N A T U R A L R E S O U R C E S

Legislative Progress Report: ESHB 2541 (2010)

Ecosystems Services Markets for Private Forestland Owners in Washington State

December 2011

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

Peter Goldmark
Washington State
Commissioner of Public Lands

December 27, 2011

House Agriculture & Natural Resources Committee
PO Box 40600
Olympia, WA 98504-0600

House Environment Committee
PO Box 40600
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Senate Energy, Natural Resources
& Marine Waters Committee
PO Box 40440
Olympia, WA 98504-0440

Senate Environment Committee
PO Box 40434
Olympia, WA 98504-0434

Dear Legislator:

It is my pleasure to submit to you a progress report on my Forest Ecosystem Services Market Incentives Demonstration Project, in response to Engrossed Substitute House Bill 2541 from the 2010 legislative session. The legislation directs the Department of Natural Resources to develop proposals for forest landowner conservation incentives that support landowners maintaining their land in forestry and provide this report back to the legislature.

As a result of the department's work during 2010 and 2011 with a broad array of stakeholders and government entities, as described in the attached document, I'm pleased to report that we have laid the needed foundation for real watershed service market transactions on a demonstration basis in 2012. This work will provide critically needed transaction evidence and other lessons as a contribution to the development of functioning ecosystem service markets on a broader scale. Payments for these services from forest lands are the most innovative and much-discussed financial incentive for forest landowners to remain in forestry, thus fulfilling legislative intentions in ESHB 2541.

I and my staff would be happy to discuss this work with interested members and committees of the legislature, and I look forward to providing a final report of successful project completion at the end of 2012, providing a pathway for legislative action in 2013.

Please let me know how I can be of further assistance as you consider the progress we've made so far and our plans for the coming year.

Sincerely,

Peter Goldmark
Commissioner of Public Lands

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c: The Honorable Brian Blake, Chair, House Agriculture & Natural Resources Committee
The Honorable Derek Stanford, Vice-Chair, House Agriculture & Natural Resources Committee
The Honorable Bruce Chandler, Ranking Minority, House Agriculture & Natural Resources Committee
The Honorable Dave Upthegrove, Chair, House Environment Committee
The Honorable Steve Tharinger, Vice-Chair, House Environment Committee
The Honorable Shelly Short, Ranking Minority, House Environment Committee
The Honorable Kevin Ranker, Chair, Senate Energy, Natural Resources & Marine Waters Committee
The Honorable Debbie Regala, Vice-Chair, Senate Energy, Natural Resources & Marine Waters Committee
The Honorable Jerome Delvin, Ranking Minority, Senate Energy, Natural Resources & Marine Waters Committee
The Honorable Bob Morton, Ranking Minority, Senate Energy, Natural Resources & Marine Waters Committee
The Honorable Sharon Nelson, Chair, Senate Environment Committee
The Honorable Christine Rolfes, Vice-Chair, Senate Environment Committee
The Honorable Doug Ericksen, Ranking Minority, Senate Environment Committee
Ms. Jan Odano
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Ms. J.T. Austin
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Washington State Department of Natural Resources

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Summary

The purpose of this report is to brief the Washington State Legislature and other interested parties on the Washington State Department of Natural Resources' (DNRs') progress in responding to legislative direction contained in Engrossed Substitute House Bill 2541 enacted by the 2010 Legislature. That legislation directed DNR to explore and make recommendations to the legislature and others regarding conservation incentives for private forest landowners in Washington, with a particular emphasis on "ecosystem services" markets. The department has engaged in a variety of responsive activities during 2010 and 2011, with a broad array of interested stakeholders and governmental entities. There exists great interest in the state and region in both the concept of ecosystem service markets or payment systems, and prospects for making such systems a reality in Washington State. Accordingly, Commissioner of Public Lands Peter Goldmark has proposed a demonstration project for market-based or other payments for watershed services in 2012. A great deal of collaborative work has already occurred to lay the foundations for that outcome. Such a demonstration is intended to provide a much-needed contribution to development of functioning ecosystem service markets on a broader scale by providing real transaction evidence and other key lessons. Widespread support has been expressed for making this demonstration project successful. This progress report begins by providing legislative background and a problem statement, summarizes the department's preliminary work with stakeholders in 2010, describes Commissioner Goldmark's demonstration project, reviews in detail the activities undertaken in 2011 in pursuit of the project, outlines project activities anticipated for 2012, and suggests potential opportunities for legislative involvement and guidance.

Legislative Background

In its regular 2010 session, the Washington State Legislature unanimously passed Engrossed Substitute House Bill 2541, relating to providing financial incentives to forest landowners and the forest products industry so as to recognize the value of specific ecosystem services provided by ecological processes related to commercial forest lands. The emphasis of the bill was on helping forest landowners access more diversified sources of revenue, including from emerging ecosystem service markets. Ecosystem services are defined in the bill (through an amendment to the definitions section of the State Forest Practices Act, RCW 76.09), as "the benefits that the public enjoys as a result of natural processes and biological

diversity." This bill indicates that commercial forest landowners may generate ecosystem services: 1) as an additional and distinct outcome associated with the protection of public resources (water, fish and wildlife, and public capital improvements) required by Forest Practices rules; 2) by landowner practices that go beyond requirements of the rules; or 3) by landowners foregoing opportunities to convert forest land out of forest use. The bill defines ecosystem services markets as "a system in which providers of ecosystem services can access financing or market capital to protect, restore, and maintain ecological values, including the full spectrum of regulatory, quasi-regulatory, and voluntary markets [indicating the degree to which market demand is driven by regulatory requirements on the 'buyers']."

ESHB 2541 is largely an aspirational statement of legislative policy intent, accomplished, for example, by adding a reference to ecosystem service markets in an amendment to the intent section of the Forest Practices Act, RCW 76.09.010. However, Section 5 of the legislation also directs DNR to develop proposals for "landowner conservation incentives that support landowners maintaining their land in forestry." The incentives the department may propose should include but need not be limited to ecosystem services markets. The legislation provides direction for the department to consult with various entities, seek available funding, and report to the Governor, the legislature, the Commissioner of Public Lands, and the Forest Practices Board by December 31, 2011. No funding was provided for the department's work under this section, and the section gave the department discretion to comply with the legislation's direction "only to the degree that existing or acquired non-state resources permit."

The department is submitting this report at this time as a progress report to the legislature, with the intention of working during 2012 to complete a demonstration project including real watershed services market transactions involving private forest landowners. By December 31, 2012, the department will then submit a final set of proposals as directed by ESHB 2541, Section 5, describing the results of the demonstration project and making recommendations for legislative action.

Intact watersheds provide services that can reduce the need for costly water-related infrastructure.

Problem Statement

Washington State, like many other areas, has seen broad efforts to retain the multiple economic and environmental benefits of working forests and conservation forests in the face of countervailing market incentives to convert forest land to development and other non-forest uses. Washington State is focusing on the role of landowner incentives, including financial incentives for maintaining forest land ownership. Incentives have a role alongside other policy options, including forest practice regulations, land use planning and zoning, and public or non-profit fee or less-than-fee ownership of forests.

ESHB 2541 mentions a range of incentives, including tax incentives, easements, technical assistance, and recognition or certification. However, the primary emphasis of the legislation is on financial incentives arising from ecosystem services markets or market-like arrangements, in which forest landowner-sellers engage in or maintain land management practices that provide ecological conditions that are beneficial in specific ways that induce other entities ("buyers") to provide financial incentives to the landowners to ensure the ecological "services" are provided or maintained. Other entities may be public or private, and may be driven by public policy objectives, regulatory obligations, or desire for a "green" public image. Payments may be through actual market mechanisms, or may more resemble public or private direct payments to landowners, typically called "payment for ecosystem services" or PES. The specific ecosystem services most often discussed include carbon storage in forests, biodiversity, and a range of watershed services important to water quality and/or quantity, including delivery of safe drinking water. Market-like mechanisms are attractive in part because they have the potential to be replicated in ways that adapt to the specifics of diverse local circumstances. The concept of ecosystem service markets attempts to draw a careful distinction between the ecological outcomes required of landowners under

regulatory laws to prevent harm and the ecological outcomes beyond regulatory requirements that public or private parties may wish to achieve.

There is currently a broad nationwide and regional dialogue about the potential for ecosystem services markets or PES arrangements to provide significant incentives for forest and agriculture land retention, and the potential institutional structures and mechanisms for such markets. Questions include:

- The role of these market or market-like arrangements alongside other policy options or private sector mechanisms aimed at similar goals;
- What specific land management practices and resulting services are the target for incentives;
- Who the buyers are and why they would value the ecosystem services;
- How to measure and monitor the provision of services against appropriate benchmarks;
- What the governmental and regulatory context is for such markets;
- Whether feasible market prices may exist to link sellers with buyers;
- How to secure the value of the services to the buyers over time; and
- Fundamentally, whether or not the scale of ecosystem services that might result from feasible market transactions could reach the point of making a difference in conserving working forest landownership and providing the desired conservation outcomes.

2010 Implementation of ESHB 2541 – Forest Carbon Workgroup

The approach DNR initially took in 2010 to the legislative direction in ESHB 2541 was to join with the Department of Ecology under Governor Gregoire's Executive Order 09-05 to reconvene the multi-stakeholder Forest Carbon Workgroup to continue to explore opportunities for forest landowners to participate in carbon offset market regimes and other incentive-based programs. That workgroup had previously met in 2008 and produced a series of consensus preliminary recommendations to the Washington legislature regarding participation of Washington forest landowners in forest carbon offset markets as a feature of federal, state, or regional greenhouse gas "cap and trade" programs. Such regulatory programs typically provide an opportunity for regulated entities to reduce their emissions directly, pay other regulated entities for cheaper reductions by those entities ("trade"), or purchase "offsets" from entities outside the regulatory umbrella that take action, such as increasing carbon storage in forests, resulting in the same atmospheric effect as direct emission reductions.

The workgroup included representatives from large and small forest landowners and manufacturers, environmental organizations and land trusts, and state, tribal, and local government. Given the lack of Congressional action on cap-and-trade legislation, the 2010

session of this workgroup aimed more broadly at carbon offset market opportunities, particularly created by cap-and-trade laws in California, and other ecosystem service market opportunities and other incentives for Washington forest landowners. That work resulted in a December 2010 report to Commissioner of Public Lands Peter Goldmark and Department of Ecology Director Ted Sturdevant that included general recommendations for DNR's exploration of ecosystem service market opportunities pursuant to ESHB 2541. The report ("2010 Forest Carbon Workgroup, Final Report") can be found at http://www.ecy.wa.gov/pubs/1110006.pdf . Based on information about the level of payment needed by forest landowners to engage in practices generating ecosystem services, the workgroup recommended a pilot PES project be developed and implemented in which a reverse auction (similar to issuance of a "request for proposals" and submission of lowest-cost bids) would be carried out in a defined geographic area, with landowners responding to advertising as participants, and with a suitable amount of funding available. The pilot project would be intended to test the feasibility of various aspects of the PES system, including the minimum levels of ecosystem services offered and awarded payments. Based on the results of the pilot project, further design of the PES system could be undertaken.

The 2010 Forest Carbon Workgroup did not provide consensus recommendations on forest carbon offset market opportunities, leaving this as essentially "unfinished business."

Regarding DNR's further work to implement legislative direction in ESHB 2541, the workgroup recommended that:

- DNR lead a properly scoped, adequately funded, and realistic collaborative discussion of landowner conservation incentives;
- DNR approach further ESHB 2541 work with formal sponsorship, leadership by entities with authority, professional facilitation, and sustained face-to-face participation;
- DNR consider narrowing the scope of discussions in a manner that would be attractive to all participants to ensure the greatest possible progress in 2011;
- A comprehensive agreement on a conservation incentives program, as envisioned by ESHB 2541, would entail a multi-year effort, with important milestones achieved by the December 2011 deadline;
- The work pursuant to ESHB 2541 be undertaken with more explicit commitment and leadership by governmental and non-governmental policy-makers, and perhaps more technical resources; and
- Federal, state, private, and non-governmental organization funds be sought as needed to provide for facilitation and technical support.

In many communities, clean drinking water depends on intact forested source areas.

A key finding that emerged during and after that stakeholder work was that a limiting factor in discussions of ecosystem market possibilities was the absence of actual transaction evidence related to private forest land, in our region if not the country. This gap keeps discussions of the potential market value of various practices at a compelling but hypothetical level, and does not encourage interested parties to move outside of established positions. Another key finding was that watershed services markets and biodiversity markets might have more potential at this time than forest carbon offset markets[1].

Commissioner of Public Lands' Demonstration Initiative on Forest Watershed Service Markets

In March, 2011 Commissioner Goldmark, in response to the direction in ESHB 2541 and the recommendations and insights of stakeholders including members of the Forest Carbon Workgroup, launched a watershed services market demonstration project. The purpose of the project is to take advantage of the opportunities presented by an as-yet untapped potential for the development of viable ecosystem service markets involving forest landowners and potential buyers of ecosystem services in Washington. The project will also address the identified limiting factor: the absence of actual public transaction evidence. The specific intent of the project is to create the necessary preconditions and attempt to stimulate a small set of real market or market-like transactions in one or more pilot watersheds in Washington.

The transactions would occur between private forest landowners as "sellers," and "buyers" who benefit from the generation of watershed services. The outcomes of the initiative will include:

[1] Since the workgroup's recommendations, the California Air Resources Board has adopted a regulatory forest offset protocol that allows forest landowners in the continental United States to develop forest carbon offset projects and sell the resulting credits to compliance-driven buyers in California. Analysis of this market indicates that offset values will average $30 per metric ton of CO2e between 2012 and 2020. Thus an established market now exists for forest landowners in Washington State who wish to participate.

- On-the-ground practices that will be structured to produce tangible and measurable water and habitat benefits on site and downstream;
- Contractual agreements among market participants;
- Public transaction evidence regarding services provided and prices paid;
- A monitoring program; and
- A detailed analysis of lessons learned and suggestions for broader application.

The demonstration project has been designed to be completed within a two-year period in 2011 and 2012, allowing one year for organization, networking, resourcing, and start-up; and the second year for detailed analysis and planning, implementation, and documentation.

This project focuses on watershed services such as improvement of water quality (temperature, sediment, etc.) and/or quantity (magnitude and/or timing of peak flows or low flows) that are of interest to potential buyers. Potential buyers may be water utilities, such as drinking water providers, stormwater managers, or other water users, or could be salmon recovery organizations. Sellers are conceived to be large or small private forest landowners subject to the Washington Forest Practices Act, who may have opportunities to engage in practices that provide improved environmental outcomes compared to rule compliance alone, or who conversely may have an opportunity to convert their land to non-forest uses but could be induced to forego that opportunity. The purpose of this project is to test the feasibility of mutually beneficial market or market-like transactions between buyers and sellers that would secure these watershed services on a local watershed level, and provide readily available lessons for broader application.

It is also the intention of this project that in a real transaction watershed services could be 'stacked' with other ecosystem services, such as biodiversity or carbon storage, to attract a higher price to the landowner if: 1) this is desirable to all directly involved parties; 2) additional technical complexities can be overcome; and 3) the separate ecosystem services are each appropriately measured and tracked.

However, this demonstration project must be carefully distinguished from other related activities that have a different scope, such as:

- Development of regulatory requirements on either potential buyers or potential sellers of watershed services;
- Other types of landowner conservation incentives;
- Other types of capital investment planning by potential buyers such as water utilities;
- Full-scale development of ecosystem service market infrastructure;
- Ecosystem services efforts focused primarily on services other than watershed benefits;
- 'Water quality trading' in the context of a 'total maximum daily load' (TMDL) regulation by Department of Ecology;
- Primary application to agricultural lands; or

- Application to forest lands with extremely high real estate values for non-forest development.

Efforts in those related areas are critical in their own right and can be usefully coordinated with the watershed services market demonstration project over a multi-year period. For example, ecosystem service markets can complement more direct approaches to extremely high real estate values on forest lands, such as Transfer of Development Rights programs.

2011 Implementation of ESHB 2541

JUNE 2011: NORTHWEST ENVIRONMENTAL FORUM LAUNCH EVENT

The Northwest Environmental Forum, a service of the School of Forest Resources at the University of Washington, has since 2004 conducted multi-stakeholder one or two-day forum events on pressing public policy topics related to retention and management of working forests. Since 2008, the Forum has had a particular interest in ecosystem service payments, and has identified watershed service markets as a focal topic starting in 2010. The Forum is intended as an opportunity for key stakeholders on emerging natural resource issues to use a neutral and knowledge-rich venue to advance common understandings and create a sense of direction.

Commissioner Goldmark agreed to join forces with the Forum in 2011 to use a collaboratively planned Forum in June 2011 as a launch event for the watershed services market demonstration project.

The following is excerpted from the report of the June 2011 Forum:

Forum Findings

The key characteristics of a successful forest watershed services market were developed as a framework to evaluate potential watershed services market projects. These must include:

- An urgent issue that includes the right geographic location, timing and vision;
- The right mix of stakeholders, with clear leadership, and engagement at the local watershed level;
- A combination of regulatory and voluntary mechanisms with clear environmental goals and flexible implementation options;
- The use, where feasible, of existing institutional mechanisms;
- A commitment to a cohesive policy with a clear regulatory driver;
- Linkage to climate change adaptation;
- Clearly identified willing buyers and sellers with an analysis of the potential beneficiaries;
- Clarity on the nature and ownership of the environmental service or services being transacted;

- A sustainable financing mechanism with diversified funding streams (i.e., government, municipalities, private foundations and corporations);
- Administrative structure to facilitate transactions between willing buyers and willing sellers while controlling transaction costs;
- A mechanism and institution for monitoring and enforcement;
- Transparent record keeping with clear reporting of activities and outcomes;
- The potential to bundle with other ecosystem services including carbon offsets, biodiversity, wildlife habitat, clean drinking water, flood protection, etc.;
- Payment levels which exceed the landowner's opportunity costs associated with engaging in or forgoing target practices;
- A clear understanding of risk (economic, political, ecological) while addressing uncertainty;
- Metrics or units of trade clearly defined within the trading framework; and
- A clear plan for program evaluation.

Actions Addressed by the Forum

Action 1: Support Pilot Marketplaces for Watershed Services

Two key geographic watersheds, Snohomish and Nisqually, emerged from breakout group discussions, and working groups that met to consider how to plan and support a pilot market for watershed services in each watershed.

Initial Plan of action for Snohomish Basin Workgroup:

- Identify a neutral entity for facilitating a stakeholder meeting.
- Assess headwaters ownership structure and engage forest landowners in conversation.
- Identify the market mechanism and metrics to assess impacts and evaluation.
- Watershed analysis and mapping can help identify buyers/sellers and potential brokers.
- Identify costs and potential funding streams for pilot implementation.
- Examine potential for bundling ecosystem services.

Initial Plan of action for Nisqually Basin Workgroup:

- Clearly define sellers, beneficiaries and buyers.
- Hold workshops with stakeholders.
- Define services provided by forests in the Nisqually watershed.
- Look at scale of impacts and scale of funding mechanisms to match.
- Must identify some funds to support development of a pilot.
- Link this process with the Nisqually River Council.
- Formalize the process with staffing and identify funding for a project coordinator.
- Seek funding from the Nisqually River Council and the US Environmental Protection Agency, along with private foundations.

Action 2: Programmatic Oversight and Support

While watershed pilot working groups are convening, a programmatic oversight working group is needed, with the following responsibilities:

- Developing clear and persuasive messages for outreach and public information;
- Securing funding for ongoing program support;
- Assessing and identifying the strongest and best-targeted demand drivers, and establishing productive relationships with entities likely to express that demand (Potential buyers include water utilities, flood districts, insurers, watershed investment districts, municipalities, salmon recovery organizations, Businesses for Social Responsibility, Community Development Financial Institutions (CDFI), foundations, environmental organizations, non-governmental organizations and others);
- Developing information that establishes a clear linkage between forest land management practices, ecological outcomes, downstream benefits and the obligations or objectives of potential buyers;
- Collecting necessary data;
- Identifying appropriate metrics and the analytical tools to support them;
- Comparing general benefits and costs, to evaluate the likelihood of a successful market mechanism;
- Developing or identifying an existing market mechanism to be used for the pilots;
- Discovering the most promising mechanisms for financing demand;
- Establishing governance needs for the pilot effort and any more large-scale follow-up, including broad stakeholder participation;
- Identifying additional watershed areas for pilot or follow-up efforts; and
- Determining optimal integration with agricultural providers of watershed services within geographic markets.

Next Steps

- Snohomish and Nisqually Watershed workgroups, with State participation, will meet to further develop potential pilot projects based on specific circumstances in the two watersheds. Stakeholder meetings will be convened to further flesh out pilot potential.
- DNR will convene a programmatic oversight workgroup to provide institutional mechanisms and support for the watershed workgroups.
- A meeting will be convened in November 2011 for the watershed working groups, participating agencies and other critical parties to share experiences thus far.
- DNR will develop a report by December 2011 for the 2012 Washington State Legislative Session in response to ESHB 2541 direction.

The entire report on the June 2011 Northwest Environmental Forum can be found at: http://www.nwenvironmentalforum.org/documents/June2011/June2011ForumReport.pdf

A list of the participants at the June 2011 Northwest Environmental Forum is attached as Attachment A. (The list also can be viewed online at: (http://www.nwenvironmentalforum.org/documents/June2011/Participants.pdf)

Carbon stored in forests adds benefits for our atmosphere.

Initial Organization, Identification of Pilot Watersheds, Partnership Development, and Workplan Development

Following the Northwest Environmental Forum project launch event, the primary project effort went toward initial start-up meetings in the proposed pilot watersheds and development of the rationale for the pilots, networking with potential partners at the statewide level, and general development of a workplan and schedule.

Initial organizational meetings were held in both the Nisqually and Snohomish watersheds. In the Nisqually watershed, the Nisqually River Council agreed to provide organizational support for the pilot project. Other key partners included the Nisqually Tribe, Nisqually Land Trust, Northwest Natural Resources Group, and Earth Economics. The initial watershed service focus in the Nisqually is drinking water and salmon recovery, along with the potential for other water-related services. There are initial ideas about both potential buyers and sellers, but no significant outreach has been done. There is also interest in the Nisqually watershed in combining or "stacking" watershed services with provision of spotted owl and marbled murrelet habitat and carbon sequestration, perhaps using federal funding under the Endangered Species Act and the new California regulated carbon offset market.

In the Snohomish watershed, the Snohomish County Surface Water Management Agency adopted the lead role with significant co-leadership by the Tulalip Tribe and participation from a Snohomish County council member and several local experts. The watershed service focus in the Snohomish, and possibly Stillaguamish watersheds, is on stormwater management and salmon recovery. The surface water management agency may be a potential buyer. Less is known about potential sellers. A useful linkage is possible with the Sustainable Lands Strategy in the county, which is reconciling conflicting farm/fish policies, salmon recovery plan implementation, and conservation of agricultural lands.

Additional outreach and networking were directed toward other watersheds that may be interested in participating in some way in this demonstration project, including the City of Tacoma Green River watershed, the Puyallup/White watershed, the Yakima watershed, and the Nooksack watershed – the latter two watersheds (Yakima and Nooksack) have watershed service market initiatives underway focused on agriculture lands. At this time, the Nisqually and Snohomish watersheds appear to have the most essential elements for a successful pilot project.

The potential initial roles of a state coordinating group were identified from the list developed at the Forum, including seeking programmatic funding for the project, providing general organizational support for the project as a whole, developing communication materials, and arranging for analytical and technical support for the watershed pilots, including the best available scientific information about cause-effect relationships related to forest land management and watershed processes in the pilot watersheds, as well as technical requirements for a workable market mechanism.

Monthly e-mail status reports were sent to a 25 member programmatic coordination group, consisting primarily of interested Forum attendees, in July, August, September, and October, describing progress in these programmatic areas.

In August 2011, the Willamette Partnership and The Freshwater Trust submitted a conceptual proposal to DNR outlining proposed support to be provided by those entities to Washington's forest watershed services market demonstration project. Specifically, the proposal outlined support in convening, feasibility assessment, program design, and pilot implementation in two-to-four watershed areas. Specifically, the proposal outlined support in convening, feasibility assessment, program design, and pilot implementation in two-to-four watershed areas, to demonstrate viable transactions between investors and ecosystem service providers, using regionally-available tools supporting unique local activities, and leading to measurable conservation benefits, cost savings to beneficiaries, and a new source of income to landowners. The two organizations have federal funding available to support this work over a three-year period. Having already conducted outreach to the Yakima and Nooksack watersheds, the Willamette Partnership also extended an offer of support.

In September 2011, in response to a request from DNR, the U.S.D.A. Forest Service's Pacific Northwest Research Station (PNW) hosted a video-telephone conference to discuss and determine a process for documenting the current scientific understanding of the biophysical factors that will influence the feasibility or success of market, or market-like, payment programs as part of DNR's demonstration project. Participants included scientists from PNW and Portland State University, stakeholders, and staff from federal, state, tribal, and local governments. The discussion resulted in prioritizing interest in developing the scientifically sound knowledge base to support payment programs related to benefits for water temperature, sediment, and timing of peak flows, especially applicable to the Nisqually and Snohomish pilot watersheds. The level of needed scientific certainty could be appropriate to support either a regulatory or voluntary payment program. The conclusions should help indicate the monitoring needed to verify results, and provide guidance on both upstream watershed areas and downstream distances associated with the most likely upstream-downstream relationships. The meeting concluded with a recommendation that a Portland State PhD program supported by PNW would provide personnel to conduct a scientific literature review under the guidance of PNW senior scientists. A scope of work was to be completed by mid-December, and the final product is to be available by April 1, 2012. Subsequently, a PhD student has been identified, coordinating discussions have occurred, and a draft prospectus for the work was delivered to DNR on December 20.

The Drinking Water Program of the Washington State Department of Health (DOH) has agreed to partner with DNR and other project participants in the development of payment programs for forest watershed services related to drinking water. DOH has legal authority, program resources, technical information, and limited funding available to support a pilot effort.

The Stormwater Program of the Washington State Department of Ecology may be interested in partnering with DNR in relation to watershed services important to stormwater management under the Federal Clean Water Act. This would match well with the interest in stormwater aspects of this project in Snohomish County.

The federal Environmental Protection Agency has provided staff available to contribute overall program oversight and guidance from EPA's perspective. Federal support also appears to be potentially available from the Department of Agriculture, the U.S. Forest Service, the U.S. Geologic Survey, and the Natural Resources Conservation Service.

The University of Washington Northwest Environmental Forum has indicated a commitment to provide further meeting organization and support through an additional Forum event at a critical stage of project implementation. This is likely to occur on April 16-17, 2012.

Tribal governments will be critical partners in the project. In particular, the Tulalip Tribe and the Nisqually Tribe have already played major roles and have indicated an intention of being substantially involved in the future.

Based on the initial organization and networking summarized in this subsection, DNR developed an initial project workplan, centered on on-the-ground implementation occurring within the pilot watersheds with state support in the form of project funding, scientific support, technical support, and state-federal agency coordination.

In mid-November 2011, DNR convened a video-telephone conference of a state coordinating group made up of approximately 20 of the most active participants in the demonstration project. The purpose of the conference was to confirm general commitments to the project as envisioned through 2012, exchange critical information, and advise DNR regarding this legislative progress report. The participants reviewed a detailed project workplan (see below) and indicated the nature of their organizations' commitment to the project. The workplan was viewed as ambitious but conceptually sound. Important contingencies include award of grant funds (see below), the federal and state budget, regulatory requirements, analytical hurdles, and identification of willing buyers and funding sources. There was agreement that project goals and objectives need to be carefully stated to avoid creating unrealistic expectations. Participants also agreed that finding synergy and efficiencies among related initiatives will be essential. A clear sense of commitment was expressed by all participants, subject to the contingencies identified. Specific tasks were identified and plans were made to coordinate in the local watershed pilots areas and to expand networks within and outside the scope of this project.

Grant Funding Received

In July 2011, the Departments of Ecology and Commerce issued a Request for Proposals for proposed financial grants in a "Puget Sound Watershed Protection and Restoration Program" for freshwater ecosystems. The grant program will disburse federal funds originally received through the Puget Sound Partnership from the U.S. Environmental Protection Agency under the National Estuary Program. In September, DNR submitted a pre-proposal for grant funds to support its forest watershed services market demonstration project. In October, Ecology invited DNR to submit a full proposal, which was submitted in November, requesting $200,000 of grant funds. A consortium of partners from the Nisqually watershed was also invited to submit a proposal which, in part, is closely coordinated with the DNR proposal. DNR's proposal seeks funding to support project-specific staffing and development of supportive feasibility analysis, metrics, and market mechanisms for the pilot watersheds.

Within an overall detailed project workplan developed for the grant proposal (included as Attachment B), the greatest use of grant funds is proposed for:

- Developing metrics for specific watershed services and practices;
- Conducting economic feasibility studies oriented toward potential sellers and buyers;
- Identifying buyers and most likely sellers; and
- Establishing formal institutional infrastructure for market or market-like transactions, which would include independent verification, crediting rules, payment rules, transaction security, and monitoring.

Grant funds will also support DNR staff involvement in implementation of market transactions and will support development of project communication materials and technical reports.

Letters of support were included in the grant proposal from the Nisqually Land Trust, Northwest Natural Resources Group, Snohomish County Public Works – Surface Water Utility, Washington Forest Protection Association, Willamette Partnership, Washington Department of Health, and U.S.D.A. Forest Service Pacific Northwest Research Station.

On December 21, DNR received notice that it will be awarded the grant funding as applied for. The Nisqually watershed partners have also received partial funding.

Anticipated Project Activities in 2012

The detailed workplan included as Attachment B identifies 23 tasks that provide a conceptual roadmap to the work envisioned for 2012. In general, the project is proceeding in five phases:

Phase I – Project development & launch – April-September 2011 (completed); Workplan tasks 1-4.

Phase II – Detailed project design & cooperator agreements – September-December 2011 (nearing completion) and continuing in 2012; Workplan tasks 3, 5-6.

Phase III – Development of foundational project components – January-June 2012; Workplan tasks 7-14.

Phase IV – Implementation of market or market-like transactions – June-September 2012; Workplan tasks 15-20.

Phase V – Project wrap-up and reporting – September-December 2012; Workplan tasks 21-23.

Conversion of intact forests to development can lead to loss of biodiversity and wildlife habitat.

Other Potential 2012 Activities Responsive to ESHB 2541

Given that the legislative interest in ecosystem service markets expressed in ESHB 2541 was not limited to the watershed services markets that are the focus of DNR's pilot project, some stakeholders have proposed additional work addressing the potential for conservation easements to become a more readily used or more flexible mechanism for incentivizing landowners to provide biodiversity services. Such services, for example, could provide benefits for northern spotted owl and marbled murrelet, both listed as "threatened" species under the federal Endangered Species Act. This outcome was envisioned by the 2009 Northern Spotted Owl Policy Working Group authorized by the Forest Practices Board. DNR intends to explore the feasibility of this additional idea in 2012.

Legislative Coordination

DNR was an active participant in legislative consideration of ESHB 2541, and welcomed the responsibilities assigned to DNR by the legislation. In the intervening period, DNR has worked actively with limited resources to fulfill those responsibilities. The legislature, the department, and partner organizations have approached this work in the larger contexts of incentive programs to support working forest and farm lands, multi-stakeholder work toward achieving the goals of the Forests & Fish Habitat Conservation Plan, and the need to develop a sustainable Forest Practices regulatory program in the current difficult economic climate. In those larger contexts, DNR and partner organizations welcome legislative interest in this ongoing demonstration project. DNR would be happy to provide additional communication to the legislature and other decision-makers, including written material, consultations, or legislative committee presentations.

The department expects to provide the legislature by December 31, 2012, a final project report, including findings, proposals, and recommendations responsive to ESHB 2541. This will include a detailed description of agency activities carried out under the direction of the legislation, including this demonstration project; lessons learned, especially the role of ecosystem service market arrangements in meeting watershed conservation goals along with other forms of conservation incentives; the critical features of successful ecosystem service market arrangements; opportunities for further development of successful market and traditional incentive programs; and specific legislative support needed, including program authority and funding. The department would welcome legislative guidance in the interim as to the conduct of the demonstration project and the development of the final report.

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Attachment A

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Attachment A

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Attachment A

Attachment B: Work Plan Explanation

This grant is sought to support an ongoing Commissioner of Public Lands' initiative to generate forest watershed service market transaction evidence on a pilot scale. Initial start-up, organization, partnership development, project design, and resource commitment tasks are complete or nearing completion. Because this is an innovative and first-of-its-kind effort, future project phases, tasks, deliverables, and target dates can be described generally, but may evolve in execution. This work plan is integrated in a mutually supportive way with major elements of a separate grant proposal being submitted by a consortium from the Nisqually watershed – key partners in this work. A separate grant proposal by Forterra (formerly Cascade Land Conservancy) is also mutually supportive with this work.

The Work Plan Table indicates with an asterisk and bold font and describes generally what tasks grant funds will contribute to, primarily through pass-through to watershed partners for contracted analytical work and through part-time project staff at DNR.

Task	Deliverable	Description & Notes	Target Date
***1. Project Administration**	Ensure completion of all other tasks on schedule & within budget	DNR staff; partially grant-funded in 2012	Ongoing throughout project to 12-31-2012
***2. Stakeholder and expert outreach**	Active, self-identified and mutually acknowledged participants and observers contributing at key points	DNR (partially grant-funded in 2012) and watershed partners	Ongoing throughout project to 12-31-2012
***3. Gain supportive state/federal agency participation**	Tangible policy-level support and communication from agencies with regulatory and/or funding functions	DNR staff; partially grant-funded in 2012	Initially completed, but further focused on Spring 2012, upon completion of scientific work
4. Identify pilot watersheds	Recognition and agreement on pilot watersheds by key partners	DNR, watershed partners	September 2011(Done)
5. Identify and secure needed funding for project components, including supporting fund-raising by partners	Sufficient funding from various sources to carry out project tasks successfully	DNR and watershed partner staff	Funding needs to be secured at various times throughout the project. For this proposed grant: Jan-Dec, 2012
6. Develop watershed service scenarios	Documentation of most likely broad scenarios relating watershed forest management practices to particular desired downstream benefits	DNR and watershed partner staff with expert advisors. Mostly complete	Draft: October 2011 Final: December 2011
7. Develop documentation of best available science applicable to chosen watershed service scenarios & locations	Written science literature review summary from reputable source	USFS PNW with contributions from partners, including integrated work under proposed Nisqually grant	Prospectus: December 2011 Summary of Literature Review: April 2012

***8. Develop metrics for target watershed services, based on best available science**	Full documentation of the chosen metric(s) with rationale	Grant-funded contract administered by watershed partners, with expert advisors.	June 2012
***9. Identify potential sellers**	Positive identification of sufficient forest landowners as indicated by science and metrics	DNR (partially grant-funded in 2012) and watershed partner staff. In Nisqually, to be performed under proposed Nisqually grant.	Ongoing; completed early Spring 2012
***10. Identify potential buyers**	Identification of the specific entities who benefit from watershed services and would be willing to pay to secure those services	DNR (partially grant-funded in 2012) and watershed partners, including integrated work under proposed Nisqually grant.	Ongoing; completed early Spring 2012
***11. Seller economic feasibility analysis**	Study and report with individual and overall cost estimates for implementing service-generating practices by identified sellers. May include opportunity cost, out-of-pocket cost, and transaction cost	Grant funded. Contract administered by watershed partners. In Nisqually, covered by proposed Nisqually grant.	Late Spring 2012
***12. Buyer economic feasibility analysis**	Study and report with estimates of economic value of services to identified buyers. May include avoided capital or operating costs or avoided damages.	Grant funded. Contract administered by watershed partners.	Late Spring 2012
13. Identify and secure funding for purchase of services by or for buyers	Commitments for funding, sufficient to secure services from sellers, from buyers or others acting on their behalf.	DNR and partner staff	Summer 2012
***14. Market infrastructure development**	Identification of a market entity and protocols that entity would administer for qualifying offers to implement practices which lead to watershed services.	DNR staff (partially grant-funded in 2012) and partner staff, with expert advisors	Summer 2012
15. Buyer RFP development	Fully documented RFPs with details on desired service characteristics that would define credits to be acquired	Supported by DNR and watershed staff and expert advisors	Summer 2012

16. Seller credit development	Documentation of specific landowner plans and commitments for practices, according to adopted protocols, and calculation of credits to be offered.	Supported by DNR and watershed staff and expert advisors	Summer 2012
17. Issuance of buyer RFP	Notification to potential sellers	Supported by DNR and watershed staff and expert advisors	September 2012
18. Seller bid proposals and selection	Qualified proposals, following protocols, establishing credits available for purchase and the price needed. Buyer presumably selects the qualified proposal with the lowest price.	Supported by DNR and watershed staff and expert advisors	September 2012
19. Contract negotiation and execution	A fully documented and executed contract, administered by the market entity according to adopted protocols, which lays out requirements and schedules for seller practices and buyer payments	Supported by DNR and watershed staff and expert advisors	October 2012
20. Begin implementation of seller practices	Documentation of actions taken, including monitoring, and results of monitoring.	Supported by DNR and watershed staff and expert advisors	November 2012
***21. Final documentation**	Written report fully documenting the pilot, key features, lessons learned, and recommendations for replication in similar or different settings and scales.	DNR staff (grant-funded) with watershed staff	November-December 2012
***22. Public and stakeholder information materials**	Diverse informational presentation materials and concrete steps to disseminate them to interested parties	DNR staff (grant-funded) with watershed staff	Ongoing throughout project. Final materials December 2012
***23. Report to legislature**	Summary of pilot with lessons learned and recommendations for legislative actions	DNR staff; grant-funded	Progress Report: December 2011 Final Report: December 2012