



# **2010 Forest Carbon Workgroup**

## **Final Report**

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## **Final Report**

*by*

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# Executive Summary

The Forest Carbon Workgroup (Workgroup) presents these recommendations to the Director of the Department of Ecology and the Commissioner of Public Lands, in keeping with direction and authority in Executive Order 09-05 and ESHB 2541. The recommendations relate to the critical role Washington's forest lands will play in addressing the challenge of climate change; appropriate responses to pressure for conversion of working forest lands to non-forest uses; and the role of ecosystem service markets, including carbon offset markets, and other incentive systems in bringing about desired results. The 2010 Workgroup included some members of a similar 2008 Workgroup and built on the results of that 2008 effort. The report appendix contains purpose statements by each participating interest, explaining its rationale for participation.

The 2010 Workgroup devoted its efforts to three topics: Forest carbon considerations in avoiding forest land use conversion; incentives to reward forest landowners for providing ecosystem services, including carbon storage and improvement of forest health; and features of forest carbon offset protocols and registries that are appropriate for use by forest offset project developers in Washington State. The 2010 Workgroup reached consensus on some but not all of the recommendations in this report, as is indicated in the report and in the following summary.

## Workgroup consensus recommendations

### Avoided conversion and local land use planning

#### **Transfer of development rights (TDR)**

The Workgroup continues to endorse the 2008 TDR-related recommendation for situations in which local governments seek to implement a TDR program, and elsewhere, the Workgroup recommends attention be given to other mechanisms that account appropriately for the value of forest carbon storage and for leakage of development pressure to other areas. The Workgroup recommends additional attention be paid to whether and how *vesting* of carbon storage could legitimately lead to marketing of credits for that storage in addition to the underlying development rights transaction.

#### **Legislation on TDR and infrastructure financing**

In light of the need to incentivize cities to create TDR programs and accept forest land development right credits, the Workgroup recommends support for legislative action to link infrastructure financing with TDR.

#### **On-site cluster development**

The Workgroup recommends further examination of positive examples of cluster-like development, including planned unit developments, and ways to improve their conservation outcomes, generation of carbon benefits, and integration of rural character. Based on further

evidence, the 2008 Workgroup recommendations, which were intended to incentivize the carbon storage benefits of cluster development, should be adopted or fine-tuned as needed.

### **SEPA and greenhouse gas mitigation**

The Workgroup endorses a future discussion, by appropriate government and non-governmental entities as to the desirability, the feasibility, and timing, of adoption of SEPA policies or other mechanisms by SEPA lead entities, for review of greenhouse gas emissions of forest land conversion.

## **Ecosystem service markets and other incentive payment systems**

### **Incentives for forest health treatments**

The Workgroup recommends further attention be given to analyzing a range of specific forest health incentive funding sources, that public education about the broad public benefits of forest health and fire hazard reduction treatments be strengthened, and that eligibility criteria for treatments and an efficient administrative system be developed.

### **Payment for ecosystem services (PES)**

The Workgroup reached near consensus on general features of a PES system, which recognizes the value of practices above regulatory requirements; employs flexible contract lengths in a tiered system; provides a price premium for *stacking* of multiple services such as carbon storage, water quality, and biodiversity; and streamlines monitoring and verification requirements. Such a system would be separate from a carbon offset credit market system intended to directly offset industrial greenhouse gas emissions. Prices and specific practices would be set through use of a reverse auction, in which landowners submit bids for acceptable prices for practices to produce specified ecosystem services. The Workgroup further recommends carefully designed surveys of landowners and the general public to gather data used to design and implement a pilot PES project in a real geographic area.

## **Other general recommendations**

### **Transition to ESHB 2541 Process**

The Workgroup recommends that the Department of Natural Resources (DNR) lead a properly scoped, adequately funded, and realistic collaborative discussion of forest landowner conservation incentives, using a process similar to that of the Workgroup, but with more explicit commitment by government and non-governmental organization leadership, and adequate technical support. The Workgroup believes all its consensus recommendations should be considered by the participants in this subsequent work, and that comprehensive results may entail a multi-year effort, with important milestones achieved by the December 2011 deadline contained in the legislation. In general, Workgroup members would be willing to participate in this further effort.

## **Workgroup non-consensus recommendations**

### **Payment for Ecosystem Services**

The Workgroup did not achieve consensus on the minimum level of ecosystem services that would qualify for payments. Some members believe that any increments of ecosystem services beyond that provided by compliance with existing regulations should be eligible for market participation and that the market would determine what gets paid for and how much. Other members believe that a minimum threshold level of service provision is necessary to efficiently use scarce conservation financial resources. One member believes that incentive payments should be available for ecosystem services at a level provided by basic compliance with existing regulations.

### **Forest carbon offset protocol/registry for Washington**

In keeping with the intent of E.O. 09-05, a subgroup of the Workgroup was formed to discuss this topic, although one Workgroup member dissented from creation of this subgroup. Midway through its period of work, the full Workgroup discussed whether it should recommend that Washington State participate in a regulatory cap-and-trade program such as the regional Western Climate Initiative (WCI), as a basis for establishing a market for forest carbon offset credits. As a result of lack of agreement evident in that discussion, only the forest landowner representatives subsequently continued the protocol/registry discussion and offered non-consensus recommendations. The Workgroup report includes statements from both the forest landowner caucus and the environmental caucus on the topics of a Washington-specific forest carbon offset protocol and a Washington-specific forest carbon offset registry.



# Introduction

The 2010 Forest Carbon Workgroup is pleased to present its recommendations to the Director of the Washington Department of Ecology and the Washington Commissioner of Public Lands regarding the critical role our state's forests will play as we address the challenges of climate change and pressure for conversion of working forest lands. The recommendations in this report describe forest carbon considerations in avoided conversion and local land use planning, the role of forest carbon in ecosystem services markets and other incentive payment systems, the connectivity between forest carbon and forest health, and the potential for a forest carbon offset protocol and registry for Washington State. The Workgroup did not reach consensus agreement on all recommendations, and consensus status is noted for each recommendation in the report. The Workgroup developed these recommendations between May 2010, when it was appointed by Ecology Director, Ted Sturdevant and Commissioner Peter Goldmark, and December 2010, when its designated period of work ended.

## Origin and authority

The 2010 Forest Carbon Workgroup was created by the Washington Departments of Ecology and Natural Resources as a result of Governor Christine Gregoire's [Executive Order \(E.O.\) 09-05](#) of May 21, 2009, "Washington's Leadership on Climate Change." The Order included the following directive to the Director of the Department of Ecology:

In consultation with the Department of Natural Resources and the forest carbon sector working group, develop by September 1, 2010, recommendations for forestry offset protocols as well as other financial incentives for forestry and forest products. The starting point for this work should be the 2008 forest sector working group report. (E.O. 09-05, Section 1(e))

The 2008 working group referenced in the E.O. was the Forest Sector Workgroup on Climate Change Mitigation, chartered in April 2008 in response to a 2008 legislative directive (ESSHB 2815).<sup>1</sup> In late 2008, the Workgroup delivered its final report<sup>2</sup> to the Director of the Department of Ecology and the Commissioner of Public Lands. The Workgroup recommended a mix of carbon offset proposals, other (non-offset) carbon incentive proposals, and several related recommendations. The offset and other credit recommendations addressed avoided and mitigation conversion of forest land to non-forest uses, urban reforestation, and forest management to increase carbon sequestration and storage. Due to time constraints on the 2008 process, details of some recommendations were incomplete, as described in the Workgroup's report.

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<sup>1</sup> Codified at [RCW 70.235.030](#). See subsection (g).

<sup>2</sup> *Forest Sector Workgroup on Climate Change Mitigation: Final Report (2008)* is available here: [http://www.ecy.wa.gov/climatechange/2008FAdocs/11241008\\_forestreportversion2.pdf](http://www.ecy.wa.gov/climatechange/2008FAdocs/11241008_forestreportversion2.pdf)

A second, complementary purpose of the 2010 Workgroup was to provide input to support the Department of Natural Resources' implementation of [ESHB 2541](#) as enacted by the 2010 Legislature. Section 5 of the law provides the following:

Sec. 5. (1) The department of natural resources shall, to the degree that resources are available, develop, consistent with this section, proposals for the development of appropriate landowner conservation incentives that support forest landowners maintaining their land in forestry. These incentives may include, but are not limited to, incentives that are related to ecosystem service markets, tax incentives, easements, technical assistance, and recognition or certification.

The act specifies December 31, 2011, as the due date for DNR to submit its report. Given that this deadline is more than a year beyond the expected completion of the Workgroup's efforts, the Workgroup is providing its recommendations and other input about incentives to DNR, assuming DNR will determine how to move forward with this input and what process to use to develop its '2541' report in 2011; further discussion of the 2541 process is described in section 4 of this report.

## **Participants, charter, scope, organization**

### **Participants**

The 2010 Workgroup was co-chaired by Stephen Bernath, Department of Ecology, and Craig Partridge, Department of Natural Resources. Mr. Bernath and Mr. Partridge also co-chaired the 2008 Workgroup.<sup>3</sup> The co-chairs transmitted invitations to participate in the workgroup to a list of individuals designed to include roughly equal representation by conservation interests and forest landowner interests, together with state and county land use/growth management experts and representation from tribes. Approximately half of the members also participated in the 2008 Workgroup. A list of members is included as Appendix A of this document. Appendix A also includes purpose statements prepared by each of the non-governmental caucuses explaining the rationale for their participation in the Workgroup. Purpose statements were submitted by the environmental caucus, family forest landowner caucus, large forest landowner caucus, and forest product manufacturer caucus.

### **Charter and scope**

The 2010 Forest Carbon Workgroup convened its first meeting on May 27, 2010. In order to guide the Workgroup's efforts, the co-chairs prepared a draft charter which was discussed, modified, and adopted by the Workgroup at its initial meetings. Notably, while the charter anticipates that members would consider the advantages of presenting a consensus recommendation, the 2010 Workgroup Charter does not require consensus—as was presumed in the 2008 Workgroup's Charter—and explicitly recognizes that non-consensus alternatives are

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<sup>3</sup> Organizational and facilitation assistance to the Workgroup is provided by Jerry Boese and Andy Chinn of Ross & Associates Environmental Consulting, Ltd.

expected and will be described in the group's report. The text of the charter is appended at the end of this report (Appendix B).

The charter established three topics for the group's work:

- Further develop effective state incentive mechanisms to reward forest landowners for maintaining significant carbon storage in forests and long lived wood products.
- Further address the issue of avoided conversion of working forest lands from the standpoint of the carbon sequestration implications of conversion, and ways that consideration of carbon effects can be built into working forest retention efforts.
- Explore provisions of forest project protocols (including but not limited to the Climate Action Reserve's Forest Project Protocol<sup>4</sup>) that may pose barriers to participation by Washington landowners. Develop recommendations, if deemed appropriate, for changes in protocols that reduce barriers by allowing alternative methods for demonstrating equivalent environmental outcomes appropriate to Washington State's legal and regulatory setting.

## **Workgroup meetings and organization**

The full Workgroup convened for a total of six in-person meetings: May 27, June 17, July 27, September 8, October 27, and December 20. The Workgroup's initial meetings served two functions: (1) to enable the members to describe their interests (or those of the organization they represent) and to understand the interests of other members, and (2) to receive informational presentations on:

- The 2008 Workgroup's recommendations and their rationale.
- Implementation of recent state legislation related to transfers of development rights.
- The Climate Action Reserve's forest project protocol.
- The status of the Western Climate Initiative and federal energy/climate legislation (see section on federal and state legislative context, below).

During its second meeting, the Workgroup established three subgroups corresponding to the three topics specified in the charter: Incentives, Avoided Conversion, and Protocols.<sup>5</sup> Workgroup members then volunteered to participate in one or more subgroups. The subgroups served as engines for ideas and proposals, as forums for in-depth discussion of factual background and policy issues, and as venues where homework was assigned and reported on. Each of the three subgroups held multiple meetings between full Workgroup meetings.

During subsequent meetings, the full Workgroup received updates on the work of the subgroups and provided commentary and course corrections. The meetings also provided a forum for integration and coordination of the subgroups' work and discussion of overarching policy issues.

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<sup>4</sup> The CAR Forest Project Protocol is available here: <http://www.climateactionreserve.org/how/protocols/adopted/forest/development/>

<sup>5</sup> Consistent with the provisions of the Charter, the Washington Environmental Council dissented from the creation of a subgroup on protocols. See memo of 6/21/10 from Miguel Perez-Gibson.

The final full Workgroup meeting included discussion of the final report to Ecology and DNR, including both consensus and non-consensus elements.

## **Context for 2010 Work**

The work of the Forest Carbon Workgroup in 2010 was launched, carried out, and concluded in an evolving policy context that bears on the nature and relevance of the Workgroup's recommendations. Some elements of that context make the originally envisioned scope of the Workgroup's efforts less relevant now; other elements make that work more relevant.

### **Climate policy and markets**

An element of the Workgroup's scope, exploring aspects of greenhouse gas reduction offset credit protocols and registries for Washington forest landowners, was developed with an expectation that Congressional climate legislation establishing a federal cap-and-trade emission control system was probable. Versions of proposed Congressional legislation contained provisions allowing for early federal recognition for market trading of voluntary offset credits developed and registered according to acceptable protocols. Over the course of 2010, the likelihood of Congressional action diminished and is not currently viewed as probable in the near future. In addition, Western Climate Initiative recommendations for a regional cap-and-trade system have not been incorporated into Washington State law, and WCI is emphasizing other aspects of regional climate change response. Meanwhile, the California Air Resources Board approved cap-and-trade regulations on December 16, 2010, including forest offset protocols administered by the Climate Action Reserve (CAR). Since then, prices for CAR credits have doubled from previous prices that were generally seen as too low to stimulate substantial transactions for forestry projects. Overall size of demand from the California market without addition of other states or Canadian provinces, however, may limit the eventual ceiling price for forest offsets.

### **Working forest retention initiatives**

Retention of working forests at risk of conversion to non-forest uses has been and continues to be an issue of high salience in Washington State, as evidenced by NGO initiatives and legislative action and proposals related to transfer of development rights (TDR) programs. (See <http://www.commerce.wa.gov/site/1305/default.aspx>.) However, TDR transactions have been few. The potential role of carbon offset credits in TDR systems, and growth management generally, continues to be an under-explored topic, but one for which there is some appetite in the land use and growth management policy arena. This topic lies at the intersection of timber markets, real estate markets, and conservation markets.

## **Forestry incentives and ecosystem services markets**

There continues to be an ongoing, legislatively-driven discussion about the role of financial incentives in securing improved conservation benefits from commercial forest land. This interest in incentives is generally expressed in the context of alternatives or supplements to traditional regulatory tools, such as forest practices rules, and as a way of providing additional revenue opportunities for forest landowner. The current legislative expression of this interest is ESHB 2541, passed by the 2010 Legislature, which is an explicit element of the sponsorship and charter of the Workgroup. In addition, this topic was the subject for the 2010 Northwest Environmental Forum, held at the University of Washington in November, 2010. The urgency of interest in this topic may have been diminished by the severe economic downturn being experienced in Washington State, and the stress the economic situation places on both traditional and innovative potential sources of funding for conservation incentives. The basic program structure and funding for the forest practices regulatory program and for landowners implementing the current regulations is likely to be a subject for legislative discussion during the 2011 session, possibly drawing away attention from innovative incentive recommendations. However, this Workgroup report explicitly discusses in Section 4 the transition from its 2010 recommendations to further work on incentives under the direction of ESHB 2541.

## **Forest health**

There continues to be a strong interest in the topic of forest health and its interaction with climate change, especially in the drier areas of eastern Washington. Although the state budget crisis has eroded funding for DNR's forest health program as strengthened by 2007 legislation, there has nevertheless been a series of federal and state capital funding measures for forest health and fire fuel reduction treatments. Forest health has also been considered an object of current strong interest related to forest biomass recovery for energy production and as a source of fiber for some higher-valued forest products. The Workgroup feels that strong and broadly accepted support for forest health incentives continues, as a backdrop to its recommendations in that area.

## **Workgroup's Findings and Recommendations**

The Workgroup is presenting its findings and recommendations in accordance with the three major topics in its charter and the three subgroups formed in response to those topics. The recommendations reflect the outcome of deliberations both within the subgroups and by the full Workgroup. In each topic or subtopic area, the degree of Workgroup consensus is explained. The Workgroup reached consensus on most, but not all items. In some cases, given the short time for the Workgroup's deliberation and the evolving context for the issues, as explained in Section 2, Workgroup consensus is that continuing work is needed, building on what the Workgroup has accomplished. In the case of non-consensus items, the Workgroup engaged constructively to explore areas of disagreement and members are satisfied that this report

accurately and fairly explains the reasons for non-consensus in a way that could enable Workgroup members and others to re-engage discussions on these issues in the future.

## **Forest carbon considerations in avoided conversion and local land use planning**

### **Introduction**

Consistent with the findings of previous groups, the Workgroup believes conversion of forest land to non-forest uses represents one of the greatest sources of loss of forest carbon sequestration and storage, and therefore avoiding such conversion where feasible is a high priority means of reducing those losses and accompanying GHG emissions. The 2008 Workgroup provided sound recommendations in the context of a compliance-driven carbon offset market. Like the 2008 effort, the Workgroup remains committed to reasonably addressing the *leakage* of conversion pressure to beyond the project area, by accommodating development within the project through transfer of development rights (TDR) or on-site clustering. The 2010 Workgroup has tried to build a connection between the 2008 recommendations and Washington's complex growth management and local land use planning system. The Workgroup also examined the avoided conversion protocol of the Climate Action Reserve, including its similarities and differences from approaches in the 2008 Workgroup recommendations. The Workgroup discussed TDR legislation proposed by the Cascade Land Conservancy, and discussed the role Washington's State Environmental Policy Act could play in the avoided conversion policy arena.

### **Transfer of development rights**

The purpose of an avoided conversion protocol for a forest carbon offset market should be to specifically recognize the forest carbon benefits resulting from an avoided conversion commitment by a landowner and to help make that commitment more likely by contributing to financial reward for the landowner. The majority of that financial reward is likely to be compensation for the foregone development rights. In the 2008 TDR-related recommendations, the additional financial reward for the carbon storage is to accrue to the local government TDR program, recognizing that such programs are a pre-requisite to successful TDR transactions.

The 2010 Workgroup sought to address the perceived complexity of the 2008 recommendation, as well as to recognize that functioning TDR programs do not exist in many areas of the state that nevertheless are experiencing some forest conversion pressure. This may be because of the as-yet moderate nature of the conversion pressure, because of local government capacity, or because of the absence of viable receiving areas for transferred development rights.

The following are consensus recommendations:

The Workgroup continues to endorse the 2008 TDR-related recommendations for situations in which local governments seek to implement TDR programs. In situations in which TDR is not appropriate or feasible, the Workgroup recommends further attention be given to available

mechanisms to accomplish the avoided conversion result, while accounting appropriately for the value of forest carbon storage and for leakage of development pressure to other areas. For example, such situations may involve a purchase of development rights (PDR) without transfer to a receiving area, thus not explicitly addressing leakage. In such case, leakage would need to be explicitly addressed in another way, such as through discounting factors. In addition, the value of carbon storage would need to be carefully assessed to assure additionality above baseline. This would include a clear assessment of conversion risk, such as through a market appraisal and/or an evaluation of existing conversion rates in the area.

The Workgroup recommends that entities interested in pursuing non-TDR avoided conversion projects explore the existing protocols that are available, with specific attention to their treatment of conversion risk, leakage, and separate treatment of development rights value and the carbon storage value of the avoidance of conversion.

The Workgroup gave particular attention to the question of the separability, and separate marketability, of carbon value and development rights value in an avoided conversion project. The questions include whether or not a development rights transaction (TDR or PDR) automatically and irrevocably includes a securing of carbon storage, thus limiting the separate marketing of the avoided conversion carbon storage credit. The Workgroup noted, for example, that if the development rights transaction only prevents urban/suburban-style development, loss of forests on a parcel could still occur, such as through conversion to agriculture. On the other hand, if a conservation easement on the property accompanies the development rights transaction, it may specify retention of forest cover. The duration of the development rights transaction is also important. In any case, the 2008 TDR-related recommendations also specified that additional carbon storage credits could be created at the discretion of the forest landowner through *improved forest management* projects following the removal of development rights from the project area.

The Workgroup acknowledges that explicit *vesting* of carbon storage in a development rights transaction, for subsequent marketing, could be an essential feature of such a transaction. However, the timing of securing carbon and registering credits for sale in an offset market is important from an additionality perspective and should be done co-incident with or within a short time period of when an easement or other sale of development rights occur. The Workgroup recommends that additional attention needs to be paid to this question in the planning of compliance-based or voluntary avoided conversion carbon transactions accompanying development rights transactions.

## **Support for legislation to advance TDR and link to infrastructure financing**

The following is a consensus recommendation with one abstention (see below):

The Workgroup recommends that the Legislature support the advancement of transfer of development rights (TDR) on a regional or statewide scale as a strategy to avoid conversion of working forest land and the associated loss of forest carbon stocks. TDRs can provide a platform

for linking to other ecosystem service payment opportunities, including carbon sequestration. The Workgroup recognizes TDR as a demand-driven, market-based tool, and it recognizes the importance of incentivizing cities to create TDR policies and accept forest land TDR credits. It further recognizes that cities have significant infrastructure financing needs, that available infrastructure funding is insufficient to meet these needs, and consequently, that cities must have access to new tools for financing infrastructure investments needed to accommodate expected population growth. The Workgroup thus recommends that the Legislature works to link infrastructure financing with TDR, with a specific emphasis on TDR from forest lands of long-term commercial significance, because of the potential for these lands to serve as carbon sinks.

(NOTE: The Workgroup member representing Pierce County abstains from this recommendation, based on a preference that TDR receiving areas eligible for infrastructure investments not be limited to incorporated cities, but also include unincorporated areas within a city's Urban Growth Area, that are, by definition, expected to become incorporated at some future time, including as a result of infrastructure development. Some other members of the Workgroup do not support infrastructure development outside incorporated areas, so the Workgroup does not include this concept in its recommendation.)

### **On-site cluster development**

The 2008 Workgroup recommended a set of conditions under which the clustering of legally-allowed development on a smaller portion of a developable parcel (in urban or rural areas) would become eligible for an offset or credit. The fundamental idea is that if development on forest land is going to occur, it could be done on a smaller footprint at higher densities, thereby avoiding the conversion of some forest land and resulting in carbon sequestration benefits as compared to a more conventional development scenario. It is worth noting that at the time of the 2008 recommendations, the underlying premise was that the offsets or credits generated by clustering would apply in a compliance-based cap-and-trade market for emission offset credits.

The 2010 Workgroup decided to revisit policy issues related to cluster development due to a perceived lack of actual cases where cluster development had been noted as successful, either from a carbon standpoint or from the more general viewpoint of local government development policies under the Growth Management Act (GMA). Despite the potential carbon benefits of a smaller development footprint, relatively dense clustering can be challenging under the GMA requirement of retaining *rural character*. Because of this lack of data, the Workgroup circulated a brief survey to county planning directors to (1) resolve questions about whether clustering is desirable from a GMA standpoint and (2) identify successful real-world applications of a cluster development model into which forest carbon considerations could be integrated.

Response to the survey from eight counties provided some limited additional insight into cluster development. Findings included:

- A good model of cluster development in a forested area has not been identified as yet. The identification of a good model would aid in an assessment of the degree to which

such developments can meet GMA requirements, generate carbon benefits, and retain rural character.

- The survey did not provide any meaningful data about the amount of forest land retained as a result of cluster development.
- Some cluster development ordinances don't require conservation easements; hence, they would not be seen as a GHG reduction measure.
- It was not clear whether, if a density bonus is provided, then an easement is required.
- Several of the cluster development ordinances require that open space be adjacent to the resource land.
- It is possible for a planned unit development (PUD) ordinance to provide for much more density than the cluster development ordinance, which may result in the cluster ordinance going unused.

The Workgroup has concluded that further work is needed to address the forest carbon issues inherent in the cluster development concept.

The following are consensus recommendations:

1. The state should seek positive examples of cluster-like developments, including PUDs, and should examine ways to improve their conservation outcomes and the extent to which they meet GMA requirements, generate carbon benefits, and integrate rural character.
2. Based on such examples, further consideration should be given to the applicability of the 2008 Workgroup cluster development recommendations to improve conservation and carbon benefits, and to any appropriate improvements to those recommendations. Issues to be addressed include the following:
  - Can cluster developments in rural areas retain rural character consistent with policies of the Regional Growth Strategy and the GMA?
  - Can cluster developments result in improved carbon benefits (including consideration of net vehicle miles traveled)?
  - Can cluster developments result in the retention of working forest land?

## **SEPA use in the greenhouse gas mitigation context for avoided conversion**

The State Environmental Policy Act (SEPA) process was envisioned as an important information gathering tool so that decision makers can collect additional information on projects that have been deemed (via statute and/or rule) to require broader environmental review beyond the lead agencies' normal review. In the case of conversion of land from one land use to another, SEPA has a statutory trigger to review the conversion decision and its potential development. This makes common sense, because many times the conversion of forest land to other uses involves development that can include needs for water supply, wastewater and stormwater treatment, roads that are accessible by emergency vehicles, utility development, compliance with the Growth Management Act and Shoreline Management Act, etc.

In many cases, the conversion of forest land and its potential impacts to the environment initially become evident when a landowner or another proponent decides to convert from a forest land use to something incompatible with the growing and harvesting of timber. These are understood to be Class IV General permit applications under the Forest Practices Act and require a SEPA checklist by the proponent. Local government is generally the lead agency so that the whole project, including the proposed development, can be reviewed—not just the timber harvest proposal.

Ecology has been considering the appropriate role that SEPA should play in mitigating for greenhouse gas emissions for projects requiring SEPA through first a workgroup, a guidance document, and now a working paper. The working paper is likely to be finalized in January 2011 and offer suggestions about how different SEPA events can affect greenhouse gases. One of the difficulties in providing statewide guidance on mitigating greenhouse gas emissions within SEPA is that it is the lead agency or local government that should adopt policies on how to evaluate greenhouse gases within SEPA.

One of these potential areas for developing guidance is the conversion of forest land. The conversion of forest land can generate additional greenhouse gases through removal of forest vegetation, the development of the site (construction), increased transportation associated with the new land use, development of services for the site, etc.

The following is a consensus recommendation:

The Workgroup believes that a separate discussion by the appropriate interests (Ecology, DNR, Commerce, Washington Association of Counties, developers, landowners, conservation caucus, and tribes) would be the best method to explore the desirability, as well as the feasibility and timing of moving towards recommending adoption of SEPA policies or other mechanisms—by the appropriate entities—as a strategy for reviewing and potentially mitigating greenhouse gas emissions associated with the conversion of forest lands to other uses.

## **Forest carbon considerations in ecosystem services markets and other incentive payment systems**

### **Introduction**

In the 2008 recommendations, a recommendation for an incentive program for improved forest carbon sequestration and storage was linked closely to recommendations for a Washington State forest carbon offset market system for improved forest management. The 2010 Workgroup recognized that a compliance-based offset market is most likely to emerge at the federal or regional level, while incentive systems may be feasible at the state level. (See [Context for 2010 Work](#)) Therefore, the 2010 Workgroup considered incentives apart from an explicit linkage to a compliance-based carbon offset market.

The 2008 report lists Forest Health and Avoided Forest Fires as a priority topic that did not receive adequate attention by the 2008 Workgroup due to time limits. The 2010 Workgroup

agrees with the continuing urgency of attention to this issue, from a climate change perspective among other important reasons. The Workgroup therefore devoted significant attention to this topic.

In examining forestry incentives, the Workgroup gave priority attention to studying and discussing systems of payment for ecosystem services. The ecosystem services included forest carbon sequestration and storage, but also extended to watershed protection and provision of biodiversity. Therefore the Workgroup's deliberation in this area is particularly relevant to the future work to be undertaken pursuant to ESHB 2541.

## **Incentives for forest health treatments based on beneficial greenhouse gas effects**

Numerous state-sponsored efforts have examined the hazardous situation in Washington's dry eastside forests (and some westside forests) with regard to forest health and the build-up of excessive fuels for forest fires. These have included the 2004 Forest Health Strategies Workgroup, the 2007 Future of Washington's Forest Project, the 2007/2008 Climate Advisory/Action Teams, the 2008 Forest Sector Workgroup, and the 2009 Northwest Environmental Forum, among others. All these groups have noted the altered forest conditions due to past harvest practices, fire exclusion and changing climate, and have consistently made recommendations for action to reduce the hazards. These groups have also noted the multiple public benefits of action (or losses from inaction) including improved forest health, reduced potential for uncharacteristically severe or widespread forest fire, reduced potential for greenhouse gas emissions, reduced potential for soil erosion and water pollution, improved rural economic benefits, improved production of forest biomass energy, and improved biodiversity and habitat for fish and wildlife. In 2007 the Legislature enacted a strengthened forest health law in response to consensus recommendations.

Strong agreement exists regarding the desirability of finding effective incentives to promote forest management practices that can address these broadly-expressed concerns, including thinning in seriously over-crowded forests and/or forests suffering from uncharacteristic insect pest or disease conditions. The state also has a corresponding regulatory authority for responding to extreme conditions in which landowners neglect to abate major public safety hazards (RCW 76.04.660).

Forest treatments such as well-targeted thinning could avoid premature carbon emissions from decay related to insect and disease damage and therefore secure longer-term carbon storage in trees. Paradoxically, however, the treatments themselves, whether thinning or controlled silvicultural burning, reduce forest carbon storage at least temporarily and can result in carbon emissions. The justification is that these emissions/loss of storage will serve to reduce the likelihood of much larger emissions/loss of storage from uncontrolled wildfire or severe forest health conditions. Treatments should also reduce the potential that unnaturally severe fire that damages forest soils, combined with a warmer and drier future climate, could permanently re-set broad areas from forest cover to non-forest brush land or savanna, which would permanently reduce the carbon storage capacity of those lands. In addition, thinned material could be used for

biomass energy production, potentially displacing use of fossil fuels, or for renewable building materials, potentially displacing more energy-intensive building materials.

Although the threat of serious forest losses to insects and disease or to fire is likely over broad areas and time periods, loss is uncertain at any particular location and point in time. This reduced certainty of benefit makes forest health treatments less suitable for establishing carbon credits which could be exchanged in a compliance-driven carbon offset market, and makes them more suitable for other types of incentive systems. However, displacement of fossil fuels or energy-intensive building materials may be suitable for establishing carbon credits.

In *wet* westside forests, lack of management can in some situations result in over-stocked and suppressed forest conditions. Instead of loss due to fire, such westside forests can be susceptible to elevated risk of insect and disease attack and tend to persist in a stagnated, deficient state and not realize their potential for carbon sequestration and storage and other ecosystem services.

The following are consensus recommendations:

The Workgroup examined a wide range of potential financial incentives, apart from carbon offset markets, for positive forest health and fire hazard abatement treatments. These include tax credits, such as against the forest harvest excise tax for landowners or the B&O tax for manufacturers; fee reductions, such as state fire prevention and suppression fees; direct state and federal capital budget expenditures to reimburse landowners for treatments; and both tax credits and energy market payments for production of biomass energy feedstocks. Currently, the largest source of funding for forest health and fire hazard abatement treatments is coming from state and federal capital expenditures. For example, Rep. Norma Smith (R – Coupeville), was instrumental in the 2010 Legislature appropriating \$2 million for forest health treatments in the highest risk areas of eastern Washington.

In all cases there are valid constraints on these potential sources of incentive payments. Current revenue produced by taxes and fees has current priority uses. Some revenue sources are inadequate in relation to forest health needs. Long-term availability of legislative appropriations is uncertain. During Workgroup deliberation, representatives of the Washington Forest Protection Association and the Washington State Association of Counties agreed to explore in the future the possibility of a voluntary pilot project for use of forest harvest excise tax revenue in a select county or counties which may see loss of tax revenue as balanced by gain in forest health from treatments funded.

The Workgroup recommends that attention be given in the implementation of SHB 2541 to the analysis of forest health incentive funding sources, along with analysis of broader forest incentive funding. The Workgroup also recommends that continued public education about the broad public benefits of forest health and fire hazard abatement treatments be undertaken and strengthened to increase general public support for creation of incentive revenue sources.

The Workgroup also looked at a number of implementation issues for forest health treatment incentive programs. These included the need for eligibility criteria for specific treatments and the need for an efficient administrative system.

Eligibility criteria would address the efficacy of treatments to improve forest health and/or retard the spread of fire, especially if climate change alters current expectations about fire behavior or disease vectors. Eligibility should be based on (1) consistency with current forest practices rules; (2) a demonstration that a risk exists, through presence of risk vectors and susceptible stand conditions; (3) a demonstration that the treatment will reduce the risk in ecologically appropriate ways based on best available science; and (4) a demonstration that unintended consequences will be avoided. The Workgroup recommends eligibility criteria be developed by silvicultural, forest health, forest ecology, and fire behavior specialists.

An efficient administrative system could be built on an existing requirement such as receiving a forest practices permit for a qualifying forest health treatment. The Workgroup recommends consideration of an administrative system in which a landowner claims credit for a qualifying treatment on the forest practices permit application, and DNR uses pre-established criteria to validate the eligibility of the treatment for incentive payments. The landowner can then use the forest practices permit to register a claim for an incentive payment through whatever funding mechanism may be established. A more efficient system may be available for state or federal appropriations aimed specifically at forest health treatments.

## **Payment for ecosystem services program for forests in Washington State<sup>6</sup>**

The Workgroup devoted considerable attention to the potential design features of a payment for ecosystem services (PES) system as a means of matching desirable conservation practices on forest lands not at immediate risk of conversion with the willingness of forest landowners to provide those practices. Workgroup members received information about functioning PES systems worldwide as a foundation for their deliberation. The Workgroup reached consensus on many aspects of a desirable PES system for forest landowners in Washington, and diligently explored areas of apparent disagreement to better understand those disagreements.

The following are near-consensus recommendations:

The general features of the desirable PES system are:

1. It recognizes the value of practices above forest practices requirements for water quality and wildlife.
2. It recognizes the value of enhanced carbon storage.
3. It provides flexible contract lengths, but with a minimum commitment.

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<sup>6</sup> The representative of the Family Forest Foundation and Washington Farm Forestry Association has indicated lack of consensus with certain aspects of the *general features* of a desirable PES system and with the explanation of non-consensus. This member does not agree that incentives should only be offered for practices that to at least some degree exceed current regulations in level of ecosystem services provided and/or duration of commitment. This member believes that incentives should be provided for basic compliance with existing rules.

4. It incorporates stacking of multiple services up-front by providing a price premium.
5. Payments increase with increased level of services and length of commitment.
6. Monitoring and verification are required, but streamlined compared to existing carbon offset protocols.
7. The program is explicitly not a carbon offset program and should not be used in place of reducing fossil fuel-based and other industrial GHG emissions.

The PES program would be contractual in nature and would secure performance through a management plan, but would otherwise have flexible terms.

Carbon payments would be based on contract length and quantity of enhanced carbon storage. A water quality premium could be added for quantified practices beyond forest practice minimum rules related to water. A biodiversity premium could be added for practices which intentionally increase or maintain structural diversity outside riparian zones. The Workgroup discussed these payments being on a *tiered* basis with increasing payments available for increasing levels of structural diversity. Qualifying practices would need to be tailored for eastern Washington, and not necessarily linked to carbon storage enhancement.

Prices for the program would be set by the use of a reverse auction. A reverse auction is a price discovery mechanism and is also used to increase the efficiency of funds spent for PES programs. Landowners submit bids based on what level of payment they would accept for producing specified services. Bids include a description of how the service would be produced. Bids are chosen based on a combination of quality and best (lowest) price acceptable to the bidder.

The Workgroup did not deeply or extensively explore the possibilities for raising funds for the PES system. A variety of fund sources were discussed. There are advantages to raising funds statewide and from federal sources, not just from the watershed where the services are provided. Funding could be from variously sourced state or federal appropriations, through mitigation requirements on development projects, from voluntary participation, or from entities gaining an economic benefit from particular ecosystem services.

The following is an agreed-on explanation of areas of non-consensus:

While generally agreeing to a program of conservation incentives to forest landowners as described above, landowners and the environmental caucus are not in complete agreement with respect to the minimum that needs to be done to warrant the incentive.

The environmental caucus is willing to support providing incentives for behavior that goes beyond existing regulations. The support to landowners is justified based on a presumption that this could avoid the need for future regulation and can implement environmentally beneficial policies faster than regulation. Landowners also agree that incentives should be granted for a commitment to do more than what is required by regulations.

The key difference in perspectives has to do with the concept of a threshold, i.e., how much more than regulation does a landowner have to provide to warrant the incentive. Landowners support a program structure that rewards all increments beyond the existing regulatory structure and would allow the market for those services to define what gets paid for and how much. At one end of the spectrum, a landowner might propose promising not to convert (status quo forest management) for a fixed period of time. At the other end of the spectrum, a landowner may agree to a permanent conservation easement with extended rotations and additional upland wildlife tree retentions. A system could be designed that would find the optimal amount of ecosystem service for the available dollars, likely something between the two examples given.

The environmental caucus has a slightly different take on how the program should be administered. Their concern is that incremental change on the margins (e.g., a short term promise to not convert while maintaining status quo forest management, or leaving one more tree per acre in the uplands than rules require) is not worth investing scarce conservation resources and that there needs to be a certain threshold amount of ecosystem service provided before a landowner is eligible. This is because some ecological resources are becoming limited quickly and the caucus thinks these should be addressed first. It is understood that a landowner would receive the ecosystem services payment for the minimum eligibility criteria for each service type.

While the landowner and environmental caucuses acknowledged that a consensus position is potentially reachable on this question, they concluded that, as the Workgroup reached its deadline, they should maintain this clarified disagreement and transition the discussion on to another venue, likely as part of the implementation of ESHB 2541. Meanwhile, they provide specific recommendations for further information gathering that should greatly aid future discussions.

The following are consensus recommendations:

1. The Workgroup recommends that a survey of a broad cross-section of forest landowners should be carefully designed and carried out that will improve on current understanding about landowner willingness to participate in a PES market system as described above, and what the desired features of the system might be. The survey should build on other recent landowner surveys and should be designed and carried out by an organization experienced with survey technique. Landowner and environmental caucus input should be sought in designing the survey.
2. The Workgroup recommends that a separate survey or series of surveys of the general public or relevant elements of the public should be designed and carried out to help gauge the support for a PES market system and the financial resources that might be available for the system. The design and administration of this survey should be sensitive to the dynamic economic climate and its likely effect on survey responses.
3. Following the gathering and analysis of survey data, and based on that analysis, the Workgroup recommends that a pilot PES project be developed and implemented in which a reverse auction would be carried out in a defined geographic area, with landowners responding to advertising as participants, and with a suitable amount of private funding

available. The pilot project would be intended to test the feasibility of various aspects of the PES system, including the minimum levels of service offered and awarded payments. Based on the results of the pilot project, further design of the PES system can be undertaken.

## **Forest carbon offset protocol/registry for Washington**

### **Introduction**

As described above in Section 1.2, one of the three elements of the initial Workgroup Charter was to “explore provisions of forest project protocols (including but not limited to the Climate Action Reserve’s Forest Project Protocol) that may pose barriers to participation by Washington landowners. Develop recommendations, if deemed appropriate, for changes in protocols that reduce barriers by allowing alternative methods for demonstrating equivalent environmental outcomes appropriate to Washington State’s legal and regulatory setting.” This Charter element was responsive to the request in Executive Order 09-05 asking for “recommendations for forestry offset protocols”. Accordingly, a subgroup of the Workgroup was formed to discuss this topic. As noted in Section 1.2, the Washington Environmental Council dissented from the creation of this subgroup.

The Protocols subgroup held several meetings from June to September. At the September 8 Workgroup meeting, the full Workgroup had an extended discussion focused on a question raised by the environmental caucus: “Should the Workgroup recommend that Washington State participate in a regulatory cap-and-trade program? (i.e., the Western Climate Initiative or other entity’s program).” As a result of the lack of agreement evident from that discussion, the environmental caucus suspended participation in the Protocols subgroup. Accordingly, the Workgroup co-chairs and facilitator no longer provided administrative support and leadership for the subgroup. However, members of the landowner caucus continued to meet and discuss the topic of the subgroup and developed a recommendation to the full Workgroup outside the framework of the Protocols subgroup. The environmental caucus provided a statement to the Workgroup in response. During the Workgroup’s final meeting, representatives of owners of smaller forestland parcels provided a third perspective on this topic.

The landowner caucus also developed a recommendation for a Washington State carbon offset registry, and the environmental caucus responded to that recommendation.

### **Forest carbon offset protocol**

The following are non-consensus elements of the report, including non-consensus recommendations:

The introduction and summary of the landowner caucus recommendation on forest carbon offset protocol is as follows (Details of the recommendation are in Appendix C.):

Washington State forest landowners chose to participate in the current configuration of the Washington Forest Carbon Workgroup as a possible way to reach consensus on how to achieve broadly accepted forestry offset protocols for Washington forest landowners. The forest landowners who chose to continue participating in the subgroup on offsets recommend the adaptation of CAR 3.1, “Climate Action Reserve Forest Project Protocol Version 3.1,” in response to the direction to the Department of Ecology in Executive Order 09-05, “Washington’s Leadership on Climate Change,”

(e) In consultation with the Department of Natural Resources and the forest carbon sector working group, develop by September 1, 2010, recommendations for forestry offset protocols as well as other financial incentives for forestry and forest products. The starting point for this work should be the 2008 forest sector working group report.

Early on, the group as a whole recognized that most existing and pending protocols have largely addressed the need to have a quality carbon offset with respect to permanence and additionality and that we did not want to debate again the arcane points of how protocols address these elements. Many of the fundamental methods in CAR 3.1 are compatible with the 2008 WA Forest Sector Working group report, including the permanence, baseline, additionality and leakage requirements and as a result, we agreed to review the non-carbon related portions of the CAR 3.1 that are a limiting factor to participation by many Washington forest landowners. Recognizing that the only limit to more widespread use of the protocol by the majority of landowners in Washington were the ecological safeguards embedded in the protocol from California’s regulatory structure, we attempted to see if we could reach agreement on adapting these safeguards to fit with Washington’s regulatory structure.

As we finished identifying the elements that limit use by the vast majority of forest landowners in Washington State, it became clear that many of the participants in the Workgroup were growing uncomfortable with the discussion. From a landowner perspective, we understood this discomfort to be based on the fact that many in the environmental community did not want to support the development of widely used protocols unless the landowner community would fully support a regulated market to make use of the protocols. It should be noted that some landowners do support the concept of cap and trade at a national level; however, these landowners have specific concerns regarding the design of the cap-and-trade systems that were being developed at both the regional and national levels.

As a result, the only participants left in the subgroup to discuss adapting the ecological safeguards to Washington were, in fact, Washington forest landowners. While there is an argument to be made that a forest carbon protocol should be focused only on the carbon and that a protocol should not have ecological safeguards embedded in the protocol (relying on existing regulatory structures outside the protocol to assure no environmental harm), Washington forest landowners recognize that it is important that carbon projects do not have unintended consequences to other environmental concerns during the implementation of a carbon project. The following recommendations are intended to recognize the environmental issues identified in

the CAR protocol and offer alternative means to avoiding unintended environmental harm as a result of a carbon project while making the protocol more accessible to Washington forest landowners.

There are four specific areas of CAR 3.1 that are addressed in these recommendations:

### **2.1.2 Intensive Forest Management**

Recommendation #1 - This subgroup recommends removing the ban against broadcast fertilization under project eligibility and instead appropriately account for it in the calculation of the project baseline and project.

### **3.4 Project Termination**

Recommendation #2 - This subgroup recommends maintaining the 100 year permanence requirement but removing the penalty if there is a reversal prior to 50 years, per consensus in the 2008 WA Forest Sector Workgroup Report.

### **3.9.2 Natural Forest Management**

Recommendation #3 – This subgroup recommends removing the quantitative limits prescribed for species composition in Appendix F of CAR 3.1 and instead allow the landowners to demonstrate through their baseline calculation and growth and yield projections how they will meet the three elements identified under Natural Forest Management.

### **3.9.4 Balancing Age and Habitat Classes**

Recommendation #4 - This subgroup recommends removing this requirement completely, recognizing that Washington has limits on the size and extent of even aged management practices.

The environmental caucus response statement is as follows:

The environmental caucus appreciated the opportunity to better understand commercial forest landowners' concerns about the Climate Action Reserve Forest Offset Protocols. We had some productive discussions and everyone came away with a better understanding of the issues.

During the course of our work, there were several significant policy developments: (1) the federal climate bill failed and there are no realistic prospects for a comprehensive federal program in the near future; and (2) in the absence of federal legislation, it became clear that the Western Climate Initiative (WCI) and other regional programs would become the primary vehicles for implementing cap-and-trade policy. During this time, it also became clear that the landowner representatives in the group, despite wanting to see changes in the forest protocols, do not support the overarching program (WCI) through which the protocols would be implemented. Given these developments, we felt that it did not make sense to try to reach consensus on modifications to the protocols, and, therefore, we cannot endorse the recommendations put forth by the landowner caucus at this time. We liken WCI to a table. It's difficult to discuss

the place-settings (protocols) if we don't agree that the table is worth sitting at. We sincerely hope that we will be able to gather around the WCI table in the near future, at which time we'd be open to discussing the merits of the protocol recommendations.

As we have noted throughout the Forest Carbon Workgroup process, the environmental caucus believes the best way to promote the use of forest offsets from Washington State landowners is through the creation of a regulated market for carbon. Such markets create higher demand and therefore higher offset credit prices than voluntary markets. As noted above, passage of a federal climate bill that would create demand for forest offsets at the national scale is unlikely in the next several years. Therefore the best opportunity for Washington State to participate in a regulated market is through the Western Climate Initiative's cap-and-trade program. Furthermore, the overarching purpose of the Governor's Executive Order creating this workgroup (EO-09-05) is to address climate change and greenhouse gas emissions in Washington State and to move the state towards achieving the mandatory GHG reductions established in RCW 70.235.020. In the absence of federal legislation, participation in a regional cap and trade system will be the most economically efficient way of achieving those reductions. In addition, the existence of a robust WCI program provides the ability to link with other regional programs such as the Regional Greenhouse Gas Initiative (RGGI), which would further increase the scale of demand for forest offsets and the efficiency and effectiveness of an overall cap-and-trade market.

WCI is moving forward with cap and trade based on the participation of other U.S. states and Canadian provinces. In the absence of active positive engagement by all parties to this workgroup to move our state towards real reductions in GHG emissions through WCI's cap-and-trade program, we believe it is not appropriate to request to modify the offset protocols used in WCI or California. We think the science of climate change provides overwhelming evidence on the need to act quickly to reduce GHG emissions. Instead we find ourselves in a situation of dangerous delay. We urge the timber industry to work with us, the Governor's Office, Department of Ecology, the State Legislature, and other members of the business community to authorize Washington State's participation in WCI. Moving forward with WCI will provide a win/win for the climate and our state's economy.

The family forest landowners' position, articulated at the Workgroup's final meeting, is that, in light of the apparent lack or delay of a federal cap-and-trade system, the WCI-approved protocol does not appear likely to work well for owners of small forest land parcels, due to issues of aggregation, logistics, and resulting transaction costs. Preferring a federal program, the family forest landowners also oppose a Washington State-specific cap-and-trade system, and did not work with others in the landowner caucus on the recommendations above.

## **Forest carbon offset registry**

The following are non-consensus elements of the report:

The Workgroup discussed whether there were any interim steps that could be taken to facilitate participation by Washington forest landowners in current or future carbon offset markets. The large landowner caucus proposed creation of an open registry system. Registries function as repositories for carbon offset credits available for the marketplace and can ensure proper accounting for credits transacted by a market. The environmental caucus proposed a more formal early action credit system where entities could report and receive compliance grade credit for emissions reductions that occur before federal, regional, or state emissions reduction programs are implemented. Actions that could be credited under such a system would include purchase of forest offsets from landowners in Washington State under protocols approved by WCI. The disagreement identified by the Workgroup relates to the range of offset project protocols approved for use with the proposed registry and whether to limit it to compliance regimes.

The landowner caucus provides the following statement:

Despite reduced momentum towards the development of a national cap-and-trade system, there remains interest from both buyers and sellers in continuing to further develop a market for forest offsets. One of the key variables for a functioning market is to have a secure place for quality offsets to be registered so that their status and ownership can be tracked over time. Creation of a state registry can provide credibility for the voluntary market in addition to the pre-compliance market for potential state, regional, or federal compliance markets.

As the registry is a voluntary mechanism designed to facilitate early action on additional carbon sequestration or greenhouse gas reduction projects, it can accommodate a wide range of specific protocols. Project proponents can use whatever protocol they feel has the best market potential while meeting their own management objectives. The registry will simply provide the tracking mechanism to facilitate any potential transactions.

The environmental caucus provides the following statement:

From the environmental caucus perspective, an early action registry needs to support eventual participation of Washington State in WCI or a national compliance program. As such, the environmental caucus advocates for the recognition of emission reductions by emitting facilities, including their purchase of forest offset credits using protocols sanctioned by WCI. The idea of allowing the use of any protocol does not promote fungibility within WCI, nor does it seem that it would really accomplish tapping into higher-value demand given that potentially regulated entities in Washington are going to want to make sure the offsets they purchase will count towards a future compliance regime. Also, using any protocol does not promote the use of offset quality parameters already

developed by WCI that the environmental caucus supports. Finally, landowners do not need Washington State's sanction to develop projects using other voluntary protocols or registries that are available.

## **Other General Workgroup Recommendations**

### **Transition to ESHB 2541 process**

According to its charter, and in keeping with co-sponsorship of the Workgroup by the Commissioner of Public Lands, one of the purposes of the Workgroup is to provide early input to the Commissioner in support of DNR's implementation of legislative direction in ESHB 2541, as enacted by the 2010 legislature. Section 5 of the law provides the following: "sec. 5.(1) The Department of Natural Resources shall, to the degree that resources are available, develop consistent with this section, proposals for the development of appropriate landowner conservation incentives' that support forest landowners maintaining their land in forestry. These incentives may include but are not limited to, incentives that are related to ecosystem service markets, tax incentives, easements, technical assistance and recognition or certification""

DNR is to report its recommendations to the Legislature in December 2011. Therefore, the Workgroup offers the following discussion to DNR as it carries out legislative direction in ESHB 2541 over the coming year.

The scope of the Workgroup's recommendations is nominally limited to the forest carbon aspects of forestry incentives but in practice has related to payments for ecosystem services more generally, as well as avoided conversion. The Workgroup has also discussed traditional incentive programs as well as market-based payment systems including carbon markets. The scope of DNR's work under ESHB 2541 encompasses all ecosystem services including carbon sequestration/storage and retention of working forest lands at risk of conversion to development. The scope also includes ecosystem service market payments as well as conventional incentive systems. Thus, there is a reasonably consistent match between the scope of the Workgroup and that of ESHB 2541, although the latter may be nominally broader.

In ESHB 2541, DNR is directed to consult with the Forest Practices Board; federal, state, and local governments; tribes; small forest landowners; conservation groups; the forest industry; and others at DNR's discretion. The Workgroup members include state and local government; tribal staff; large and small forest landowners and timber manufacturers; land trusts; and environmental organizations with interest in forestry, energy and climate, and land use. With the exception of federal agencies and the Forest Practices Board, the Workgroup well-represents the interests to be consulted by DNR under ESHB 2541.

The process used effectively by the Workgroup includes formal sponsorship and leadership by agencies with legislative direction and implementation authority, professional facilitation services, and committed face-to-face participation sustained over many months.

The following are consensus recommendations:

Workgroup members wish to see DNR lead a properly scoped, adequately funded, and realistic collaborative discussion of landowner conservation incentives.

The Workgroup recommends DNR seek to use similar process features in further ESHB 2541 work as those that have contributed to the success of the Workgroup's effort, including formal sponsorship, leadership by entities with authority, professional facilitation, and sustained face-to-face participation.

The Workgroup recommends 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. The scope should acknowledge the resource protection goal shared by all participants, and should promote a mutual understanding of the relationship between incentive (including market) approaches and regulatory approaches to pursuing that goal.

The Workgroup expects that comprehensive agreement on a conservation incentives program, as envisioned by ESHB 2541 may entail a multi-year effort, with important milestones achieved by the December, 2011 deadline contained in the legislation.

The Workgroup recommends 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.

The Workgroup recommends that federal, state, private, and NGO funds be sought as needed to provide for facilitation and technical support.

Because of the strong match between the Workgroup's scope, stakeholders representation, and process design, and that required of DNR in ESHB 2541, the Workgroup believes that all the substantive consensus recommendations contained in this report are applicable to DNR's subsequent work. The Workgroup's strongest focus has been on incentivizing forest carbon sequestration and storage, working forest retention, and forest health. The Workgroup has evaluated using both existing conservation market mechanisms, proposed payment for ecosystem services (PES) methods that recognize additional services beyond carbon, and non-market incentive mechanisms.

The Workgroup collectively and its members individually would be willing to assist DNR and other interested parties further in understanding Workgroup recommendations and applying and expanding on them in subsequent ESHB 2541 work.

# Appendices



# Appendix A

## Workgroup membership and affiliations

Lyle Almond	Makah Tribe
Cathy Baker	The Nature Conservancy
Heather Ballash	Department of Commerce
Tim Boyd	Port Blakely Tree Farms, LP
	Vaagan Brothers Lumber, Inc.
	Boise Cascade, LLC
	Boise, Inc.
Brynn Brady	Pierce County
Anthony Chavez and Edie Sonne Hall	Weyerhaeuser
John Henrikson	American Tree Farm
Brian Kernohan	Forest Capital Partners
Henry McGee	Futurewise
Adrian Miller	Washington Forest Protection Association
Miguel Perez-Gibson	Washington Environmental Council
Denise Pranger	Northwest Natural Resource Group
Court Stanley	Port Blakely Tree Farms
Steve Stinson	Family Forest Foundation
	Washington Farm Forestry Association
Dan Stonington	Cascade Land Conservancy
Paula Swedeen	Pacific Forest Trust

# **Participant purpose statements**

## **Statement of Environmental Caucus**

(Forthcoming)

## **Statement of family forest landowners**

Family forest landowners own over half (5.7 million acres) of the state's private forest land and represent over 215,000 individual owners, making them the largest private sector ownership class. As representatives of this key stakeholder group, the Washington Farm Forestry Association, Family Forest Foundation, and the Washington Tree Farm Program recognize the need to participate in the Forest Carbon Workgroup due to its potential impacts (positive and negative) upon family forest owners.

For decades, family forest landowners have demonstrated a sustained ability to simultaneously produce benefits for the economy, society, and the environment. Yet, we face a growing threat to our forest lands due to regulatory exclusion and lack of management, resulting in suppressed and weakened ecosystems at risk of collapse or stagnation, negatively impacting the forest's capacity for both productivity and carbon sequestration.

We support workable and realistic incentives for enhanced forest management. Existing incentive proposals do not have much value for family forest landowners due to the complexity and cost of implementation combined with low compensation from non-existent funding sources. At the same time, advancing regulatory disincentives threaten to negate any possible gains from the proposed incentives.

We feel that a carefully planned long-term approach to addressing incentives for forest stewardship would be prudent. Incentives must either increase revenue or decrease costs. The costs of our state's regulatory requirements for family forest landowners are significant. A reduction of this regulatory burden may be the most significant incentive available and should be considered along with other innovative solutions.

## **Statement of large private forest landowners**

Large private forest landowners were pleased to participate in the second convening of the Washington Forest Carbon Workgroup. Our hope is that this process will lead to robust programs that can maintain and enhance carbon and other ecosystem services that working forests provide through incentives. We view potential incentives broadly, including, but not limited to, increasing markets for existing products and directly or indirectly monetizing ecosystem services. In evaluating different incentives for forest landowners, we also want to be sure that in the process we do not undermine our existing markets and our customer's competitiveness, recognizing that the entire forest sector supply chain supports the maintenance of working forests and the environmental benefits they provide.

By participating in a multi-stakeholder group, we hope to achieve common support for these kinds of policies in order to build coalitions to help get them implemented. We also value the

discussion around disagreements on specific policy options so that we and other stakeholders can continue to work through these complex issues with a more clear understanding of each others positions.

## **Statement of forest product manufacturers**

The days of integrated forest products companies have come to an end. Sawmills and pulp and paper mills in Washington State remain an integral part of the forest products sector, and are dependent on raw materials from private and public timberlands owned by entities not under the control of the mill.

The manufacturing facilities have not been the direct focus of the 2008 and 2010 workgroups, but entered the negotiations hoping to garner some additional value for the carbon stored in their long-lived products or additional fiber made available through incentives to address the forest health crisis in eastern Washington. In addition they wanted to make sure that there was just recognition of the climate benefits of wood building products due to their relatively low embodied greenhouse gas footprint. To date, the outcome has been disappointing. Clearing the “beyond business as usual” hurdle is difficult in the manufacturing setting, but these opportunities should still be pursued.

The manufacturing facilities also want to make sure that any carbon incentives to forest landowners—private or public—do not remove their timberlands from the working base inventory or favor in-forest carbon sequestration at the expense of the wood product carbon storage pool. In the end, maintaining a viable manufacturing infrastructure, a place for timberland owners to sell their trees, is critical to the overall health of the forest products sector and all the benefits, including in-forest and in-product carbon sequestration, that are provided by industrial and family-owned forests and the mills they help supply.

## **Statement of environmental caucus**

The environmental caucus appreciated the ability to continue discussions with landowners, state agencies, county government, and tribes on how forests can play a role in mitigating climate change and how that role can provide meaningful economic incentives to landowners. We participated and will continue to participate in such discussions for the following reasons: We think that advances in science indicate that climate change poses a significant threat to human health and safety and a threat to the ecosystems that sustain human life, and that there is a limited amount of time to significantly reduce emissions before catastrophic impacts become highly likely and potentially irreversible. The most recent published analyses indicate this timeframe is approximately five years.<sup>7</sup> We think that actions to reverse greenhouse gas (GHG) emissions trends need to take place with all due haste and that biological sequestration of carbon in forests can play an important role in mitigating climate change and drawing down high atmospheric concentrations of carbon dioxide. We think that a regulatory driver for market approaches such as economy wide cap and trade or other programs that create the ability to buy and sell emission

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<sup>7</sup> See Anderson, K. and A. Bows. 2011. Beyond ‘dangerous’ climate change: emission scenarios for a new world. *Philosophical Transactions of the Royal Society A* 369: 20-44.

reduction credits will be the most effective path to achieving a stable and livable climate. Such approaches will create higher demand and therefore higher prices for forest offsets or other forms of payment to landowners for sequestering carbon. We also think that in the absence of federal legislation for the foreseeable future, participation in the Western Climate Initiative (WCI) and linking with other regional programs provide the most expeditious route to creating an effective mitigation mechanism and to providing sufficiently high prices for forest carbon offsets. We do not think we can continue to delay action in order to wait for a federal cap and trade bill and are thus willing to discuss ways in which participation in WCI would be acceptable to the forest products industry.

In addition to these climate-driven reasons for our participation, we believe that private forests in Washington State and the landowners who steward them are fundamentally important to the ecological and economic well being of the state. We recognize that there are difficult economic and social pressures on Washington's private forests in the form of weak forest product markets, international competition, and differential prices on land values that create a strong incentive to convert to non-forest uses. We also think that the practice of forestry on private lands could be incentivized to produce a higher aggregate flow of important ecosystem services including carbon sequestration, water quality, and biological diversity than is attained under the existing regulatory framework. We believe it is appropriate to look for ways to raise and spend scarce public and private capital on improving existing conditions and rewarding landowners who already voluntarily manage to standards beyond current law and regulation. Therefore we think that well-constructed ecosystem service payment programs can both provide new sources of revenue for landowners and address key ecological issues in the private forest landscape.

We learned much from this year's discussions and recognize the need for further work to develop appropriate incentive mechanisms. We intend to participate collaboratively to extend the work of the 2010 Washington Forest Carbon Workgroup to produce politically viable, economically meaningful, and ecologically significant solutions to the joint challenges of climate change, loss of important wildlife habitat, water quality issues, loss of working forestlands, and sustained economic viability of the forest products industry.

# Appendix B – Workgroup Charter

## 2010 Forest Carbon Workgroup Workgroup Charter — April 2010

### **I. Background and Authority**

In response to a 2008 Legislative directive (E2SHB 2815),<sup>1</sup> the FOREST SECTOR WORKGROUP ON CLIMATE CHANGE MITIGATION was chartered in April 2008 and in late 2008 delivered its final report<sup>2</sup> to the Director of the Department of Ecology and the Commissioner of Public Lands. The Workgroup recommended a mix of carbon offset proposals, other (non-offset) carbon incentive proposals, and several related recommendations. The offset and other credit recommendations addressed avoided and mitigation conversion of forest land to non-forest uses, urban reforestation, and forest management to increase carbon sequestration and storage. Due to time constraints on the 2008 process, details of some recommendations were incomplete, as described in the Workgroup’s report.

On May 21, 2009, Governor Gregoire issued Executive Order 09-05, “Washington’s Leadership on Climate Change,”<sup>3</sup> which includes the following directive to the Director of the Department of Ecology:

(e) In consultation with the Department of Natural Resources and the forest carbon sector working group, develop by September 1, 2010, recommendations for forestry offset protocols as well as other financial incentives for forestry and forest products. The starting point for this work should be the 2008 forest sector working group report.

This directive is premised on (1) the likelihood that federal climate legislation will include provisions recognizing the validity of offset credits meeting specified criteria created before enactment of the federal legislation, and (2) the desire to enable Washington landowners to participate in a robust voluntary or compliance-based carbon sequestration market that will reduce the likelihood of loss of forest land to non-forest uses.

On March 24, 2010, Governor Gregoire signed into law ESHB 2541 (Chapter 188, Laws of 2010), which includes the following:

Sec. 5. (1) The department of natural resources shall, to the degree that resources are available, develop, consistent with this section, proposals for the development of appropriate landowner conservation incentives that support forest landowners

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<sup>1</sup> 1 RCW 70.235.030

<sup>2</sup> Forest Sector Workgroup on Climate Change Mitigation: Final Report (2008) is available here: [http://www.ecy.wa.gov/climatechange/2008FAdocs/11241008\\_forestreportversion2.pdf](http://www.ecy.wa.gov/climatechange/2008FAdocs/11241008_forestreportversion2.pdf)

<sup>3</sup> E.O. 09-05 is available here: [http://www.governor.wa.gov/execorders/eo\\_09-05.pdf](http://www.governor.wa.gov/execorders/eo_09-05.pdf)

maintaining their land in forestry. These incentives may include, but are not limited to, incentives that are related to ecosystem service markets, tax incentives, easements, technical assistance, and recognition or certification.

## **II. Sponsorship, Purpose**

The 2010 Forest Carbon Workgroup is being jointly sponsored by the Washington State Departments of Ecology and Natural Resources. The purpose of the Workgroup is provide the forum for stakeholders and government representatives to develop recommendations to the Departments of Ecology and Natural Resources to address the intent of Executive Order 09-05 as quoted above, and to partially address the intent of ESHB 2541. The starting point for this work is the 2008 Workgroup's Final Report.

We will also try to be aware of other discussions that may be occurring in other jurisdictions on subjects closely related to our purpose and scope, and where possible, coordinate our activities with those related efforts.

## **III. Scope of the Group's Work**

The scope of this group's work may include the following elements: Further develop effective state incentive mechanisms to reward forest landowners for maintaining significant carbon storage in forests and long lived wood products.

Further address the issue of avoided conversion of working forest lands from the standpoint of the carbon sequestration implications of conversion, and ways that consideration of carbon effects can be built into working forest retention efforts. Explore provisions of forest project protocols (including but not limited to the Climate Action Reserve's Forest Project Protocol<sup>4</sup>) that may pose barriers to participation by Washington landowners. Develop recommendations, if deemed appropriate, for changes in protocols that reduce such barriers by allowing alternative methods for demonstrating equivalent environmental outcomes appropriate to Washington state's legal and regulatory setting. The group may consider the value of offsets whether in a voluntary or compliance-based setting, or in response to general project mitigation requirements. The group may also take into consideration the desire to move the protocol(s) closer to full consistency with the Western Climate Initiative's offset criteria. It is not the intent of the Workgroup to re-negotiate the fundamental provisions of the protocols such as those related to permanence, baseline, additionality, and leakage.

## **IV. Responsibilities of Participants**

Invitees are expected to represent the interests of their organizations and bring a strategic, policy-oriented perspective to benefit the group. Invitees are expected to make every effort to participate in all group meetings and activities, including participating electronically. Designees

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<sup>4</sup> The CAR Forest Project Protocol is available here: <http://www.climateactionreserve.org/how/protocols/adopted/forest/development/> . See especially Section 3.9, "Sustainable Harvesting and Natural Forest Management Practices."

may be explicitly named to the group as substitutes for the invitees. Invitees and designees will make every possible effort to ensure that designees are well prepared to participate in the group's ongoing work process, so that progress is maintained. Other organization representatives are welcome to attend meetings as observers in the absence of the organization's invited member. Meetings will be open to the public. Observers will not participate in the deliberation of the group unless invited by the group. Meetings will be announced on the Department of Ecology's climate change website.<sup>5</sup> Work products of the group will also be posted to this site. The sponsors will assure that at each meeting a time will be allowed for public comment. The group's recommendations will be made available for public comment.

## **V. General Approach**

The general strategy the group will use to meet its objectives will be as follows: Agency-assisted collaborative discussions among all participants at a series of regularly-scheduled meetings, as well as between-meeting homework, subgroup work, and research, and drafting of group documents, indicating degree of consensus and nature of any significant disagreements. An objective is to provide in-depth, nuanced input to decision-makers on the most important matters for group participants.

The sponsors expect the group and its individual members to consider the following guidelines in communications, including communications among group members, with sponsors and their designees, and with external parties:

- Be mutually respectful.
- Be honest about one's own or one's group's core values, interests, and goals.
- Avoid attributing positions or motives to other parties in communicating externally.
- Communicate externally as a group as much as possible, for example through periodic agreed-on statements of progress.
- Use commonly used collaborative communication guidelines.

The process the group uses should serve to bring out group members' important and relevant values, interests, and objectives, and those of the organizations they represent, so that shared values, interests, and objectives can be identified, and principled disagreements can surface clearly and be explicitly discussed by the group, with the purpose of identifying the greatest possible group agreement on objectives related to the work of the group, and so that remaining interest-based disagreements can be fully understood by all group members.

This Workgroup is expected to consider the advantages of presenting a consensus recommendation wherever possible. Generally, *consensus* means that all members of the group can at least *live with* a proposed decision, even if their first preference might be a different decision. To the extent that consensus is reached, members will be expected to honor and promote it both in letter and spirit.

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<sup>5</sup> [www.ecy.wa.gov/climatechange/index.htm](http://www.ecy.wa.gov/climatechange/index.htm)

Recognizing the complexity of the issues and interests involved, non-consensus alternatives will be expected and acceptable in this process.

The main written product of the group's work is expected to be a progress report, followed by a final report (see major milestones, below). The reports will identify all areas of consensus, together with a description of the alternative approaches preferred by Workgroup members in areas where consensus was not reached, and the rationale for such approaches.

During meetings, Workgroup members will be polled to determine whether or not a consensus exists on a given issue. Agreements reached during the course of group discussions on one issue are not considered final until a disposition (consensus or not) is agreed to on all issues to be covered by the group's report, i.e., nothing is final until everything is final.

## **VI. Time Schedule and Logistics**

### *Major milestones*

September 30, 2010 – Progress report to the Departments of Ecology and Natural Resources, including interim recommendations for legislation, if any.

December 1, 2010 – Final report, or second progress report if the group agrees to continue its activities in 2011.

### *Anticipated meeting frequency and logistics*

April through December 2010 – Monthly (with additional sub-group work between meetings)

If the group chooses to continue its work into 2011, it is anticipated that meetings would not be scheduled during the 2011 Legislative session. Meetings will generally be 10:00 AM to 3:00 PM with the option of a working lunch.

Meetings will initially be planned in Olympia, Seattle, or elsewhere in the central Puget Sound area.

Meetings will be in-person, with a call-in option.

### *Meeting co-conveners*

Craig Partridge (DNR) and Stephen Bernath (Ecology)

## **Appendix**

### **Section 5 of ESHB 2541 (Chapter 188, Laws of 2010)**

NEW SECTION. Sec. 5. (1) The department of natural resources shall, to the degree that resources are available, develop, consistent with this section, proposals for the development of appropriate landowner conservation incentives that support forest landowners maintaining their land in forestry. These incentives may include, but are not limited to, incentives that are related

to ecosystem service markets, tax incentives, easements, technical assistance, and recognition or certification. (2) The department of natural resources shall consult with the forest practices board, representatives of federal, state, and local government, Indian tribes, small forest landowners, conservation groups, industrial foresters, and other individuals deemed beneficial by the department in implementing this section. (3) By December 31, 2011, the department of natural resources must present their research and any proposed incentives to the governor, the appropriate committees of the legislature, the commissioner of public lands, and the forest practices board. The department of natural resources shall also offer to present their findings and recommendations to the Washington congressional delegation, local governments, and any state or federal agency that has as a portion of their mission the support of Washington's working land base and the jobs, products, and ecological values that working lands provide. (4) Neither the activities nor outcome of the department of natural resources' actions or decisions under this section shall cause, promote, or delay rule making by the forest practices board in the execution of its applicable duties. (5) The department of natural resources is authorized to seek federal and private funds, and in-kind contributions to complete the work in this act. At the discretion of the department of natural resources, the department must comply with this act only to the degree that existing or acquired nonstate resources permit. (6) This section expires July 1, 2012.



# Appendix C

## Detailed Landowner Caucus Recommendations for Adjustments to Climate Action Reserve Forest Project Protocol Version 3.1

The following recommendations are intended to recognize the environmental issues identified in the CAR protocol and offer alternative means to avoiding unintended environmental harm as a result of a carbon project while making the protocol more accessible to Washington forest landowners.

There are four specific areas of CAR 3.1 that are addressed in these recommendations:

2.1.2 Intensive Forest Management

3.4 Project Termination

3.9.2 Natural Forest Management

3.9.4 Balancing Age and Habitat Classes

### **2.1.2 Intensive forest management**

2.1.2 An Improved Forest Management Project involves management activities that maintain or increase carbon stocks on forested land relative to baseline levels of carbon stocks, as defined in Section 6.2 of this protocol. An Improved Forest Management Project is eligible only if:

1. The project takes place on land that has greater than 10 percent tree canopy cover.
2. The project employs natural forest management practices, as defined in Section 3 of this protocol.
3. The project does not employ broadcast fertilization.
4. The project does not take place on land that was part of a previously registered Forest Project, unless the previous Forest Project was terminated due to an Unavoidable Reversal (see Section 7).

Recommendation #1 - The landowner caucus recommends removing the ban against broadcast fertilization under project eligibility and appropriately accounted for in the calculation of the project baseline.

The restriction on broadcast fertilization is unnecessary from a carbon standpoint. Nitrous oxide emissions from N fertilizer application can be estimated using the following method taken from the IPCC. This should be included in both the baseline calculations (if fertilizer is used) and the project. The following demonstrates how this can be achieved.

Equation 3.2.18 in LUCF Sector Good Practice Guidance

Equation 3.2.18 Direct N<sub>2</sub>O emissions from Forest Fertilization in LUCF Sector  
Good Practice Guidance<sup>1</sup>

$$\text{N}_2\text{O direct-N}_{\text{fertilizer}} = [(F_{\text{SN}} + F_{\text{ON}}) * \text{EF1}]$$

Where:

N<sub>2</sub>O direct-N<sub>fertilizer</sub> = direct emissions of N<sub>2</sub>O from forest fertilization in units of Nitrogen

F<sub>SN</sub>= annual amount of synthetic fertilizer nitrogen applied to forest soils adjusted for volatilization as NH<sub>3</sub> and NO<sub>x</sub>

F<sub>ON</sub>= annual amount of organic fertilizer nitrogen applied to forest soils adjusted for volatilization as NH<sub>3</sub> and NO<sub>x</sub>

EF1= emissions factors for N<sub>2</sub>O emissions from N inputs, kg N<sub>2</sub>O-N/ kg N input.

Assumptions

- 3.2.1.4.1.2 says: “As noted in GPG2000, the default emissions factor (EF1) is 1.25% of applied N.”
- NH<sub>3</sub> volatilization can range from 0-30%- so 15% is a good estimate. See paragraph on urea in [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/ind10750](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/ind10750) for more explanation.

To convert to CO<sub>2</sub>e, convert to N<sub>2</sub>O and multiply by Global Warming Potential of N<sub>2</sub>O

Calculation Example:

200 lbs N/acre applied as urea.

$$200 * .15 = 30 \text{ lbs N volatilizes as NH}_3 \quad \square \square \text{ leaves } 170 \text{ lbs N}$$

$$170 * .0125 = 2.125 \text{ lbs N as N}_2\text{O} \quad \square \square \text{ } 3.34 \text{ lbs N}_2\text{O} (2.125 * 44/28)$$

$$3.34 * 298^2 = 995 \text{ lbs CO}_2\text{e/acre} \quad \square \square \text{ } 0.45 \text{ mt CO}_2\text{e/acre}$$

### 3.4 Project termination

3.4 Project Proponent can willingly terminate a project, but must pay back CRTs in the following amount: 0-5yrs: 1.4x; 6-10yrs:1.2x; 11-20yrs:1.15x; 21-30yrs:1.1x; 31-50 yrs: 1.05x; >50yrs:1x

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<sup>1</sup> IPCC Good Practice Guidance for LUCF. 2003. Edited by Jim Penman, Michael Gytarsky, Taka Hiraishi, Thelma Krug, Dina Kruger, Riitta Pipatti, Leandro Buendia, Kyoko Miwa, Todd Ngara, Kiyoto Tanabe and Fabian Wagner

<sup>2</sup> This is the GWP of N<sub>2</sub>O from the IPCC Fourth Assessment Report. Many inventories (e.g., EPA) still use the GWP from the Second Assessment Report, which is 310.

Recommendation #2 - The landowner caucus recommends maintaining the 100 year permanence requirement but removing the penalty if there is a reversal prior to 50 years, per consensus in the 2008 WA Forest Sector Workgroup Report.

It is critical that project reversals be accounted for at a 1:1 ratio; however, it is not appropriate to penalize a landowner for opting out of a project. This penalty increases the risk to forest landowners considering a project and serves as a disincentive to embarking on a carbon project.

From the 2008 WA Forest Sector Final Report:

In the event that a project is no longer reliable or is reversed, as described below under project reliability, the offset seller is required to secure the purchase of substitute allowances or offsets...

and

At ten-year intervals, sellers must perform re-inventory of forest and wood-product carbon, at which point sellers may adjust their prescriptions based on new information, may receive additional credits for carbon stored in excess of modeled amounts, or must pay back credits received, based on amounts of modeled carbon storage that were not achieved. The state or third party would have appropriate auditing authority to verify inventory results.

### **3.9.2 Natural forest management**

#### **Natural Forest Management**

1. Forest projects must maintain or increase standing live carbon stocks over the project life.
2. Forest project must show verified progress toward native tree species composition and distribution consistent with the forest type and forest soils native to the Assessment Area.
3. Forest projects must manage the distribution of habitat/age classes and structural elements to support functional habitat for locally native plant and wildlife species.

Recommendation #3 – The landowner caucus recommends removing the quantitative limits prescribed for species composition in Appendix F of CAR 3.1 and instead allow the landowner to demonstrate through their baseline calculation and growth and yield projections how they will meet the three elements identified under Natural Forest Management.

Washington State has a complex and highly variable distribution of forest species as a result of both natural and management choices on the landscape. Washington's private forest landowners generally can meet the criteria outlined for forest projects in 1-3 above; however, the specific species diversity index provided in Appendix F will significantly limit participation.

Growth and yield modeling can demonstrate maintaining or increasing standing live carbon stocks over time. Washington forest landowners generally manage with native tree species and can demonstrate through the growth and yield calculations how their species selection for

reforestation and harvest is consistent with forest types and soils in the project area. Washington's Forest Practice Rules by design as well as indirectly will create a mosaic of habitat/age classes and structural elements that support functional habitat for locally native plant and wildlife species. Critical habitat designations; Riparian Management Zones; unstable slopes; snag, green tree, and downed wood retention; and adjacency and green up requirements are all examples of how the regulatory structure in Washington ensures that these criteria will be met. Additionally, many landowners also have other management objectives that can assist in meeting these criteria.

### **3.9.4 Balancing Age and Habitat Classes**

For projects that employ even-aged management practices, harvesting must be limited to stands no greater than 40 acres. Stands adjacent to recently harvested stands must not be harvested using an even-aged harvest until the average age of the adjacent stand is at least 5-years old, or the average height in the adjacent stand is at least 5 feet.

Recommendation #4 - The landowner caucus recommends removing this requirement completely recognizing that Washington has limits on the size and extent of even aged management practices.

The harvest limits and green-up requirements in CAR 3.1 exactly mirror California's Forest Practice Rules. The baseline and project methodology calculations will ensure additional carbon so there is no climate justification for this requirement.

Washington State has regulations that are developed for our unique forest ecosystems that also limit clearcut size and require similar adjacent stand green-up standards (WAC 222-30-025 - Even-aged harvest size and timing). While these are not exactly the same as in California, they are more detailed and vary depending on the location and type of harvest being conducted. Functionally, these regulations, like California's ensure that there is a forest carbon project will not negatively impact other environmental variables.