Pilot is likely to achieve significant agricultural, environmental, and social benefits, which if replicated, could elicit widespread benefits and impact compared to the cost.	of 10
Realistic measurements and benchmarks	The pilot sets forth baseline measurements to be taken, and benchmarks that are observable over a two to three year time frame. The benchmarks will provide evidence of progress toward the longer term expected results of the pilot.	of 10
	Total for conditions likely to yield a successful pilot	***of 70***
	Pilot Total Overall	**of 250**

Pilot Criteria: Readiness			
Readiness to proceed	Pilot is ready to be implemented soon after it is funded – has necessary endorsements and partners, sources of funding, technical expertise and data, and capacity to implement. If the pilot scores high according to the above matrix, it must meet the readiness criteria in order to be eligible for funding in the current round.	Yes □	No □

Appendix D. Pilot Examples and Potential Ingredients

The overarching intent of the Agricultural Pilots Project is to foster a sustainable and robust agricultural economy in a way that protects and preserves the quality of land and natural resources for future generations. Pilots may range from simple to complex, draw upon tried and true methods, or leverage combinations of farming techniques, incentive programs, new technologies, or collaborative planning processes in unique ways. The following examples are organized into categories for illustration, although pilots will not be limited to these categories. These examples are offered for the sole purpose of generating pilot ideas and are not intended to limit the range, scope, or scale of the Agricultural Pilots Project.

- Market-based incentives
- Financing and financial planning
- Conservation incentive and technical assistance programs
- Collaborative efforts
- Local planning processes
- Agricultural land preservation
- Technology applications
- Conservation farming practices

Market-Based Incentives

In an increasingly competitive and dynamic marketplace, farmers are challenged by low commodity prices, increasing production costs, international trade agreements and restrictions, and limited access to markets. Helping farmers overcome these challenges could be central to preserving farmland and achieving the environmental benefits associated with lands in agricultural use.

Washington agricultural products are known both domestically and internationally for their quality and freshness. Pilot projects in this category could test ways to improve access to markets through promotion of quality, freshness, and environmental stewardship. A pilot might also seek to reduce travel miles for our state's food supply, promote the health benefits of wholesome, locally grown food in local schools or other institutional buying programs, and improve overall food security for our state.

Financing and Financial Planning

Pilots in this category would help ensure funding for agribusiness through sound financial, business and succession plans. Examples may include combining farm plans and incentive programs with business plans, risk reduction through regulatory agreements, and pooling self insurance funds. Examples of combined farm plans and financial plans are provided in more detail below.

Conservation Incentive and Technical Assistance Programs

A number of federal, state, and local incentive and technical assistance programs encourage or support environmental stewardship. Many are specific to a particular type of agriculture or environmental goal, and some are available only in a particular county or region. Some are available through conservation districts, Farm Services Agency (FSA), Natural Resources Conservation Service (NRCS), and USDA offices. Others are available through local planning agencies such as the Washington Conservation Commission or the Salmon Recovery Funding Board. Other specialized delivery mechanisms such as commodity groups, WSU Extension, Farm Bureau, and others offer funding and technical programs as well. A listing of programs with agricultural and environmental goals can be found in the document containing Existing Programs, Resources, or Projects. Our research suggests that farmers are sometimes unaware of the available support, and that the application process for programs can be a barrier to participation. Those who provide support to farmers might be aided by a listing of the full range of opportunities for financial or technical support. Pilots in this category could seek to make incentive programs more effective by making them more accessible, easier to apply for, easier to combine where there is potential for increased impact, and more targeted toward areas that may maximize environmental benefits.

Collaborative Efforts

Our research has shown that collaborative efforts at the local or regional level that include a variety of stakeholders and perspectives can achieve significant outcomes in support of both agriculture and the environment. Open communication about interests and concerns can create trusting relationships and mutual respect among the parties involved. Collaborative planning efforts have the potential to garner ongoing support from the affected parties while producing outcomes desired by both sides. Adapting some of the techniques used by existing collaborative efforts – for example, Comprehensive Irrigation District Management Planning (CIDMP) processes, Columbia Groundwater Management Area (GWMA), model watersheds, and the Vinea Winegrower's Trust - could establish ways of cooperating and communicating that would extend beyond the pilot activity. The commonalities which seem to ensure success in these voluntary collaborative efforts include neutral facilitation, mutual trust, collaboratively developed goals and monitoring, and a plan that allows for flexibility in achieving outcomes. (A full description of each of these efforts can be found in the document containing Existing Programs, Resources, or Projects)

Many include participation by regulatory agencies, and all seem to capitalize on the ability of those with local knowledge and a desire to preserve resources held in common. Promoting the adoption of a similar process in local area watersheds, municipalities, or land use planning processes could be a valuable pilot. Other potential pilot ideas include:

Local Planning Processes

Local planning processes can integrate a variety of policy issues affecting agriculture and the environment. Improved access to local and international markets, certifications based

on conservation farming methods, farm plans, financing options, and collaborative planning processes offer opportunities for unique new combinations. Blending these concepts might serve to provide models that could aid in local planning processes. A pilot could examine and assess proven or newly developed planning models, note which approaches have contributed to those successes, or consider how promising approaches could be adopted in other locations.

Agricultural Land Preservation

In and around areas with high population growth, the agricultural land base is at risk of conversion to development due to high land values. These higher values are an incentive for farmers to sell their land, and high prices and associated property tax rates make it difficult for farmers to afford additional land for agricultural production. Land protection mechanisms can provide a way to keep agricultural land from being converted to non-agricultural uses and keep available land more affordable for farmers. Pilots that seek to provide fair market value for farmland might reduce development pressure on agricultural land, lessen the impact of fragmentation of farmland and farm communities, and keep more land in agricultural production.

Technology Applications

A number of new technologies are available for use in the agricultural sectors which have not yet been widely adopted. A pilot which seeks to promote adoption or further dissemination of technologies that will benefit both agriculture and the environment would be valuable. For example, testing organic or low impact methods for controlling pests through implementation, combining weather, soil or crop specific systems to reduce water usage or soil erosion, or promoting cultivation and processing of bio-fuel crops could achieve long term sustainable results. Using new technologies in combination with other tools or ideas outlined in this appendix could produce a potentially valuable pilot.

Conservation Farming Practices

Some agricultural producers are already using innovative farming practices that increase profitability and improve environmental outcomes compared to more widely used conventional practices. These innovative practices are sometimes specific to a particular climate, crop, availability of irrigation, or other conditions. Most have been implemented by a modest number of agricultural producers but have not been widely adopted due to the high cost of transition, increased management requirements, perceived risks, or lack of information about prior successes.

If adopted more widely, these farming practices have the potential to increase agricultural profitability by improving efficiency, increasing productivity, reducing input costs, or adding additional revenue streams. Corresponding positive environmental outcomes might include reduced soil erosion, improved water quality, decreased water consumption, and reduced application of ecologically disruptive materials. Examples of practices which are generally thought to be beneficial for the environment are included in

Appendix D. A pilot might apply these practices or technologies to new crops or locations.

The following are examples of potential pilots which incorporate several of the themes or categories noted above. These are simply provided as samples to illustrate how tools, resources and ideas may be combined to create innovative and promising pilots.

- **Uniform certification process.** A streamlined certification process jointly created through collaborative efforts could help agricultural producers make better use of federal programs. Developing a uniform certification process based on farm plans or other standardized criteria could result in streamlined qualification for programs offered through the various agencies. For example, Oregon considers Food Alliance certification as qualification for the highest tier of the Conservation Security Program (CSP).
- **Farm plans.** Farm plans are central to qualifying for many federal environmental programs, and conservation districts have been successful in promoting and developing farm plans, and providing technical assistance. Although these plans are typically not monitored or used in a regulatory context, they are generally intended to promote environmental stewardship and reducing regulatory and other risks to farmers. Pilot opportunities could include monitoring environmental and financial outcomes, using farm plans as a regulatory model, using them as a standardized means of qualifying for all environmental programs, and possibly using them to certify farms for a statewide label that endorses sustainable farming practices. Other pilot opportunities could monitor newly developed applications in land use planning for efficacy, or integrate them as part of a comprehensive business plan or financing proposal.
- **Combined farm and financial plans.** Combining farm plans with comprehensive financial planning could reduce risk or uncertainty for farmers. For example, sound business and succession plans could help farmers reduce the risk of obtaining loans for operating expenses, capital improvements, or expanding into new markets. They could also help with planning for retirement or transitioning away from farming. Combining comprehensive financial planning with farm plans could improve the overall financial vitality of the farm community by reducing regulatory risk and capitalizing on federal programs as a source of funding. A pilot opportunity could be to explore how farm and business plans could be combined to meet regulatory requirements and obtain financing.
- **Comprehensive toolbox of programs.** Because so many programs are offered through a variety of sources, a pilot could improve knowledge of and access to programs by developing a comprehensive database or "toolbox" of federal, state, and local incentive and technical assistance programs. This could be a single-source database such as the Idaho OnePlan (www.oneplan.org), which provides information and software to help growers develop a single conservation farm plan that can be pre-endorsed by the various agencies, thereby streamlining and simplifying the application process that farmers face. Idaho OnePlan is a multi-

agency project that combines government regulations and best management practices for agriculture into a single plan—integrating federal, state, and local regulations for a variety of conservation practices.

- **Ombudsman/advocate.** Individuals have made a significant difference in improving environmental consciousness among agricultural producers, particularly in riparian areas. People such as Dorie Belisle in Whatcom County and others across the state have helped to disseminate environmentally friendly practices. These individual efforts have accounted for untold miles of tree planting and fencing in riparian areas and have helped build a community of shared accountability. A pilot could employ knowledgeable and motivated individuals to educate others about available programs to help implement sustainable practices, and to promote collaborative efforts among community members.
- **One-stop agricultural economic development office.** Keeping agricultural lands in production can be challenging amid an array of subsidy programs and local planning and zoning regulations. A pilot could create a single county office that coordinates the efforts of all local FSA/NRCS/USDA offices and county planning departments to promote local agricultural economic development. This resource could help farmers navigate challenges to profitability in a way that complies with regulations and fosters positive environmental outcomes.
- **Certification, labeling, and marketing.** A means for differentiating agricultural products in the marketplace such as the Food Alliance or Blue Angel eco-label used in Germany (which is coordinated with government certification for standardization), might also offer ways to link quality and freshness with environmental stewardship in the marketplace. A pilot could work to develop an approach for linking growing practices with recognition in the marketplace, contracts with retailers that leverage this differentiation, or other ideas which can connect environmental sustainability with market premiums, new market access or secure contracts. A pilot could also link certification with import qualifications of foreign food safety authorities and could even pre-qualify farms for federal programs (e.g., in Oregon, Food Alliance certification qualifies farms for the Conservation Security Program).
- **Government or institutional purchasing programs.** A pilot could explore ways to implement a program that certifies farms and cooperatives as environmentally sustainable or promoting stewardship, and thereby qualifies them for direct purchasing programs for state and local institutions such as schools or prisons. This approach could benefit farmers and the agricultural economy as well as provide healthy, wholesome, locally grown food for citizens of our state. A pilot could expand the criteria of existing Food Policy Councils to codify an environmental stewardship dimension, such as that used by the Food Policy Council in Vancouver, Canada.
- **Integrated PDR/TDR system.** Using a combination of Purchase of Development Rights (PDR), Transfer of Development Rights (TDR), and other market-based tools, a pilot could promote conservation of agricultural land and protection of

environmentally sensitive land. Developers, farmers, and environmentalists could collaborate on a pilot design that meets their diverse goals and is appropriate to the market forces of the area.

- **Financial and tax incentives for maintaining open space and agricultural land.** Public support for local agriculture and aversion to sprawl could indicate that broader adoption of open space taxation, local bond issues, or other financing techniques might be of interest in some local areas. A pilot could test the feasibility and impact by developing, with appropriate consultation and safeguards, a proposal that could test this approach.

Appendix E. Examples of Existing Programs, Projects or Resources which Promote Agricultural and Environmental Goals

During the course of our research and discussions with stakeholders, PCC staff developed a database of programs and funding sources which may be a useful general resource, as well as for identifying potential combinations of tools and ideas that could yield unique and successful pilots. This appendix contains our research findings, which describes many of the ongoing efforts targeted toward enhancing the agricultural economy and achieving benefits for the environment. We have also included a description of the various sustainable farming techniques mentioned throughout the report and appendices.

The information in this appendix is arranged in the following categories:

- Conservation incentive and technical assistance programs
- Collaborative efforts
- Market-based incentives
- Technology applications agricultural land preservation
- Conservation farming practices

Conservation Incentive and Technical Assistance Programs

The programs outlined in this section represent the range of assistance programs currently available to the agricultural sector in Washington. Those bolded in the list that follow are typically larger programs, providing the most substantial amount of funding.

Center for Sustaining Agriculture & Natural Resources (CSANR)
Challenge Cost-Share Program Conservation Partnership Initiative (CPI)
Conservation of Private Grazing Land Initiative (CPGL)
Conservation Reserve Program (CRP)
Conservation Reserve Enhancement Program (CREP)
Conservation Security Program (CSP)
Cultivating Success
Environmental Quality Incentives Program (EQIP)
Farm and Ranch Lands Protection Program (FRPP)
Farm Family Support Network
Grassland Reserve Program (GRP)
King County Farm to School Connections
King County Local Food Policy Council
Landowner Incentive Program (LIP)
Living on the Land
Private Stewardship Grant Program Stewardship Planning Programs, King County
USDA SARE (Sustainable Agriculture Research and Education) Western Region Grants
Washington Salmon Recovery Funding Board Grant Program
Washington State University Extension
Wildlife Habitat Incentives Program (WHIP)
Wetlands Reserve Program (WRP)

Program: Center for Sustaining Agriculture & Natural Resources (CSANR)

Type: Technical assistance, research, and education

Agricultural sector: All

Description: The WSU Center for Sustaining Agriculture & Natural Resources (CSANR), which was established by the Legislature in 1991, aims to develop and foster agricultural and natural resource management approaches that are economically viable, environmentally sound, and socially acceptable. The center sponsors a variety of programs, including Ag & Energy, Ag & Environment, Ag & Society, BIOAg, Climate Friendly Farming (see the project description under the Emerging Technologies section of this report), Demonstration Farms, Organic Agriculture, Sustainable Agriculture Research and Education (SARE), and Small Farms. BIOAg and the Small Farms Program both provide technical assistance to agricultural producers, and are each briefly described below:

- **BIOAg:** The Biologically Intensive Agriculture & Organic Farming (BIOAg) program includes a range of research, education and extension projects, with the goal of promoting access to fresh, healthful, Washington-grown food.
- **Small Farms:** The Small Farms Program is dedicated to enhancing the viability of small-scale agriculture across the state, particularly in urbanized areas) conducts education, outreach, and research in partnership with farmers and communities around Washington. A major focus of the program is on helping small producers identify and develop new market opportunities.

Web site: http://csanr.wsu.edu

Program: Challenge Cost-Share Program

Type: Program that leverages federal dollars with private and state funding for conservation efforts.

Agricultural sector: Bureau of Land Management (BLM)-administered public lands

Description: The program solicits partnerships and partnership funding through a variety of resource management programs, including fisheries, wildlife, threatened and endangered species, cultural resources and recreation.

Web site: http://www.nbc.gov/cci/matrix.cfm

Program: Conservation Partnership Initiative (CPI) – administered by the Natural Resource Conservation Service (NRCS)

Type: Voluntary program which promotes conservation partnerships that focus technical and financial resources on conservation priorities in watersheds or airsheds of special significance and other environmentally sensitive areas.

Agricultural sector: Watersheds or regions associated with agriculture and rural settings

Description: The first phase of CPI allows eligible applicants (local and state government agencies, Indian tribes, and non-governmental organizations that have a history of working with agricultural producers) to apply for project planning funds to help develop a watershed or regional-scale plan that addresses conservation priorities by establishing locally led partnerships.

CPI applications must address one of more of the following conservation priorities:

- Terrestrial and freshwater aquatic wildlife habitat
- Invasive species
- Agricultural air quality
- Livestock nutrient management
- Minor/specialty crop pest management

Other factors to consider: Awards are between $50,000 and $200,000. Up to two applicants from each state can be forwarded to the nationwide competition. In Washington, the Ohop Restoration Project received funding in 2004.

Program: Conservation of Private Grazing Land Initiative (CPGL) – NRCS

Type: Technical, educational, and related assistance to owners of private grazing lands (not a cost share program).

Agricultural sector: Livestock

Description: Technical assistance is provided to help landowners improve grazing land management, protect soil from erosive wind and water, employ more energy-efficient ways to produce food and fiber, conserve water, provide habitat for wildlife, sustain forage and grazing plants, use plants to sequester greenhouse gases and increase soil organic matter, and use grazing lands as a source of biomass energy and raw materials for industrial products.

CPGL was authorized by the conservation provisions of the Federal Agricultural Improvement and Reform Act (1996 Farm Bill).

Other factors to consider: Currently, funds have not been appropriated for this program. When funded, CPGL is available in all 50 states. The program includes technical assistance rather than direct financial assistance.

Web site: http://www.nrcs.usda.gov/programs/cpgl/

Program: Conservation Reserve Program (CRP) – NRCS/Farm Service Agency (FSA)

Type: The program encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers.

Agricultural sector: Farmers and ranchers

Description: CRP is administered by FSA, and NRCS provides technical land eligibility determinations, conservation planning, and practice implementation. Under this program in FY 05, Washington received more than $34.1 million in payments and technical assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program is funded through the Commodity Credit Corporation (CCC). Most of the 1.4 million acres enrolled in CRP are in cover crops, but nearly 15 percent (about 200,000 acres) are registered as being planted as wildlife habitat and riparian buffers. Each county is limited to 25 percent of its eligible farmlands.

Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices. Land in CRP reduces soil erosion, lowers sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources.

Other factors to consider: More than 90 percent of applicants receive funding. The majority of contracts in the state will expire between 2007 and 2010. Efforts are currently being made to extend those contracts.

Web sites: http://www.nrcs.usda.gov/programs/crp/, http://www.fsa.usda.gov/dafp/cepd/crp.htm, http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1OB?contentidonly=true

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Program: Conservation Reserve Enhancement Program (CREP) – USDA/FSA

Type: Voluntary program that removes riparian areas with salmon or steelhead habitat from production and grazing under 10- or 15-year contracts. In return, landowners receive annual rent, incentive and maintenance payments and cost share for practice installations.

Agricultural sector: Privately-owned riparian areas with salmon or steelhead habitat

Description: CREP is a joint partnership between the State of Washington and USDA and is administered by the Washington State Conservation Commission and the Farm Services Agency (FSA). It is a spin-off from the federal CRP program (as described above) that allows states to customize the conservation practices they fund. The agreement was signed in 1998. All eligible applicants have been funded by the program.

Web sites: http://www.scc.wa.gov/programs/crep/, http://www.fsa.usda.gov/dafp/cepd/crep.htm

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Program: Conservation Security Program (CSP) – NRCS

Type: Voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and for other conservation purposes on tribal and private working lands.

Agricultural sector: Working lands, including cropland, grassland, prairie land, improved pasture, and rangeland, as well as forested land that is an incidental part of an agricultural operation. The program is available in all 50 states and provides equitable access to benefits to all producers, regardless of size of operation, crops produced, or geographic location.

Description: The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) amended the Food Security Act of 1985 to authorize the CSP program. This program is relatively new to Washington, with the first pilot program in the Moses Coulee watershed in 2004 funded with $750,000. The 2005 priority watersheds in Washington included the Lower Skagit, Banks Lake, Upper Columbia-Entiat, Upper Crab, Rock, Willapa Bay, Nisqually, Dungeness-Elwha, Colville, Lower Grande Ronde, and Middle Columbia-Hood. For 2006, 110 watersheds (with at least one in each of the 50 states) have been selected to participate in the CSP, split evenly between cropland and grazing land.

Other factors to consider: Due to funding restrictions, only two watersheds in Washington state were selected to participate in the 2006 CSP—the Lower Snake-Tucannon Watershed in Columbia, Garfield, Asotin, and Whitman counties and the Naches Watershed in Yakima, Kittitas, Pierce, King, and Lewis counties. Enrollment is currently at 14 watersheds, including 273 contracts that total $4.5 million. The maximum contract amount is $40,000, but the average contract amount is $16,000 per year. NRCS has been able to fund nearly every applicant thus far.

Web site: http://www.wa.nrcs.usda.gov/programs/csp/06ws/index.html

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Name of Project: Cultivating Success

Description: This community based education program is designed to provide small scale farmers and ranchers with the planning and decision making tools needed to establish their own sustainable, small acreage agricultural enterprise. Through the development of a demonstration farm and knowledge gained from this program, farmers and ranchers have improved their production and marketing efficiency and are experiencing a measurable increase in farm profits and/or quality of life due to their participation in Cultivating Success. The program is offered jointly by the University of Idaho and Washington State University.

Website: http://cultivatingsuccess.ag.uidaho.edu/

Program: Environmental Protection Agency: National Strategy for Agriculture

Type: This effort by the EPA emphasizes a commitment to communication, innovation and collaboration with the agricultural community and centers around broad goals which include developing and demonstrating environmental protection solutions that express the value of farmland environmental stewardship activities to the public. The activities which support this strategy offer opportunities for funding and policy discussion, which could be useful in the development of a pilot project. These activities include:

- considering market strategies for conservation to bring about larger scale environmental protection and resource enhancement, increasing education, incentives and funding opportunities for agricultural compliance with environmental protection goals,
- considering input from the agricultural sector in EPA rulemaking and strategic plans, in addition to other stakeholders already routinely involved,
- continuing the development and maintenance of mechanisms and for a for improved communication with the agricultural community on all relevant agency actions at the national, state and local levels,
- striving for greater use of collaborative efforts among state, local and other federal agencies for identifying and addressing agricultural and environmental priorities,
- providing results, in collaboration with the research community, to the agriculture sector through outreach and web site publications,
- embracing demonstrated innovative approaches to compliance (i.e., performance based programs) and demonstrate the effectiveness of these approaches, assisting with technology transfer as appropriate,
- supporting research and development for technologies that will assist with environmental protection.

Website: http://www.epa.gov/agriculture/agstrategy.html

Program: Environmental Quality Incentives Program (EQIP) - NRCS

Type: Voluntary program that helps farmers and ranchers comply with existing laws and avert the need for future regulation, by providing assistance in complying with federal, state, and tribal environmental laws (mainly those that affect water quality).

Agricultural sector: Farmers and ranchers

Description: EQIP was reauthorized in the Farm Security and Rural Investment Act of 2002. EQIP's goal in Washington is to assist producers in complying with environmental regulations in an environmentally safe and cost-effective manner through the implementation of a conservation plan, which includes structural, vegetative, and land management practices on eligible land. The process is locally led, via a State Technical Committee and 11 multi-county Local Work Groups (LWGs). Each LWG is organized by a conservation district and is composed of local elected officials (county commissioners, district supervisors, and so on). Each group uses its own ranking criteria and factors to determine which projects are funded and how much cost-sharing is available for approved conservation practices (from the Field Office Technical Guide - FOTG). Non-voting members of the LWG are invited to provide input on criteria and project selection. The LWG makes a recommendation to the State Conservationist, who then brings it to the State Technical Committee for discussion. The final funding allocations are determined by the State Conservationist. In Washington, EQIP is currently funded at $17.5 million per year. Between 10 and 50 percent of applicants receive funding.

Other factors to consider: The most commonly used conservation practices to meet the State's goals and objectives are animal waste storage facilities (including constructing anaerobic digesters on dairy farms or feedlots), irrigation conversion, components of nutrient management plans, nutrient management, residue management (no-till, direct seeding), conservation buffers, pest management, and prescribed grazing. NRCS also directed its state offices to reward and recognize actions that reduce greenhouse gas emissions within the EQIP ranking systems. As a result, NRCS can provide cost-share assistance to livestock producers to install greenhouse gas mitigating technologies, including the construction of methane digesters.

As part of the 2002 Farm Bill, EQIP funds were authorized to fund Conservation Innovation Grants (CIG), also administered by NRCS. CIG is a voluntary program intended to stimulate the development and adoption of innovative, on-the-ground conservation approaches (such as market-based systems) and technologies, including pilot projects and field demonstrations. Under CIG, EQIP funds are used to award competitive grants to non-federal governmental organizations, tribes, or individuals. Funding is awarded through a Request for Proposals (RFP) process, emphasizing projects that have a goal of providing benefits over a large geographic area. In addition to the nationwide RFP process, a state component of CIG was piloted in 12 states in FY05, and 25 states (including Washington) will be participating in the state component of CIG in FY06. State Conservationists will determine the funding level for State competitions, with individual grants not to exceed $75,000.

Web sites: http://www.wa.nrcs.usda.gov/programs/eqip/eqip.html, http://www.state.gov/g/oes/rls/fs/2004/39485.htm, http://www.nrcs.usda.gov/programs/cig/

Program: Farm and Ranch Lands Protection Program (FRPP) – USDA / NRCS

Type: Voluntary program that purchases development rights to keep productive farmland in agricultural uses.

Agricultural sector: Farmers and ranchers

Description: Working through existing programs, USDA joins with state, tribal, or local governments to acquire conservation easements or other interests from landowners. Participating landowners are paid market value and agree to not convert their land to non-agricultural uses, to develop and implement a conservation plan for any erodible land, and to retain the rights to use the property for agriculture. The easements are perpetual easements. In order to qualify, land must be:

- Part of a pending offer from a state, tribe, local, or non-profit organization with a farmland protection program
- Privately owned
- Managed under a conservation plan
- Large enough to sustain agricultural production
- Accessible to markets related to whatever the land produces
- Surrounded by parcels of land that can support long-term agricultural production
- At least 50 percent prime, unique, statewide, or locally important soil or contain historic or archaeological sites

Authorized by the Food Security Act in 1985 and reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill), the program is funded through the CCC. NRCS provides up to 50 percent of the fair market easement value. A cooperating entity must provide at least 25 percent of the appraised fair market value or 50 percent of the purchase price of the conservation easement.

Other factors to consider: In the State of Washington, participating counties include Clallam, Whatcom, Snohomish, Skagit, and King counties, as well as the Methow Conservancy in Okanogan County and the Jefferson Land Trust in Jefferson County. In FY05, Washington received $2 million to fund this program.

Web site: http://www.nrcs.usda.gov/programs/frpp/

Program: Farm Family Support Network

Type: Financial and business plan consultation

Description: The FFSN staff members provide counseling to farm families and serves as a resource in the client's decision making process. The consultant is generally an information resource but can also assist in financial analysis and preparing agricultural business plans. FFSN staff has counseled farm families regarding family communication and dealing with change, prepared financial packages for families to assist them in obtaining loans, helped farm families establish sound business practices, and have sponsored, prepared and presented risk management workshops to dairy and tree fruit producers. It has the potential to curb increased development and sprawl in the rural urban fringe by ensuring that family run farms continue as a viable force in our economy. In two and a half years, the FFSN has served 652 farm families.

Website: http://ffsn.wsu.edu/

Program: Grassland Reserve Program (GRP) – NRCS/FSA

Type: Voluntary program that pays farm and ranch owners to keep areas of native grassland out of production, by helping them restore and protect grassland (including rangeland, pastureland, and certain other lands) while maintaining the areas as grazing lands.

Agricultural sector: Livestock grazing

Description: The program emphasizes support for grazing operations, plant and animal biodiversity, and grassland and land containing shrubs and forbs under the greatest threat of conversion. Participants voluntarily limit future use of the land while retaining the right to conduct common grazing practices; to produce hay, mow, or harvest for seed production; and to conduct fire rehabilitation and construct firebreaks and fences. The program offers enrollment as permanent easements, 30-year easements, rental agreements (in 10-, 15-, 20-, or 30-year easements), and restoration agreements.

GRP was authorized in the 2002 Farm Bill. The program is administered by NRCS and FSA, in cooperation with the U.S. Forest Service. Funding comes from the CCC. Washington received $1.17 million in FY05. No funds were designated to GRP in Washington for FY06.

Other factors to consider: Fewer than 10 percent of applicants receive funding.

Web site: http://www.wa.nrcs.usda.gov/programs/grp/grp.html

Program: King County Farm to School Connections

Type: Local food systems and education about the value of agriculture in the region

Description: This represents a way for farmers to expand their markets and promote localized food systems. This program encourages better nutritional practices in school cafeterias by providing a better quality of food, improves institution-community partnerships, and supports local farmers and the local economy. The most significant aspect of this program is its educational component; farm-to-school connections work to expand and transform children's knowledge about sustainable agricultural practices and their value in the community and state.

Website: http://www.metrokc.gov/dchs/csd/wsu-ce/FoodSystems/Index.htm#F%20to%20S

Program: King County Local Food Policy Council

Type: Proposed program to link local agriculture to urban areas

Description: This has not been implemented yet, but is currently in the proposal stage. Government programs that address hunger, nutrition, agriculture, and food sector labor conditions are spread across many different agencies. The Food Policy Council would bring together these disparate agencies and jurisdictions and attempt to capture a synergy and efficiency in working together to foster local food systems approach. It would also serve as a way to bring together local government, farmers and food entrepreneurs to develop a regional network to promote agricultural and environmental sustainability.

Website: http://www.metrokc.gov/dchs/csd/wsu-ce/FoodSystems/Index.htm

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Program: Landowner Incentive Program (LIP) – Department of Interior (DOI)/USFWS

Type: Program that offers federal assistance to states to benefit federally listed, proposed, or candidate species

Agricultural sector: Landowners in general

Description: The 2005 Consolidated Appropriations Act included $22 million for conservation efforts on private lands in the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, and territories and tribes.

LIP assists states by providing grants to establish or supplement landowner incentive programs that protect and restore habitat on private lands for federally listed, proposed, or candidate species or other species determined to be at-risk. It also provides technical and financial assistance to private landowners for habitat protection and restoration.

Other factors to consider: Participating state fish and wildlife agencies, landowners, and non-profit groups must put up at least 25 percent of the cost of projects.

Web site: http://www.doi.gov/initiatives/landowner_incentive_program.html

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Program: Living on the Land

Type: Technical assistance for small farms

Description: This is a series or courses taught by WSU that educates small acreage land owners who live on the urban fringe about how to manage their land in a sustainable manner. It presents information on improving management techniques for small farmers including goal setting, soil conservation, water quality management, and natural resource protection. This program has been successful in promoting the use of Best Management Practices of small acreage farmers.

Program: Private Stewardship Grant Program – DOI

Type: Voluntary conservation effort on private lands

Agricultural sector: Any

Description: The program provides federal grants on a competitive basis to individuals and groups engaged in voluntary conservation efforts on private lands to benefit federally listed endangered or threatened species, candidate species, or other at-risk species. Private landowners and groups working with private landowners can submit proposals directly to United States Fish and Wildlife Service for funding to support these efforts.

Examples of funded projects include:

- Installation of fencing around sensitive habitat for imperiled species, to prevent predation, trampling, and competition from nonnative species
- Removal of fish migration barriers to enhance survival and reproduction of imperiled fish species
- Implementation of effective management practices on existing suitable habitat for imperiled species

Other factors to consider: Nationally, approximately $6.5 million is available through this program to support on-the-ground conservation efforts on private lands.

Web site: http://www.doi.gov/initiatives/private_stewardship_grant.html

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Program: Stewardship Planning Programs, King County

Type: Technical assistance program

Agricultural sector: Landowners

Description: King County offers three tracks to help landowners in unincorporated King County carry out a range of development activities, including farm planning, forest planning, and rural stewardship planning. Free technical assistance is available from King County and King Conservation District to help landowners develop a Farm Management Plan, which is used to determine habitat protections that are consistent with agricultural practices. Technical assistance is also available from the county to help landowners (in the rural RA zone) develop a Rural Stewardship Plan, tailoring habitat protections to their property and goals.

Web site: http://dnr.metrokc.gov/wlr/cao

Program: USDA Sustainable Agriculture Research and Education (SARE) Western Region Grants

Type: Program that funds projects to help agricultural producers remain profitable while protecting the environment and strengthening rural communities.

Agricultural sector: Farmers and ranchers

Description: Projects range from increasing shrimp production in Arizona to educating producers about energy alternatives to fossil fuels in California and extending the raspberry-producing season in Utah. In 2005, two grants were awarded to applicants from the state of Washington. The Whitman Conservation District received $77,688 for education-related activities, and Christopher Tchudi, a producer, received $2,419 for agricultural systems.

Grants are offered in the following categories:

- Research/Education: Applicants are typically scientists affiliated with universities, nonprofit organizations, or agricultural agencies. Grants range from $20,000 to more than $200,000 and typically last three years. An interdisciplinary approach is encouraged, and projects must involve producers as participants or consultants.

- Farmer/Rancher: These projects are conducted by agricultural producers with support and guidance from a technical advisor, usually a cooperative extension agent or educator, or a professional from a government agricultural support agency. Producers use their grants to conduct on-site experiments that can be shared with other producers. Projects might also focus on marketing and organic production. Grants are limited to $10,000 for an individual producer or professional and $20,000 for three or more producers or professionals.

- Professional + Producer: These grants are similar in concept to Farmer/Rancher grants, except that an agricultural professional, such as an extension educator or

NRCS professional, coordinates the project with a farmer or rancher serving as technical advisor. Grants are limited to $10,000 for an individual producer or professional and $20,000 for three or more producers or professionals.

- Professional Development Program: These grants are designed to help agricultural professionals affiliated with land grant universities and government and nonprofit organizations develop educational tools to help spread knowledge to producers about concepts and practices of sustainable agriculture. Applicants can seek up to $30,000 for one-year projects and $60,000 for two-year projects in a single state or locale. (For regional or multi-state projects, applicants can seek up to $60,000 for one year and $100,000 for two years.

The benefits to agriculture have been significant. Sixty-four percent of farmer/rancher grant recipients report that the SARE grants helped them achieve higher sales; 41 percent said it increased net income. In addition, 56 percent said they increased yields per acre because of their funded project, and 54 percent cited increases in annual animal production. Furthermore, 37 percent cited reduced spending on fuel, 39 percent spent less on fertilizer, 43 percent spent less on pesticides, and 38 percent cut weed control expenses.

The benefits to environmental stewardship have been equally impressive. Seventy-nine percent of recipients reported improved soil quality, 69 percent increased wildlife habitat, 58 percent decreased soil erosion, 54 percent improved water quality, and 47 percent improved air quality.

Web site: http://wsare.usu.edu

Program: Washington Salmon Recovery Funding Board Grant Program

Type: Program that funds salmon recovery and habitat restoration projects

Agricultural sector: Any

Description: This program funds salmon habitat and assessment projects. Applicants must provide at least 15 percent in matching funds. Currently, both public and private entities are eligible.

Other factors to consider: Possible funding shortage

Web site: http://www.iac.wa.gov/srfb/grants/salmon_recovery.htm

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Program: Washington State University Extension

Type: Education and technical assistance

Description: The extension network provides research, education and technical assistance across the state. With programs ranging from local IPM implementation efforts to agricultural business and rural community development, the extension provides a valuable resource to agricultural operations – whether large or small, urban or rural. The extension network has been instrumental in converting university research to practical implementation and local knowledge.

Web site: http://ext.wsu.edu/

Program: Wildlife Habitat Incentives Program (WHIP) – NRCS

Type: Technical and financial assistance program

Agricultural sector: In Washington, lands where fish and wildlife have been affected by agricultural activities or urban development, or areas where invasive species have negatively affected wildlife.

Description: WHIP is a national program that provides technical and financial assistance to non-federal landowners and tribes to develop, restore, and enhance fish and wildlife habitats. Participants agree to implement a wildlife habitat development plan (WHDP), and USDA agrees to provide cost-share assistance for the initial implementation of wildlife habitat development practices. The cost-share agreement generally at least 10 years from the date the contract is signed. After 10 years, further preservation is up to the landowner.

The major objectives in Washington State include: providing technical assistance, providing cost-share assistance, educating program participants and the public, and entering into cooperative agreements for special projects with landowners. The State Technical Committee (without the involvement of LWGs) has established separate priorities for implementing WHIP in eastern and western Washington. Funding, ranking criteria, and approved practices have been developed for the eastern, western, and central areas of the state. Thus, regional plans show a great deal of local flexibility.

WHIP was established by the 1996 Farm Bill. The 2002 Farm Bill strengthened the program by authorizing $700 million in program funds through 2007.

Other factors to consider: In Washington, WHIP is a small program that receives about $500,000 in funding annually ($170,000 for each "region" of the state). In 2004, all funding was allocated to restore salmon habitat by removing fish passage barriers. Fewer than 50 percent of applicants receive funding. Funding is statewide in nature.

Web site: http://www.wa.nrcs.usda.gov/programs/whip/whip.html

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Program: Wetlands Reserve Program (WRP) – NRCS

Type: Voluntary program that pays landowners to take wetland areas out of production and put them under conservation easements.

Agricultural sector: Washington State's goals and objectives of WRP are to assist eligible applications in the restoration, creation, protection and enhancement of wetlands on their property through a voluntary, environmentally safe and cost effective manner.

Description: Under the program, participating landowners can establish conservation easements that last 30 years or are permanent, or they can enter into restoration cost-share agreements where no easement is involved. In exchange for establishing a permanent easement, the landowner receives payment worth the agricultural value of the land plus 100 percent of the costs for restoring the wetlands. The 30-year easement payment is 75 percent of what would be provided for a permanent easement on the same site and 75 percent of the restoration cost. The voluntary agreements last at least 10 years and provide for 75 percent of the cost of restoring the involved wetlands. In FY05, Washington received $8.6 million in funds from the federal government for WRP. The state WRP is implemented through consultation with the State Technical Committee, which has identified the following most commonly used practices to reach its goals and objectives: wetland/upland wildlife habitat management, water control structures, creation of shallow wetlands, tree plantings, and conservation buffers.

Other factors to consider: Funding is granted to 30 to 50 percent of applicants. Funds tend to go to a limited number (13 to 15) of fairly large, high-quality easements (often over $500,000) that are typically found on the west side of the state. No more than ten percent of a single county can be enrolled in the program. Stevens County currently has the highest enrollment, at less than one percent.

Web site: http://www.wa.nrcs.usda.gov/programs/wrp/wrp.html

Collaborative Efforts

Coordinated Resource Management
Model Watershed Plans
Groundwater Management Area (GWMA) Plan
Comprehensive Irrigation District Management Plan (CIDMP)
Vinea Winegrower's Sustainable Trust
Washington State Conservation Commission Dairy Program

Program/Plan: Coordinated resource management (CRM)

Type: Collaborative planning and conflict resolution process

Agricultural Sector: Rangelands, but may be applied to any sector

Description: This collaborative process facilitates resource allocation decisions based on local knowledge, technical assistance, and consensus. The process is initiated by the local landowner and includes the voluntary participation of stakeholders and decision makers within local government agencies. This process has been used successfully in Washington and other states. The keys to success are neutral facilitation, mutual trust, collaboratively developed goals and monitoring, and a plan that allows for flexibility in achieving outcomes. A pilot project could promote the adoption of a similar process in local area watersheds, municipalities, or land use planning processes.

Web site: http://www.rangelands.org/education_crm.shtml

Program/Plan: Model Watershed Plans

Type: Collaborative planning processes

Agricultural sector: Farmers and ranchers

Description: The Bonneville Power Administration (BPA) funded a series of Model Watershed Plans in southeast Washington, in collaboration with the Salmon Recovery Funding Board (SRFB) and the Washington Conservation Commission (WCC). Additional partners included the Washington State Department of Fish and Wildlife, NRCS, and local farmers and ranchers. Plans were prepared for Asotin Creek, Pataha Creek, and Lower Snake-Tucannon River watersheds.

The Asotin Creek Model Watershed Plan, completed in 1995, was the first BPA-funded Model Watershed Plan in Washington dealing with watershed restoration and protection for fish habitat. The mission of the plan was to "complete and implement an integrated plan for Asotin Creek watershed that will meet landowner objectives and agency acceptance, in order to protect and enhance all resources bases with concern for long-term sustainability." Such comprehensive watershed management requires long-term commitments from landowners and state and federal agencies, and the plan continues to improve upon grassroots public involvement and interagency cooperation in habitat restoration. Information and education for the local public are an important aspect of the plan.

The Tucannon River Watershed Plan recommended conservation practices to lower water temperature and reduce the amount of sediment delivered to the stream. The plan provided federal cost-share funds to private landowners to help establish the recommended practices. BPA funds were supplemented with funds from Columbia County, WCC, and private landowners.

The Pataha Creek Model Watershed (the largest sub-watershed in the Tucannon watershed) was selected as a model in 1993. Projects included the use of riparian fencing,

off-site watering facilities, tree and shrub plantings, and upland conservation practices. The program is dedicated to enhancing the viability of small-scale agriculture across the state, particularly in urbanized areas as focused on upland conservation practices to reduce the sedimentation into Pataha Creek, using farming practices such as no-till seeding that reduce erosion from cropland.

Other factors to consider: The Model Watershed Plans can leverage funds from programs such as CREP. Continuation of these plans has been constrained by lack of funding.

Web sites: http://www.efw.bpa.gov/publications/h36208-1.pdf, http://www.efw.bpa.gov/publications/H36266-1.pdf, http://www.efw.bpa.gov/publications/H12585-1.pdf

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Program/Plan: Columbia Basin Groundwater Management Area (GWMA) Plan

Type: Collaborative approach to groundwater/irrigation management

Agricultural sector: Irrigated and dryland farming; livestock

Description: Concerns over high groundwater nitrate concentrations in Adams, Franklin, and Grant Counties led to official designation of the tri-county area as a GWMA by Washington State Department of Ecology in February 1998. The boards of county commissioners of the three counties joined with more than 100 local volunteers to form and direct the GWMA efforts. They developed the GWMA Plan to inform the public and guide groundwater protection activities that focus on the nitrate problem. The staff of the local conservation districts, health districts, and county governments coordinate, facilitate, and implement the GWMA activities.

The local GWMA participants recognize that nitrogen used in irrigated agriculture—meaning all nitrogen-loading activities within the irrigated areas of the three counties—has likely been contributing nitrate into the region's groundwater. They have agreed that the most effective methods for improving regional groundwater nitrate levels in the GWMA are the following:

- Widespread irrigation water management and use of nutrient management guidelines in fertilizer use and application on agricultural lands
- Public education about drinking water safety and groundwater protection

The plan presents: 1) the current understanding of the nature of the groundwater nitrate problem and sources that might contribute nitrate to groundwater, 2) management strategies recommended by the local GWMA volunteers to reduce groundwater nitrate levels, and 3) a process to implement the strategies and monitor their progress. The plan contains specific goals for implementing nitrate management strategies.

The plan lessens the need for mandated nitrate control measures. Growers can conserve water and power through the use of irrigation water management scheduling and use the technology to generate data on soil moisture and other field conditions, which improves management decisions.

The environmental benefits include reduced nitrate levels in local groundwater and water conservation. Monitoring of the progress in achieving the GWMA goals will be conducted regularly. The monitoring results and evaluation were scheduled for release by December 31, 2005.

Other factors to consider: A diverse group of more than 100 local volunteers have formed five Ground Water Advisory Committees (GWACs) that represent the five nitrate sources of concern: irrigated and dryland agriculture, sprayfield and wastewater management, dairy/feedlot and cattlemen, urban and rural residential, and environment and recreation. The GWACs research nitrate issues, provide input to the GWMA process, and develop recommendations for the GWMA Plan. The development and implementation of the GWMA Plan is proactive, voluntary, and locally driven.

Funding constraints have limited program participation to 25 to 30 percent of applicants; more than 200,000 acres have been turned away each year.

Web site: http://www.gwma.org/

Program/Plan: Comprehensive Irrigation District Management Plan (CIDMP)

Type: Multi-agency effort to develop individualized irrigation management plans for landowners and farmers

Agricultural sector: Agricultural landowners

Description: The CIDMP provides the agricultural community with a voluntary opportunity to lead a collaborative farmland and resource stewardship planning process with state and federal agencies and other interested parties. The objective is to develop creative solutions to address the complex and intertwined set of fish and water issues facing agricultural landowners and meet environmental requirements while protecting the viability of the agricultural landscape. This performance-based approach describes in a 10-step process how an irrigation district or group of agricultural landowners in a basin or watershed can develop management plans that simultaneously meet the requirements of the Clean Water (CWA) and Endangered Species Act (ESA). It is designed to work with watershed planning, salmon recovery or other similar efforts.

Web site: http://afw.scc.wa.gov/files/index.php3

Program/Plan: VINEA: Winegrower's Sustainable Trust

Type: Voluntary collaborative effort links marketing and sustainable farming practices

Description: This collaborative effort represents an agreement by winegrowers and producers to consider economic, environmental and social sustainability throughout the production process. Growers use practices that were collaboratively defined by members of the Trust that are respectful of workers and the environment. By using mutually agreed and environmentally-friendly philosophies and practices, the Trust seeks to link their stewardship to market premiums and access.

Web Site: http://www.vineatrust.org/

Program/Plan: Washington State Conservation Commission Dairy Program

Type: Compliance assistance

Agricultural sector: Livestock (dairy)

Description: The program was created in 1998 with the passage of the Dairy Nutrient Management Act, which aims to prevent the degradation of surface and ground waters. The guiding principle for the program has been to bring the dairy industry into compliance with the Federal Clean Water Act. An approved and certified dairy nutrient management plan (see approval checklist used by local conservation districts on the web site listed below) is prepared by dairy producers to satisfy the requirements of the act. The act required producers to have their plans certified by December 31, 2003. Industry, the EPA, the environmental community all agreed on the need to pass act. The resulting law is far more flexible and user friendly for the dairy farmer than what would likely have passed had the interested groups taken no action.

Dairy producers can reap financial benefits by using the nutrients in dairy wastes to enhance the productivity of crops grown on the farm, potentially supplementing or replacing other fertilizers. This reduces production costs and improves soil quality. The program benefits the environment by preventing degradation of surface and ground waters by the dairy industry.

Web sites: http://www.scc.wa.gov/programs/dairy/;
http://filecab.scc.wa.gov/Dairy/DNMP_Approval_Checklist_020900.html

Market-Based Incentives

Food Alliance
Gently Grown Label
Puget Sound Fresh, King County
Salmon Safe

Shepherds Grain
Small Farm & Direct Marketing Program

Program: Food Alliance

Type: Labeling

Description: Food Alliance is a non-profit organization in the Pacific Northwest that works to create market incentives for adoption of sustainable agricultural practices. It operates a certification and eco-labeling program based on a broad set of social and environmental criteria. Participating farms must develop plans to reduce pesticide use, conserve soil and water, protect wildlife, and provide healthy and safe working conditions. The group has certified more than 2.75 million acres on 140 farms in the Northwest and Midwest (one example is a cooperative of family ranches called Country Natural Beef, formerly known as Oregon Country Beef, which is certified by Food Alliance for its use of sustainable agricultural practices). The Food Alliance recently partnered with the NRCS CSP program to combine federal payments and market incentives for farmers and ranchers to provide automatic CSP eligibility to Food Alliance–certified farmers.

Web sites: http://www.foodalliance.org, http://www.oregoncountrybeef.com

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Program: Gently Grown Label

Type: Labeling

Description: Bluebird Fruit created the Gently Grown label for fruit produced by the Peshastin Creek Growers (PCG) Association. PCG supports the use of environmentally friendly pest management practices by using "category 4" pesticides, which have low toxicity.

The benefits to agriculture include improved farm worker safety and improved marketing opportunities. The benefits to the environment include improved soil and water quality through reduced use of broad-spectrum pesticides.

Web site: http://entomology.tfrec.wsu.edu/pearent/pcg.htm

Program: Puget Sound Fresh, King County

Type: Labeling

Description: Puget Sound Fresh was started by the King County Agriculture Commission to encourage consumers, wholesalers, retailers, and restaurants to seek out

and purchase locally grown products. The program labels products with a Puget Sound Fresh sticker or banner. The Cascade Harvest Coalition (a non-profit organization dedicated to local agriculture) has partnered with Puget Sound Fresh and 12 local counties to keep local farmers farming. The coalition also sponsors Washington FarmLink, a program that provides aspiring farmers and landowners with technical assistance and education to help them build sustainable farming operations.

Web sites: http://dnr.metrokc.gov/wlr/farms/, http://www.cascadeharvest.org/

Program: Salmon Safe

Type: Labeling

Description: Salmon Safe recognizes farms that contribute to restoring ecosystem health in native salmon fisheries in the Pacific Northwest. Participating agricultural operations must promote viable streams and wetlands through proper water use, erosion control, chemical management, and environmentally sound animal husbandry. More than 30,000 acres have been certified (18 farms in the Puget Sound region), and the Salmon Safe label is found on wine, fruit, milk, and rice in some grocery stores and specialty wine shops nationwide. The label is supported by the Stewardship Partners in Seattle.

Web site: http://www.salmonsafe.org, http://www.stewardshippartners.org/

Program: Shepherds Grain

Type: Labeling

Description: Shepherds Grain is an alliance of 12 family farms that are dedicated to practicing sustainable agriculture in growing wheat. Their farming practices, which include using a direct-seed system for their locally-grown wheat, are certified as "environmentally and socially responsible" by the Food Alliance (further described below). Wheat is typically a commodity product (meaning the price is set by the Chicago Board of Trade), but these farmers can put an additional premium on their products.

Web site: http://www.shepherdsgrain.com/

Program: Small Farm & Direct Marketing Program – WSDA

Type: Technical assistance and marketing

Description: The program works to improve the status of small farms (those with gross sales of less than $250,000 a year) in Washington, which constitutes approximately 90 percent of farms in the state. The mission is to increase the economic viability of small

farms, build community vitality, and improve the environmental quality of the region. The program does this by providing technical assistance to small farms, including help with direct marketing strategies (selling products directly to consumers), chef-farm connections, farm-cafeteria connections, eco-labels, agricultural tourism, and several other assistance programs.

Web site: http://agr.wa.gov/Marketing/SmallFarm/default.htm

Technology Applications

CSANR Climate Friendly Farming
Cultivation of biofuel crops
Sensor Webs/Ag WeatherNet
Stationary, mobile, or small-scale biomass digesters
Stationary or mobile oilseed crushers

Project: CSANR Climate Friendly Farming

Type: Research

Description: The Climate Friendly Farming Research & Demonstration Project showcases interdisciplinary cooperation in a comprehensive research project. The project aims to help farmers ease global climate change by reducing farm-produced greenhouse gases. CSANR researchers are assessing dairy, irrigated crop, and dryland grain farming systems to determine how each could move from contributing to global warming to becoming part of the solution. The research could make it possible to compensate farmers for offsetting the pollution caused by urbanization and industries. The program is collaborating with WSU's biological-systems engineering department to convert an existing stationary anaerobic digester in Pullman, Washington, into a mobile anaerobic digester.

Web site: http://cff.wsu.edu/

Project: Cultivation of biofuel crops

Type: Research

Description: Initial studies have been conducted on the viability of certain biofuel crops (such as mustard, rapeseed, canola, soybean, sunflower, and safflower) in Washington. Further testing in the disparate regions of the state is needed to determine the economic viability of these crops. Biofuel crops provide renewable energy that is essentially carbon dioxide neutral because the CO_2 emitted during combustion is offset by the CO_2 removed by the crop during its growth.

Program: Sensor-webs/AgWeatherNet

Type: Real time weather network for specific locations

Description: This sensor technology allows agricultural producers to measure temperature, leaf wetness and automated insect traps. This pilot also utilizes IPM technology through the use of insect traps to control codling moth and leaf rollers in orchards. The combination of weather data and trap data can then be used to see if having improved weather and trap data can improve IPM programs. This program allows producers to enhance IPM programs and reduce pesticide use.

Website: http://agweathernet.prosser.wsu.edu/index.html

Project: Stationary, mobile, or small-scale biomass digesters

Type: Research and monitoring of recently implemented projects

Description: Efforts are underway to develop and test a new manure digester in Monroe, Washington, to test an existing digester at the Vander Haak Farm in Lynden, Washington, and to test the design of an existing stationary digester in Pullman, Washington, before converting it to a mobile digester. Other projects such as the Regional Organics Process Facility, are working to develop and implement a system for turning corn or other by-products into green power or value-added products.

Project: Stationary or mobile oilseed crushers

Type: Research

Description: Bio-fuels could become an important component of sustainable agriculture in the state, but the lack of infrastructure for crop production, processing, and market access has been cited as a barrier. A pilot project could seek to develop a relatively inexpensive means of processing oilseeds, particularly one that could benefit and support local farms or reduce transportation costs. Another pilot project could establish a supply chain to satisfy urban demand.

Project: Paper products from straw waste

Type: Research and testing

Description: Wheat straw has traditionally been burned in Washington's fields, but air quality concerns have led farmers to seek a cost effective alternative to burning. Research

suggests that wheat could be used as a feedstock for paper products, including cardboard, copy paper, and other paper products.

Agricultural Land Preservation

Farmland Preservation Program
Farmland Preservation Program (FPP), King County
King County Transfer of Development Rights (TDR) Program
Open Space Taxation Act

Program: Farmland Preservation Program

Type: Purchase of Agricultural Conservation Easements (PACE)

Description: The statewide Farmland Preservation Program, administered by the Office of the Interagency Committee for Outdoor Recreation (OIAC), is aimed at preserving economically viable farmlands in Washington State and enhancing ecological functions on those lands. Counties and cities are eligible to receive the grants, which are to be used to:

- Preserve viable farmland
- Enhance the ability of the preserved farmland to provide agricultural production
- Improve or restore the ecological functions of the preserved farmland, including providing benefits to fish and wildlife
- Provide other functions important to communities such as improving aquifer recharge, managing storm water, creating jobs in the agricultural sector, etc.

Counties and cities may use the grants to acquire farmland development rights through PACE (see further description below). Grant funds can also be used for improvements that enhance the agricultural production of the preserved farmland and help restore or enhance ecological functions.

Other factors to consider: OIAC will begin soliciting grant proposals in the spring of 2006. They are currently beginning to develop guidelines for what types of requests will be eligible for funding and how they will be evaluated.

Web site: http://www.iac.wa.gov/iac/grants/farmland_description.htm

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Program: Farmland Preservation Program (FPP), King County

Type: Purchase of Agricultural Conservation Easements

Description: The FPP began in 1979 when King County voters approved an initiative authorizing the county to preserve rapidly diminishing farmland by purchasing development rights. In selling development rights, owners allow covenants to be placed on their property that limit use and development. The county acquired development rights for 12,600 acres of farmland in the 1980s and continues to purchase rights on selected properties. The protected farmlands are located primarily in the Green, Sammamish, and Snoqualmie River valleys and on the Enumclaw Plateau and Vashon Island.

FPP is a purchase of development rights (PDR) program, also referred to as purchase of agricultural conservation easements (PACE). Additional PACE programs in Washington include:

Pierce County Resource Conservation Fee Proposal
Puget Consumers Coop Farmland Fund
San Juan County Land Bank
San Juan Preservation Trust
Skagit County Conservation Futures
Skagitonians to Preserve Farmland
Whatcom County PDR Program
Washington State's Agricultural Conservation Easements Program (established via House Bill 2758 in 2002; currently unfunded)

Web sites: http://dnr.metrokc.gov/wlr/LANDS/farmpp.htm, http://www.farmland.org/pnw/index.htm

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Program: King County Transfer of Development Rights (TDR) Program

Type: Transfer of Development Rights

Description: The King County TDR Program allows individuals in the private market to purchase and sell residential development rights. It encourages land development in urban areas and sets aside land for preservation in other, more rural regions of the county. The program requires a permanent conservation easement on the land from which development rights are transferred. Participation in the program is voluntary, but sites must be certified by King County. Agricultural Production District lands qualify as TDR "sending sites." Other local jurisdictions that have initiated TDR programs include:

City of Issaquah (proposed TDR program)
City of Redmond
Snohomish County

Web site: http://dnr.metrokc.gov/wlr/tdr/

Program: Open Space Taxation Act

Type: Agricultural lands conservation

Description: The Open Space Taxation Act allows property owners in Washington State to have their open space, farmland, and timberland valued at their current use rather than at their highest and best use (for taxation purposes). Several counties have established a public benefit rating system (PBRS) for the open space classification of the Act to determine the percentage of tax reduction per parcel. Examples of such programs in Whatcom and King County are briefly described below:

- **Open Space Taxation Program, Whatcom County:** Applications are considered for the "Open Space Farm and Agriculture Conservation" classification under the Act, using a set of criteria determined by Whatcom County (see program web site listed below).
- **Public Benefit Rating System, King County:** The PBRS and the Timber Land programs provide incentives to encourage landowners to voluntarily conserve and protect land resources, open space, and timber. In return, the land is assessed at a value consistent with its "current use" rather than the "highest and best use." PBRS is based on a point system; points are assigned to specific open space resources or PBRS categories. The sum of the points translates into a percentage reduction in taxes for the portion of the land enrolled in PBRS.

Other factors to consider: Land enrolled in the USDA CRP program is automatically classified as farm and agricultural land under the Act.

Web sites: http://dor.wa.gov/docs/pubs/prop_tax/openspace.pdf**,**
http://www.co.whatcom.wa.us/pds/planning/openspace/os_index.jsp,
http://dnr.metrokc.gov/wlr/lands/incentiv.htm

Conservation farming practices

Soil Management

- **Direct seeding/reduced tillage.** Applicable to either dryland or irrigated crops, direct seeding refers to cropping systems that fertilize and seed directly through the residues of the previous crop without using the traditional tillage for seedbed preparation. Only a narrow strip of soil is disturbed with each of the fertilizer and/or seed openers, and much of the crop residue is retained on the soil surface, which reduces erosion and conserves organic matter. Direct seeding and reduced tillage techniques can be one- or two-pass systems, which are further categorized into high- to low-disturbance. Direct seeding systems can minimize soil erosion, improve water conservation and soil quality, sequester carbon, and increase production efficiency and profitability.
- **Green manures.** This technique involves tilling fresh plant material into the soil to improve the soil, add nutrients, manage soil-borne pests, increase water

infiltration, improve yields of the following crop, and increase profits. This is a traditional technique that was largely replaced by less expensive synthetic fertilizers. However, farmers are now realizing that unlike using synthetic fertilizers, this technique can improve the soil's physical, chemical, and biological qualities. The technique has proven successful in potato crops in Washington to control soil-borne pests, and it might be beneficial for other crops, particularly by using legume green manures to provide nitrogen as synthetic nitrogen becomes more expensive and potentially scarce.

- **Combined direct seeding/green manures.** Growers in other parts of the world (especially South America) have combined these two practices with success. It has allowed them to reduce input costs, increase yields, build soil organic matter, reduce soil erosion, and protect water quality. This combination has been used in the southeastern United States, but it has not been explored in the Pacific Northwest. Growers have developed special equipment to terminate the cover crop without tillage or herbicides in some situations, further protecting water quality outcomes and reducing costs.

Rangeland and Pasture Management

- **Rotational grazing.** Rotational grazing, or intensive pasture management, is a system of dividing a pasture into several smaller sections and moving livestock between them in short rotations to allow plants to recover before they are grazed again. This system improves livestock weight gain, maintains plant diversity, and increases available forage. Because this approach prevents pastures from being overgrazed, it can increase plant cover, reduce soil erosion and sequester carbon within the soil. The use of portable fencing inherent in this practice makes it easier to keep cattle away from waterways during wet periods and allows them to graze during drier times, which can benefit native plant growth.
- **Multi-species grazing.** Sheep and goat grazing during selected seasons and cycles of plant growth can reduce invasive plant species and promote growth of native grasses. These grazing techniques have been successfully used on rangelands used for cattle grazing, as well as sensitive areas such as wetlands and riparian areas in both rural and urban settings. Because sheep and goats prefer different plants than cattle and have different grazing mechanics, they seek out small plants, particularly weeds, which allow for a high protein intake. If sheep and goats graze pastures during the early stages of weed growth, they can, over time, reduce weeds and invasive species in pastures. This can in turn reduce the need to apply herbicides to pastures and sensitive areas in both rural and urban settings, and it can achieve long-term gains for farmers in the form of increased yields and reduced expenses and environmental costs associated with herbicide application. In addition, the livestock represent a saleable product after they are used for weed control.
- **Habitat-enhancing grazing.** One recent pilot effort conducted by the Washington Cattleman's Association (WCA) and the Washington State Department of Fish and Wildlife (WDFW) allows grazing on WDFW lands in an effort to improve habitat for elk, deer, and other wildlife. This approach aims to

promote native plant growth, which is more palatable to wildlife, using sound rangeland management practices.

- **Integrated crop/livestock systems.** This traditional farming method is less common in highly specialized agricultural systems. However, even in intensive agricultural areas, examples of the benefits of integrating crops and livestock are evident. In the Columbia Basin, growers plant cover crops such as triticale in the fall after harvest to reduce the potential for wind and water erosion over winter. The cover crop can be grazed by livestock, generating revenue for the grower and additional organic matter for the soil. Often the land is leased by a crop farmer to a livestock producer for the grazing period. Increased farm diversity or coordination between farms could help spread the use of this technique. This approach also enhances the potential to market grass-fed livestock products.

Irrigation

- **Drip irrigation.** This technique applies water directly to the root of the plant, reducing evaporative losses from irrigation. It has been successfully used in tree fruit production and many vegetable crops.
- **Deficit irrigation and partial rootzone drying.** This technique has been tested in orchards to trick the tree into thinking it is under water stress so that it grows less foliage, uses less water, and produces higher-quality fruit. It also reduces the need for pruning, which can lead to potentially significant cost savings.

Pest Management

- **Integrated pest management (IPM).** IPM uses a combination of techniques to control pests, such as using pest-resistant plant varieties, regular monitoring for pests and their natural predators, weather monitoring, and carefully applied doses of low-toxicity pesticides. These techniques can be used singly or in combination, with an emphasis on methods that are least injurious to the environment and most specific to the particular pest.

Organic Practices

- **Organic farming.** Organic food production in this state has increased dramatically to meet increasing consumer demand. Washington has more than 30,000 acres of certified organic land, with a large portion in higher-value fruit and vegetable crops. Most studies of organic systems have found environmental benefits, and many organic products yield a premium price for the grower. However, these systems are often more expensive to implement and can incur a slight yield loss. Thus, premium prices are generally necessary to make them viable economically.
- **Composting.** Composting is a biological process that uses heat, moisture, oxygen, and microbial organisms such as bacteria and fungi to decompose plant and animal matter. This decomposition process breaks down raw materials into nutrient-rich organic matter that farmers can apply as fertilizer or soil conditioner

to crops and pastures. Compost is also being researched for specific disease control potential and enhancement of general plant health and growth. While compost use started on smaller farms, it is now used on a number of larger operations in the state. However, more widespread use of compost could be achieved by documenting consistent benefits using manure by-products in a way that returns organic matter to the soil, improves water quality and reduces fertilizer costs. Use of composting and beneficial microorganisms also has potential in urban agriculture. Urban composting may reduce water, fertilizer, and pesticide use on playgrounds, lawns, and golf courses—a significant source of urban water pollution.

- **On-farm composting.** This is a common practice, particularly on organic farms, and it forms the basis for soil health and plant nutrition.
- **Commercial recycling.** Large composting operations already exist in several agricultural areas in the state. As hobby farms and horse operations increasingly become a part of our urban fringe and rural fabric, creative new ways of recycling manure, bedding, yard waste, or even compost from commercial feed operations might offer additional opportunities for an agricultural-based business. Environmental benefits could include more effective manure and nutrient management.

Information-Intensive Management

- **Precision agriculture.** The use of Geographic Information Systems (GIS) and Global Positioning Satellite (GPS) data for farm operations is increasing. These tools can be used to create yield maps, apply variable amounts of fertilizer, map and treat specific areas for weeds instead of whole fields, and a range of other activities that can reduce costs, increase yield and quality, and improve environmental stewardship.
- **Soil moisture monitoring.** Existing technology allows farmers to remotely monitor soil moisture up to a depth of two feet. This allows for watering only when soil conditions warrant it. A pilot project could explore methods of disseminating this technology, coupling it with other systems, or monitoring results.
- **Direct crop monitoring.** Research is underway to develop sensors that mimic the temperature and moisture conditions within an apple. Water for evaporative cooling is then applied only when the sensor indicates that it is necessary, rather than based on outside air temperature, which can help to conserve water use. This kind of technology could be applied to other high-value crops to reduce water usage and prevent crop loss.