



# Replacing Encumbered State Forest Lands With Productive Forests

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Report to the Legislature  
in Response to Second  
Substitute House Bill 1484  
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October 2010



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





**Peter Goldmark**  
Washington State  
Commissioner of Public Lands

October 29, 2010

The Honorable Brian Blake, Chair  
House Agriculture & Natural Resources Committee  
PO Box 40600  
Olympia, WA 98504-0600

The Honorable Ken Jacobsen, Chair  
Senate Natural Resources, Ocean & Recreation Committee  
PO Box 40466  
Olympia, WA 98504-0466

Dear Representative Blake and Senator Jacobsen:

I am pleased to send you the Department of Natural Resources' (DNR) report prepared pursuant to the provisions of Section 10 of Second Substitute House Bill 1484, passed by the Legislature in the 2009 Session. The Act contains, in Sections six through nine, provisions that allow the Board of Natural Resources the necessary tools for the state to replace State Forest lands encumbered by endangered species-based harvest restrictions with productive, working forest lands. In doing so, the legislation is intended to provide sustainable revenue to smaller counties that as beneficiaries are heavily dependent on State Forest land revenues, while promoting long-term protection, conservation and recovery of the marbled murrelet and northern spotted owl.

The Legislature directed DNR to prepare a report detailing the procedure and timeline, and estimated costs, for full implementation of the intent of the Act. The report therefore contains a recommended process for the transfer of State Forest lands that meet the specific criteria in the Act to Natural Resources Conservation Area designation, using the Trust Land Transfer program. DNR staff identified qualifying lands, estimated asset values for those lands, and the report provides the Legislature with options for a timeframe for full implementation of the Act. Further, it offers important considerations for the ongoing support of the affected beneficiaries in the identification of replacement lands.

My staff worked closely with county commissioners from the three counties that primarily are affected by this legislation — Pacific, Skamania, and Wahkiakum — and the Washington State

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Association of Counties, in the scoping, analysis, and preparation of this report. Our goal was to assure that the State Forest trust beneficiaries for whom this Act was designed to support were fully included in the plan for this program.

As outlined by this report, the Legislature created a method by which to provide sustainable revenue to smaller counties that rely on State Forest trust revenues. Legislative funding in the capital budget will be essential to achieving that purpose. I look forward to working with the Legislature as you consider options for implementing this program.

I would be happy to discuss the report with you and the relevant committees of the Legislature. Please do not hesitate to contact me if you have questions or concerns about the report.

Sincerely,



Peter Goldmark

Commissioner of Public Lands

cc: The Honorable Hans Dunshee, Chair, House Capital Budget Committee  
The Honorable Karen Fraser, Capital Budget Chair, Senate Ways & Means Committee  
The Honorable Bruce Chandler, Ranking Minority Member, House Agriculture & Natural Resources Committee  
The Honorable Bob Morton, Ranking Minority Member, Senate Natural Resources, Ocean & Recreation Committee  
The Honorable Judy Warnick, Ranking Minority Member, House Capital Budget Committee  
The Honorable Joseph Zarelli, Ranking Minority Member, Senate Ways & Means Committee  
House Agriculture & Natural Resources Committee Members and Staff  
Senate Natural Resources, Ocean & Recreation Committee Members and Staff  
House Capital Budget Committee Members and Staff  
Senate Ways & Means Committee Members and Staff

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Prepared by  
Washington State Department  
of Natural Resources  
**Policy Office**



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**Natural Resources**  
**Peter Goldmark** - Commissioner of Public Lands



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## EXECUTIVE SUMMARY

Second Substitute House Bill 1484, the *Threatened or Endangered Species – Habitat Open Space Act* of 2009, provides the necessary tools for the state to maintain long-term working forests and trust revenue to small rural counties by replacing State Forest lands that have Endangered Species Act (ESA)-listed species-based harvest encumbrances with productive, working forest lands. It does so by enabling the Board of Natural Resources to transfer or dispose of State Forest lands without public auction if they are (a) located in a county with a population less than 25,000, and (b) are encumbered with timber harvest deferrals that are associated with federal ESA-listed wildlife species and greater than 30 years in length. The legislation stipulates that lands must be appraised at fair market value without consideration of management or regulatory encumbrances associated with the listed species' habitat. It proposes that this program be achieved by transferring lands into Natural Resources Conservation Area status using the Trust Land Transfer program. The value of the timber on the transferred State Forest lands is to be distributed to the beneficiaries, less the management fee, which is to be deposited into the Forest Development Account. Proceeds from real property transferred according to this act are to be placed in the Park Land Trust Revolving Fund and must solely be used to purchase replacement forest land that can be actively managed as working State Forest lands, within the same county as the property transferred or disposed.

The process made possible by SSHB 1484, and described in this report, will allow DNR to achieve the objective of maintaining long-term trust revenue to specific State Forest trust beneficiaries in small timber-dependent counties. Four counties—Klickitat, Pacific, Skamania, and Wahkiakum counties—meet the criteria of having populations of less than 25,000 and having State Forest lands encumbered with timber harvest deferrals meeting the criteria of this legislation. DNR staff worked closely with those counties and the bill's other authors in the preparation of this report.

Within Pacific, Skamania, and Wahkiakum counties, just over 7,400 acres are fully encumbered with qualifying harvest deferrals. Given their current deferred status, fully encumbered lands support no ability to generate revenue. In Klickitat and Skamania counties, over 47,000 acres of partially encumbered lands were identified as qualifying under this legislation. Partially encumbered lands support a reduced capability to generate revenue given requirements to provide habitat for ESA-listed species. Once the Marbled Murrelet Long-Term Conservation Strategy is completed (currently under development by DNR), the area of encumbered lands may increase in Pacific and Wahkiakum counties.

DNR staff has estimated the total asset market value of the fully encumbered lands at \$68 million; factoring in a potential error in estimated value of 20 percent, the actual market value of those lands could range from \$54 to \$82 million. DNR and affected State

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Forest trust beneficiaries propose that the Legislature fund this program over a period of 10 to 30 years. This proposal recognizes that in the next few years, DNR will re-evaluate total program funding requirements to incorporate partially-encumbered lands meeting the requirements of this legislation. Over time, the initial estimate of \$68 million in required appropriations is therefore likely to be revised substantially upward. The current inability to evaluate the area and total market asset value of partially-encumbered lands, due in part to anticipated near-term policy changes, creates one area of substantial uncertainty that is not resolved by this report.

DNR recommends Legislative implementation of the program laid out in this report. Over the projected 10 to 30 year implementation period, Capital appropriations will achieve the legislative objective of supporting the small timber-dependent counties it targets by replacing the encumbered State Forest lands that provide revenue to them with replacement productive working trust land.

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## INTRODUCTION

Through the passage of Second Substitute House Bill 1484 in 2009, the Washington State Legislature enabled the Washington Board of Natural Resources to assist small timber-dependent counties that rely on State Forest trust revenue to help fund vital local services. Through the long history of management of State Forest lands (formerly named Forest Board Transfer and Forest Board Purchase lands) in those counties, timber revenue has played a critical role in maintaining the very communities that have served as the foundation for the natural resource industries that are integral to Washington State's heritage. SSHB 1484 enables the Board of Natural Resources to replace State Forest lands that are encumbered with Endangered Species Act-related harvest deferral designations, with productive working forests that become new State Forest lands to support county trust beneficiaries now and in future generations. This report outlines a recommended process detailing the procedure, timeline and costs for the full implementation of sections six through ten of the *Threatened or Endangered Species Habitat Open Space Act* of 2009.

This report was prepared by Washington State Department of Natural Resources in close cooperation with Klickitat, Pacific, Wahkiakum and Skamania counties and the Washington State Association of Counties. The report is respectfully submitted to the Washington State House Committee on Agriculture & Natural Resources, House Committee on Capital Budget, Senate Natural Resources, Ocean & Recreation Committee, and Senate Ways & Means Committee on October 29, 2010.

## BACKGROUND

### State Trust Lands and the Endangered Species Act

DNR manages 3 million acres of state trust uplands to provide revenue for specific beneficiaries and to benefit the public. This non-tax revenue helps fund statewide construction of public schools, universities, prisons and other state institutions, and funds services in many counties, such as libraries, firefighting and other emergency services, and hospitals. The bulk of those lands — 2.2 million acres — is working forests, also representing the majority of the revenue-generating capability on trust lands.

In the 1990s under the federal Endangered Species Act (ESA), the Federal government listed several species as “threatened.” In response, DNR signed a multi-species Habitat Conservation Plan (HCP) with the federal government in January 1997. “A habitat conservation plan is a long-term land management plan authorized under the Endangered Species Act to conserve threatened and endangered species. For DNR, it means a plan for state trust lands that allows timber harvesting and other management activities to continue while providing for species conservation as described in the ESA”

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(HCP p. I.1). The HCP allows DNR to meet its obligation under the ESA by conserving habitat upon which threatened and endangered species depend. The plan includes all DNR-managed forestlands within the range of the northern spotted owl and covers multiple species, including the northern spotted owl, marbled murrelet and salmon species. This contract with the federal government also adds greater certainty to DNR's ability to manage trust lands for sustainable long-term revenue for those trusts' beneficiaries, by allowing harvesting on a significant portion of forestlands while conserving and creating habitat in other forests.

### **Impetus for SSHB 1484**

The HCP provides ESA regulatory coverage for 1.8 million acres of state trust lands. It contains specific conservation strategies, the objectives of which are to conserve the habitats of federally listed species within the area of the plan. Some strategies contribute to conservation of habitat features found throughout the landscape covered by the plan — such as riparian areas along streams and wetlands, and special wildlife trees. Other strategies for the northern spotted owl and marbled murrelet, however, seek to create and protect habitat in specific landscapes deemed important to the conservation of those species. Because these important landscapes were identified with specific landscape features that are not found everywhere, they were established in specific areas without regard to trust land boundaries. While some state trust beneficiaries have revenue-generating trust lands spread throughout Washington, by design, the county beneficiaries supported by State Forest trust revenue only receive revenue generated on State Forest land within their county boundaries. The result is that some of these habitat areas have fallen disproportionately in some counties more than others, negatively affecting some State Forest trust beneficiaries more than others.

RCW 79.64.110 (1)(c) provides that, in counties with populations of less than 16,000, the county's portion of the revenue from State Forest transfer lands is distributed to the county's current expense fund. There are only two counties that qualify under that provision — Skamania and Wahkiakum Counties — both subjects of this legislation. For those counties, trust revenue plays a significant role in directly financing services in that county. For example, in Wahkiakum County, trust revenues from State Forest lands comprise roughly 30 percent of their county budget. In addition, the reduction in timber harvest from state trust lands in these rural timber-dependent counties has compounding or "multiplier" effects to those local economies which depend on forest management for local jobs and tax revenue.

In sum, ESA regulatory compliance has had a disproportionate impact on some State Forest trust beneficiaries. This has rendered some trust lands less effective at generating dependable trust revenue that those beneficiaries had come to rely on to fund local services. SSHB 1484 attempts to remedy this shortcoming by funding the replacement of

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these encumbered lands with new productive revenue-generating State Forest lands to be managed to benefit small counties affected by these circumstances.

## **Description of the legislation**

Second Substitute House Bill 1484 does two separate and unrelated things, both to be implemented by the state Department of Natural Resources (DNR). It modifies the Riparian Open Space Program and requires the Forest Practices Board by rule to establish those changes. It also enables DNR to transfer and replace encumbered State Forest lands under particular circumstances, which is the subject of this report.

The legislation authorizes DNR to transfer State Forest lands to another public agency without an auction, if the lands are located in a county with a population of 25,000 or less, and if the lands are encumbered with timber harvest deferrals associated with wildlife species listed under the federal Endangered Species Act. To qualify, the timber deferrals in a county must be for a period of 30 years or longer.

Appraisals for the properties and for the valuable materials located on the lands must be based on their fair market value without consideration of the management or regulatory encumbrances associated with the wildlife species listed under the federal Endangered Species Act. Any proceeds associated with the valuable materials located on the lands to be transferred, must be distributed in the same way as timber harvest revenue to the county where the transferred land is located, with a portion going to the DNR Forest Development Account used to fund the management of State Forest lands (per RCW 79.64.110). The proceeds representing the real property value of the transferred or disposed land must be deposited in the Park Land Trust Revolving Fund to be used solely to purchase replacement State Forest land that is to be actively managed as a working forest within the same county as the property transferred or disposed.

DNR was directed to report to the Legislature by October 31, 2010, on the procedure, timeline, and the estimated costs of conducting the transfers for the qualifying counties. The report assumes that transfers will occur through the Trust Land Transfer mechanism established in capital appropriation bills since 1989 and that the transferred lands will become Natural Resources Conservation Areas. Recommendations and estimates in the report also assume that the land transfer will occur at a specified biennial rate designated to provide sustainable revenues to the affected counties.

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## ANALYSIS

### What is the process established by the legislation to transfer lands?

This legislation stipulates a process by which State Forest lands are transferred out of trust status, and the trust is compensated for their value. The proceeds from the valuable materials (timber) are dispersed to the trust beneficiaries, while the value of the land is to be used to purchase replacement working forestland for that trust. The legislation specifically establishes the following process:

1. The Board of Natural Resources is authorized to directly transfer, without public auction, lands meeting the following specific criteria (RCW 79.22.060)
  - a. They must be in counties with a population of 25,000 or less, and
  - b. They must be encumbered with timber harvest deferrals — greater than 30 years in length — associated with wildlife species listed under the federal Endangered Species Act.
2. The lands are appraised at fair market value without consideration of management or regulatory encumbrances associated with wildlife species listed under the federal Endangered Species Act (RCW 79.22.060).
3. The land transfer is funded by legislative appropriation, and is conducted through the Trust Land Transfer program, placing the transferred land into Natural Resources Conservation Area status.
4. The portion of the appraised value associated with valuable materials (timber) on the transferred lands is distributed as provided in RCW 79.64.110. The timber value associated with the transferred lands is distributed to the county as timber revenue, with a portion deposited into the Forest Development Account to compensate DNR for the already expended administrative and management costs related to those lands.
5. The land value of the transferred property is deposited into the Park Land Trust Revolving Fund to be used to purchase replacement forest land that must be actively managed as a working forest within the same county as the property that was transferred, within the appropriate trust designation — State Forest Transfer or State Forest Purchase (RCW 43.30.385).

This legislation identifies a process that, while similar to the Trust Land Transfer program established biennially through legislative budget proviso, has subtle differences. The following sections, therefore, will describe the process for implementing the legislation, and will identify key issues to be considered in its implementation.

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## How does the existing Trust Land Transfer program work?

The Trust Land Transfer (TLT) program, first funded in 1989, presents an opportunity to retain in public ownership Common School (K-12) trust lands with low revenue production potential but high conservation or other values, while acquiring replacement trust lands to maintain and improve financial returns to the school trust beneficiaries. The program has three key benefits: (1) it provides funding for public school construction, (2) it provides funds for the acquisition of productive replacement trust land to increase revenues for the Common School trust, and (3) it provides for the transfer of under-performing trust lands with other values to a more suitable public ownership classification. Lands transferred out of trust status to designated public agencies have important ecological or social values of statewide significance and are protected.

Under the TLT process, lands are identified each biennium by DNR for consideration by the Board of Natural Resources and the Legislature as candidates for the TLT program. A key criterion is that candidate properties as an aggregate have a high proportion of timber value to land value so as to ensure that the greater part of the appropriation is deposited directly to fund school construction in the current biennium. The Legislature reviews the proposal with detailed information on each property, including estimates of land and timber values. It determines the makeup of the final package, and sets an appropriate funding level, and if approved, the transfer package is authorized and funded as a section of the Capital Budget Bill. DNR is then authorized to implement the program and must complete the transfers within the biennium. DNR coordinates with receiving agencies, completes market appraisals on all properties, and prepares title transfer documents. The Board of Natural Resources evaluates each proposed transfer and must approve the transfer in fee ownership.

Finally, at transfer, the timber (or lease) value is deposited into the Common School Construction Account and the land value is deposited into the Real Property Replacement Account. The timber value is available for distribution by the Office of the Superintendent of Public Instruction to fund school construction within the current biennium. The land value is used by DNR to acquire other lands to be managed to provide current and future income for the Common School trust.

Only the Common School trust is eligible to benefit from the Trust Land Transfer program. Therefore the legislation that enables the TLT process also allows inter-trust exchanges between the Common School trust and other trusts to position the lands identified as parcels appropriate for transfer. Often, trust properties identified with values suitable for transfer to NRCA or Natural Area Preserve (NAP) designation, or to other public entities, are not Common School trust assets. The inter-trust exchange mechanism enables the transfer of non-Common School trust assets, allowing disposition of low revenue producing lands in other trusts. This provision is contingent on substitution of properties

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in the Common School portfolio with those in the portfolio of non-Common School trust holdings of equal market value, and in the best interest of each trust.

## How will the encumbered State Forest lands transfer process differ from the TLT program?

While in principle the same, the process for transferring encumbered State Forest lands outlined in this report will differ from the TLT process in a few key ways, as follows:

- Only State Forest lands meeting specific criteria will be eligible for transfer
- Lands only will be transferred into Natural Resources Conservation Area status and managed under RCW 79.71.
- A biennial list of properties proposed for transfer, and estimated asset value of those properties, will be submitted to the Legislature, *separately but concurrently* with the TLT property list, and following the same process observed by the TLT program
- Lands will have their value appraised without consideration for the major encumbrance that has made them low-revenue producing – i.e. habitat for federally-listed ESA species
- The Forest Development Account is credited a percentage of the proceeds from the transfer of the “valuable materials” (timber) under RCW 79.64.110 just as though the timber on those lands was sold at auction
- Land value from transferred properties is deposited into the Park Land Trust Revolving Fund
- Replacement forest lands must be purchased in the same county as the property that is transferred, and managed for the benefit of the same county beneficiary

## Which lands qualify?

There are two stipulations for which lands qualify under this legislation: they are (1) in counties with a population of 25,000 or less, and (2) encumbered with timber harvest deferrals — greater than 30 years in length — associated with wildlife species listed under the federal endangered species act.

### *Qualifying counties*

Based on [2010 Office of Financial Management estimates](#), there are 12 counties in Washington that have populations smaller than 25,000 people. Of those 12 counties, only 4 contain State Forest lands that are encumbered with ESA-habitat deferrals as stipulated by the legislation — including Klickitat, Pacific, Skamania and Wahkiakum counties.

## Qualifying habitat lands

In the four counties identified, there are two major federal ESA-listed species for which habitat is designated, resulting in a long-term harvest encumbrance on state trust lands. These species are the northern spotted owl and marbled murrelet.

Long-term encumbrances, however, are not created equally. While some ESA-related habitat designations are complete in their encumbrance, others are only partial. In other words, some habitat areas are completely deferred from timber harvest, and as such, are simply set aside. Other encumbrances allow limited timber harvest in some areas, or partial harvest over all the encumbered area. This report provides an accounting of both fully and partially encumbered trust lands. The beneficiaries from the qualifying counties request the replacement of all qualifying encumbered State Forest land, but propose that the Legislature first fund the transfer of fully encumbered lands. The State Forest trust beneficiaries are quite clear that their long-term economic vitality requires the maintenance of a working forest land base in State Forest Trust ownership that is able to produce revenue for their benefit.

There are two categories of marbled murrelet habitat that are completely encumbered — occupied sites, and occupied site buffers. All marbled murrelet occupied sites are completely deferred from forest management. Extremely limited management is allowed in occupied buffers, yielding minimal revenue generation for the beneficiaries. For the purposes of this legislation, therefore, these lands are considered functionally fully encumbered. Both Pacific and Wahkiakum Counties have State Forest lands containing occupied sites and buffers (Table 1). There are currently no partially encumbered habitat categories for marbled murrelets. DNR is just beginning the process to develop an HCP long-term conservation strategy for the marbled murrelet in southwest Washington, and this process may result in land management changes to both fully encumbered habitat areas and to habitat that may become partially encumbered areas. However, at the time of publication of this report, those designations are not known, and therefore not included in this analysis.

**Table 1. Habitat area fully encumbered with federal ESA-listed species related timber deferrals (number of acres by county and habitat category)**

Category of habitat	Pacific	Wahkiakum	Skamania	Klickitat	Total
<b>Marbled murrelet</b>					
Occupied sites	1,583	627			2,210
Occupied site buffers	752	317			1,069
<b>Subtotal</b>	<b>2,335</b>	<b>944</b>	<b>0</b>	<b>0</b>	<b>3,279</b>
<b>Northern spotted owl</b>					
Nest patch core			2,395		2,395
Nest patch buffer			1,758		1,758
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>4,153</b>	<b>0</b>	<b>4,153</b>
<b>Total</b>	<b>2,335</b>	<b>944</b>	<b>4,153</b>	<b>0</b>	<b>7,432</b>

Northern spotted owl management is a bit more complicated. As with marbled murrelet habitat, there are only two categories of fully encumbered habitat — nest patch cores and nest patch buffers. DNR does not allow timber harvest on state trust lands in either of these land designations. Among the qualifying counties, nest patch cores and buffers are found only in Skamania County (Table 1). There are two categories of northern spotted owl conservation areas with specific habitat conditions that meet the earlier description of being partially encumbered lands. Though different in their specific management requirements, DNR manages both ‘Nesting, Roosting and Foraging’ (NRF) and ‘Dispersal’ management areas to maintain 50 percent of each designated landscape in northern spotted owl habitat. In general, management rules within these designated landscapes reduce the productive timber harvest capacity by half. Skamania and Klickitat Counties have large acreages partially encumbered as a result of these habitat designations (Table 2).

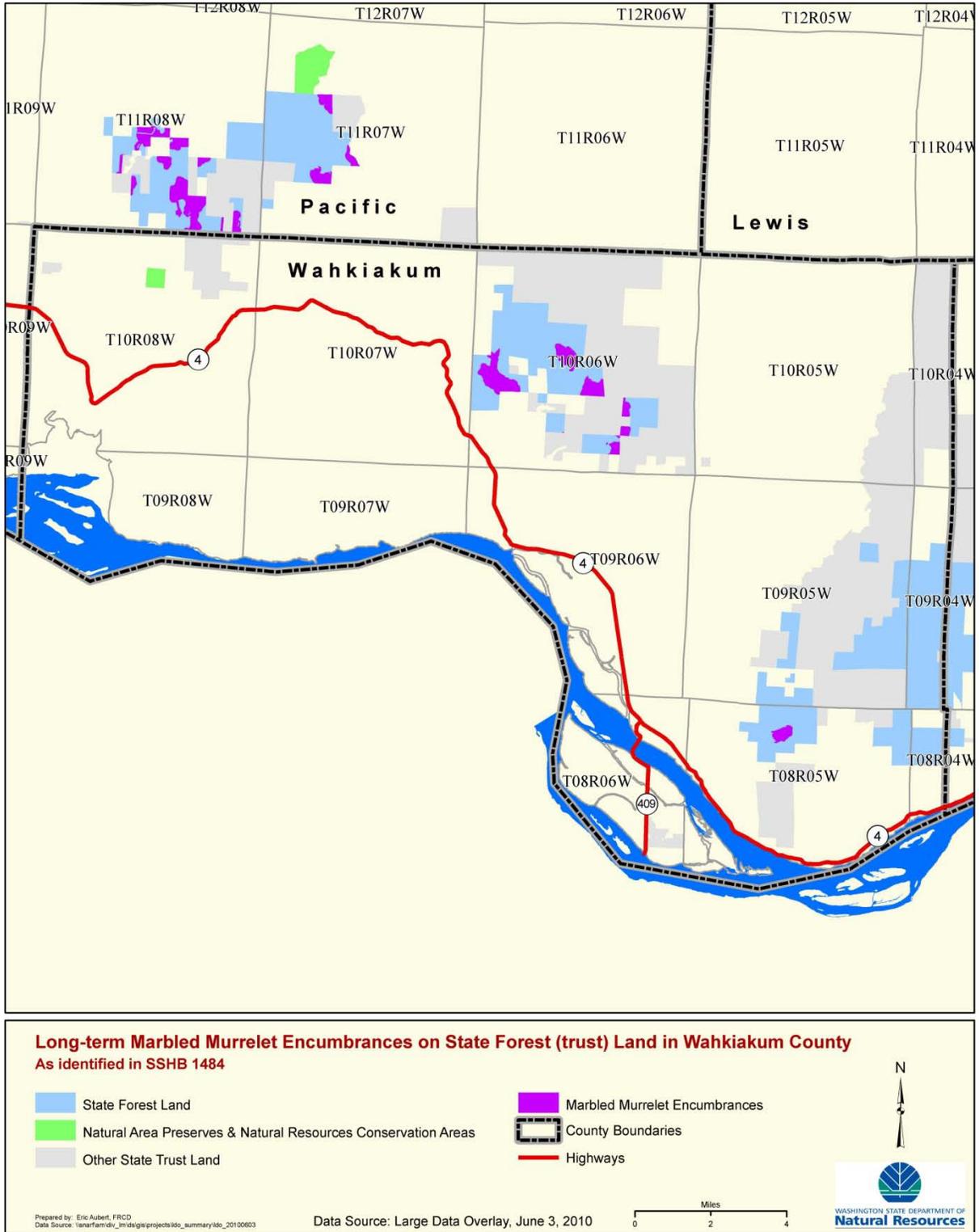
Table 2. Habitat management area partially encumbered with federal ESA species related timber harvest deferrals (number of acres by county and habitat category)

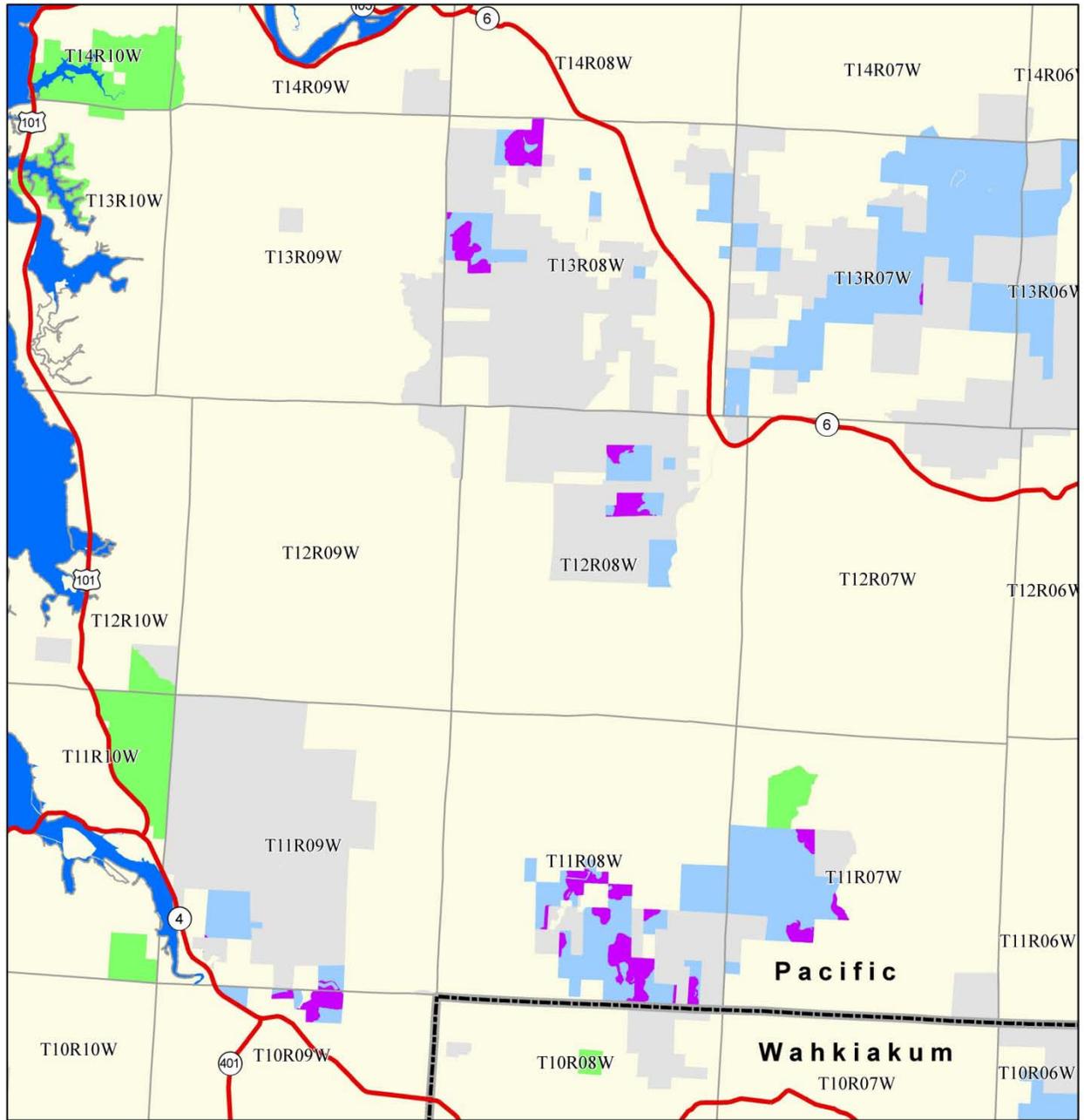
Category of habitat management area	Pacific	Wahkiakum	Skamania	Klickitat	Total
<b>Northern Spotted owl</b>					
Nesting, Roosting Foraging Areas			17,641	6,578	24,219
Dispersal Areas			18,738	4,395	23,133
<b>Total</b>	<b>0</b>	<b>0</b>	<b>36,379</b>	<b>10,973</b>	<b>47,352</b>

There are a number of other federal ESA-listed species on State Forest lands that are covered under the trust lands Habitat Conservation Plan, but which do not require habitat conservation measures that result in substantive “harvest deferrals” as described by this legislation; therefore these are omitted from this analysis. One notable exception is salmon. One of the HCP’s four main conservation strategies is devoted to the maintenance and restoration of salmonid freshwater habitat on DNR-managed lands. It does this through the implementation of a riparian conservation strategy and by managing the hydrologic maturity in rain-on-snow basins.

For the purposes of this program, however, riparian conservation measures are not evaluated as an encumbrance for two reasons. The first is, though some regional variation does exist in the frequency of riparian and rain-on-snow features, the counties eligible under this legislation are not disproportionately encumbered by those strategies (in the way they are with northern spotted owl and marbled murrelet strategies). Secondly, any forest lands that would be acquired to replace transferred forest lands would be, on average, just as encumbered by riparian conservation or hydrologic maturity features as are the current State Forest lands. And because the legislation stipulates that replacement lands must be purchased within the same county, the requirements for salmonid habitat conservation would have the same effect on those acquired lands as it did on the transferred lands. Hence, this analysis considers these encumbrances “a wash.” Though the legislation does not speak clearly to this issue,

riparian areas are found throughout the forested landscape and unavoidable, and were therefore not the subject of this legislation as conceived by its authors.





**Long-term Marbled Murrelet Encumbrances on State Forest (trust) Land in Pacific County**  
 As identified in SSHB 1484

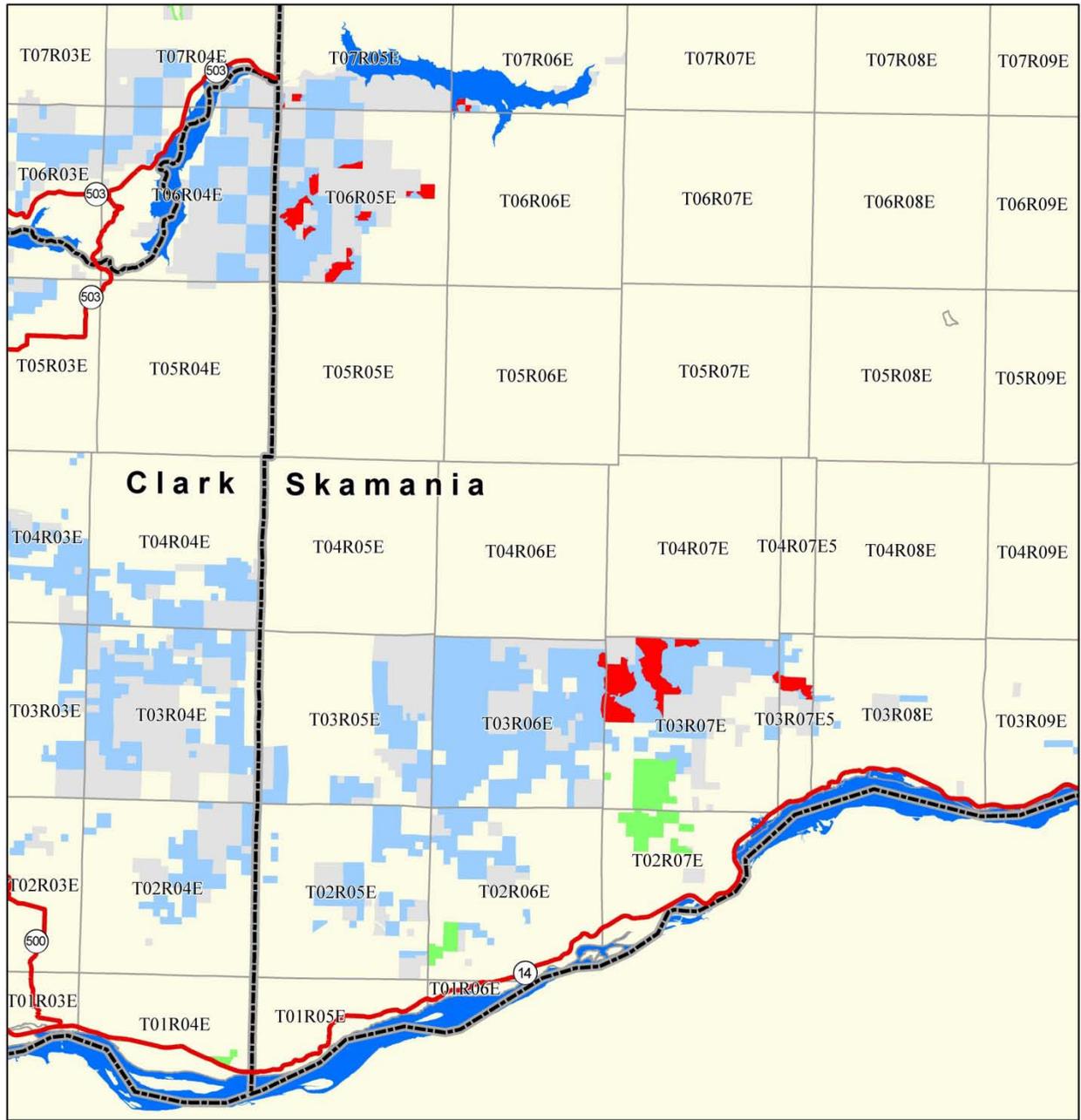
 State Forest Land	 Marbled Murrelet Encumbrances
 Natural Area Preserves & Natural Resources Conservation Areas	 County Boundaries
 Other State Trust Land	 Highways

Prepared by: Eric Aubert, FRCD  
 Data Source: \lanar\am\div\_in\idgis\projects\lido\_summary\lido\_20100603

Data Source: Large Data Overlay, June 3, 2010

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WASHINGTON STATE DEPARTMENT OF Natural Resources



**Long-term Northern Spotted Owl Encumbrances on State Forest (trust) Land in Skamania County**  
 As identified in SSHB 1484

 State Forest Land	 Northern Spotted Owl Encumbrances
 Natural Area Preserves & Natural Resources Conservation Areas	 County Boundaries
 Other State Trust Land	 Highways

Prepared by: Eric Aubert, FRCD  
 Data Source: \lenarf\m\div\_in\disgis\projects\kdo\_summary\kdo\_20100603

Data Source: Large Data Overlay, June 3, 2010

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WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**

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## What is the estimated value of the identified ESA-encumbered lands?

DNR staff conducted an analysis to provide preliminary estimates of timber and land value for the properties identified in the bill. A summarized methodology is provided below. For a detailed explanation of assumptions and methods, please see Appendix A. It is important to note that though this analysis was conducted by DNR appraisal staff, it does not constitute an “appraisal,” per se. This analysis is based on corporate data and a desk analysis that has not been field checked; it is by design based on coarse but reasonable assumptions. While grounded in data, assumptions of prices (such as log markets) are particularly susceptible to change and volatility. This may result in actual market values that vary from those estimated based on assumptions made in this analysis, especially over the multi-year timeframe for implementation suggested in this report. These assumptions will be updated as DNR works with the Board of Natural Resources and the Legislature to implement this legislation.

### *Methods*

Staff queried data on the four affected counties from corporate data for marbled murrelet and northern spotted owl habitat management and Forest Resource Inventory System (FRIS) stand-level data. Trust lands containing qualifying habitat lands include the State Forest trust, and specifically in Pacific County, the University Repayment trust. While the bulk of the State Forest trust lands are managed solely for the benefit of their trust beneficiaries, the University trust holds interest in the standing timber on some of those lands pursuant to Board of Natural Resources Resolution No. 756. On those specific lands, the University trust receives 32 percent of the proceeds from the sale of timber, with the remaining 68 percent going to the county beneficiaries. Reported value estimates reflect these required transactions of revenue.

The following describes the methods used to arrive at the market value estimates provided by DNR appraisal staff in Table 3.

For the purposes of calculating the market value of timber in areas identified as encumbered by the legislation, riparian areas were excluded from the encumbered habitat area summed earlier in Table 1 (reported again and labeled “Qualifying encumbered habitat area” in Table 3). Riparian areas are discounted for the purpose of timber appraisals due to the little volume of timber available for harvest on those lands. The result of this discounting is a smaller area in which the timber has value (labeled “Encumbered areas with timber value”). Timber volumes for “encumbered areas with timber volume” (labeled “Encumbered timber volume”) were calculated using FRIS data, and were adjusted to reflect realistic merchantable volume by accounting for hidden defect and breakage. Estimates of overall volume distributions, by species, were

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calculated for each county from a sample of timber stand data for the qualifying lands. Those distributions were used with average stumpage prices, by species, to assign a single average stumpage price for all qualifying lands within a county. These average stumpage prices were used to calculate timber value (labeled “Encumbered timber market value”).

In order to calculate land area to be transferred into NRCAs, fully encumbered habitat areas (Table 1) are assumed to be “squared off” to form manageable parcels to be transferred (labeled “Area of proposed NRCAs”). A course estimate of an additional 20 percent is added to the habitat area to account for this need to create functional, operationally feasible NRCA boundaries. Finally, the value of the bare land and pre-merchantable or “reproduction” timber are reported together (labeled “Land & reproduction market value”).

Estimated timber and land value are then summed for a total value (labeled “Combined land and timber market value”). To reflect the squared off proposed NRCAs, total asset values were increased by 20 percent in the same way that land areas were adjusted (labeled “Total estimated asset market value”). Lastly, to account for variation in total estimated market value, a range of variation in value of 20 percent plus or minus is provided.

### ***Estimated area and value of fully encumbered lands***

Just less than 7,500 acres of land have long-term timber encumbrances due to ESA-listed species habitat deferrals (Table 3). As previously discussed, those lands fall in three counties, with more than 4,000 acres deferred in northern spotted owl nest patches in Skamania County, and nearly 3,300 acres of marbled murrelet habitat deferred in Pacific and Wahkiakum Counties. About 62 percent of that total area, or 4,581 acres, are considered to have value for the purposes of evaluating harvestable timber volume, yielding an estimated 192 million board feet of timber. While total estimated timber value is about \$53 million, the estimated land value is under \$4 million, for a total estimated asset value of \$56 million. After correcting for the anticipated need to square off Natural Resources Conservation Area (NRCA) areas into logical properties for transfer, the total cost of the transfer of these lands, therefore, is estimated to be about \$68 million. Finally, the total cost for the transfer of lands may vary by 20 percent when taking into account variance in market value, yielding a likely range of \$54 to \$82 million. All asset market values are presented in 2010 dollars, and have not been corrected for inflation that will inevitably occur during this program’s implementation over an undetermined number of years into the future.

Table 3. Summary of estimated area and asset value for qualifying fully encumbered lands under SSHB 1484

County	Trust	Qualifying encumbered habitat area (acres)	Area of proposed NRCAs (acres)	Encumbered area with timber value (acres)	Encumbered timber volume (MMBF)	Encumbered timber market value (\$ million)	Land & reproduction market value (\$ million)	Combined land & timber market value (\$ million)
Pacific	State Forest Land	2,335	2,200	1,060	47	10	1	11
Pacific	State Forest Land (shared interest w/ University Repayment Trust)	(contained in above figure)	600	260	15	2	(contained in above figure)	2
Pacific	University Repayment Trust (shared interest with State Forest Lands)	n/a	n/a	n/a	n/a	1	n/a	1
Wahkiakum	State Forest Land	944	1,100	530	18	3	0.7	3.7
Skamania	State Forest Land	4,153	5,000	2,665	112	37	2	39
<b>Totals</b>		<b>7,432</b>	<b>8,900</b>	<b>4,515</b>	<b>192</b>	<b>53</b>	<b>3.7</b>	<b>56.7</b>
<b>Total estimated asset market value (\$ million)*</b>								<b>68</b>

\* Accounting for variation in total estimated asset market value yields a possible range of \$54 to \$82 million.

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### *Estimated area and value of partially encumbered lands*

As outlined above in the discussion of the area of lands that qualify as encumbered for the purposes of this legislation, there are many acres of timberland that are partially encumbered with ESA-related habitat deferrals. Table 2 shows that there are more than 47,000 acres of northern spotted owl habitat on which management activities are restricted in some way that limits the ability to create revenue for their county beneficiaries. In addition, the discussion on marbled murrelet habitat areas with partial encumbrance acknowledges that although no such partial encumbrances currently exist, there may be such areas designated as a result of the adoption of DNR's forthcoming Marbled Murrelet Long-Term Conservation Strategy for these forested state trust lands.

A methodology for estimating the value of these lands is more challenging than those where the forest lands are completely deferred from management and provide no revenue to beneficiaries. For example, partially encumbered lands include areas in which management is specifically geared towards habitat development, and other areas where revenue generation is the primary goal. These different management goals result in different costs and revenue streams. An appropriate mechanism for "transferring" these lands is also not obvious. Because of DNR's commitment under its HCP, and for the benefit of all of the trusts, DNR must retain the flexibility to manage these lands (whether that requires maintaining those areas as habitat or harvesting them), because over time, their "role" in management of that landscape may change. In other words, some lands that currently serve as habitat may later be managed primarily for revenue, and vice versa. This makes the transfer of specific acres into NRCA status — thereby limiting management options — extremely difficult. Yet these particular lands are at least partially encumbered for the purposes of managing working forestlands for the benefit of the trusts. Additionally, estimating the value of partially encumbered lands may require a more complicated analysis than with fully encumbered lands, due to the need to evaluate value and revenue flow into the future for this managed landscape.

Given the ready identification of fully-encumbered lands (Table 1), DNR and the affected trust beneficiaries propose that the program first focus on transfer and replacement of those acres. After the transfers of fully-encumbered lands are under way, it is further recommended that DNR proceed to analyze the value of partially-encumbered lands, and propose a method for their transfer. At that point, DNR may have additional clarity on federal requirements for its management of marbled murrelet habitat currently being developed for the long-term conservation strategy. This second phase of the program may be more urgent for some counties than others. Most of Wahkiakum County's currently deferred lands, for instance, are not currently in long-term deferral (greater than 30 years). These lands are subject to short-term timber harvest deferrals resulting

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from the agreed-to process that is still in progress between DNR and US Fish and Wildlife Service to develop a Marbled Murrelet Long-Term Conservation Strategy for forested state trust lands.

Though DNR does not propose a specific methodology for the estimation of asset value of these lands or a procedure for their transfer, a mechanism must be developed. The essential issue is how to compensate State Forest trust beneficiaries for encumbrances on the trust, and allow the replacement of encumbered lands with unencumbered working forestlands or otherwise replace the lost beneficiary revenue. Because the requirements for meeting existing HCP commitments does not easily allow the removal of these lands from the working forest land base, solutions must maintain DNR's ability to manage all the trusts' lands in these landscapes.

Any reasonable method for solving this conundrum must factor in a few key issues. The first is an assessment of the degree of encumbrance posed by the habitat deferrals. An encumbrance that allows partial harvest over all the acres of a given habitat area will be different from one that allows full harvest over half that same area. Secondly, the length of the encumbrance must be considered. A 30-year encumbrance may suggest a different mechanism than one that will functionally exist in perpetuity; the nature of the mechanism chosen must reflect the nature of the ESA habitat obligation. One possible solution, for example, might be a carefully constructed conservation easement funded by the legislature, the proceeds of which would compensate the trust. Proceeds from the purchasing of a temporary easement (to mitigate for a finite ESA obligation) could pay for the value forgone by not harvesting the timber for the remainder of the life of the HCP. On the other hand, a permanent easement (to mitigate for a functionally indefinite obligation) could be purchased for the total asset value (including the land and timber), allowing DNR to purchase replacement working forest lands for the trust. The latter arrangement would work much like the method laid out in this report for fully encumbered lands. The DNR Asset and Property Management Division increasingly has been utilizing conservation easements as an effective asset management tool to achieve trust land management objectives, and can assist in devising an innovative solution to this challenge. Regardless of method, DNR must invest in further conceptual and practical development of an appropriate mechanism to complete implementation of this aspect of the legislation.

### **What is the projected timeline for the transfer of qualifying lands?**

The stated goal in this legislation is to provide “sustainable revenue” to the affected counties. The rate at which funding is applied to this program will be important both to legislative budget writers, and to the counties as the beneficiaries of the program.

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There are several ways to assess “sustainable revenue” to trust beneficiaries. One method would be to meter out revenue such that it benefits each county evenly over time until revenue can be created from the management of newly acquired replacement lands (which could take about 60 years, the typical length of a harvest rotation). Another would be to calculate what the sustainable harvest of those lands would be, were there to be no encumbrances due to ESA-listed species habitat. A different approach might simply seek to supplement trust revenue to these beneficiaries at a rate that allows them to “sustain” county budgets in the short term, perhaps until longer-term solutions can be identified. None of these can be used to calculate sustainable revenue without substantial assumptions, and in the case of any analysis requiring evaluation of sustainable harvest, substantial staff resources and time. Further, uncertainties exist as to the possible rate of acquisition of replacement lands, due to the availability of such lands and opportunities for their purchase.

DNR proposes a moderate approach that factors the qualitative measure of sustainability, opportunity, and the availability of funding. Under this approach, the legislature would meter funding over a 10 to 30 year period for the transfer of these lands out of trust status. This proposal recognizes the fact that the full extent of these lands has not been evaluated for estimated asset value — namely the partially encumbered lands (some of which are still unknown, given the still incomplete Marbled Murrelet Long-Term Conservation Strategy). Therefore, the legislature could consider funding the initial sum of \$68 million identified for this program in the shorter term (up to 10 years), with the expectation that this initial commitment of funds will be followed by an evaluation of partially encumbered lands for funding over the balance of the longer-term timeframe (30 years).

Because the counties differ in their short-term budgetary needs, there is agreement among the counties that a heavier emphasis on transferring and acquiring lands may be applied in some counties before others. In addition, due to the varying size and number of encumbered properties, and likely timeframe for their transfer, it is unlikely that DNR will be capable administratively to transfer to each county the same trust asset value or even the same number of acres to each trust each year. For example, Wahkiakum County has only seven or eight distinct encumbered habitat areas to be transferred; it is not practical to transfer those properties equally over the next 10 to 30 years. DNR will work with the affected counties to implement the program efficiently, and consistent with the goal of providing sustainable revenue to those beneficiaries.

### **What biennial appropriations by the Legislature would be required for the transfer of these lands?**

Given the proposed timeframe for transfer of lands over the next 10 to 30 years, it is straightforward to estimate a biennial rate of funding to support that effort (Table 4).

Table 4. Estimated biennial rate of appropriations needed (in 2010 dollars) to transfer fully encumbered trusts lands meeting the requirements of SSHB 1484

Time period of program funding (to transfer identified fully encumbered lands)	Estimated biennial cost (based on \$68 million estimated total asset value)
Transferred over 10 years	\$13.5 million
Transferred over 30 years	\$4.5 million

When, as suggested by the analysis, partially encumbered lands are added to the list of lands to transfer, this rate of appropriations would have to be increased to meet the goals of the program. Following basic assumptions, one could easily extrapolate how the biennial program costs would change if total estimated asset value (when including partially encumbered lands) were to change. If the total estimated asset value were to double or triple, so would the biennial appropriations necessary to fund the program.

This estimate of appropriations needed to implement this legislation is meant primarily as a frame of reference. As recommended earlier, DNR proposes that staff prepare for the Legislature a list of properties proposed for transfer according to the same procedure used for the Trust Land Transfer program. This will allow the Legislature to fund the program at the rate deemed appropriate.

The total estimated asset value, on which these estimated appropriations are based, reflects specific assumptions stated throughout this analysis. It does not, for example, factor in inflation or changes in real estate or timber markets over the proposed 10 to 30 year time period of the program’s implementation. It assumes no change in policy that would influence the encumbered status of these lands. And as stated above, it does not include partially encumbered lands, the extent and value of which have not been established.

### **What program administrative costs would be required to cover the transfer and acquisition of State Forest trust lands?**

The legislation defines funding for much of the implementation of this program. There are essentially three general costs to implementing this legislation — the transfer of land out of trust status, the ongoing management of lands as a Natural Resources Conservation Area, and the acquisition of replacement lands for the trust.

The transfer of lands out of trust status is a fairly straightforward process, and is well charted territory for the DNR asset transactions program. The legislation calls for costs for DNR’s management of these lands and the administrative costs of their transfer to come out of the sale of valuable materials, or timber, from these lands, much as they would were they to be harvested. To achieve this, the legislation amended RCW 79.64.110 to include these transferred lands. This amendment provides that when State

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Forest Transfer trust lands are transferred through this program, 25 percent of the value of the timber goes into the Forest Development Account. Similarly, when State Forest Purchase trust lands are transferred through this program, 50 percent of the value of the timber goes into the Forest Development Account.

There is no funding expressly dedicated to the upfront or ongoing land management responsibilities of habitat brought into NRCAs, but with these transfers come statutory and administrative obligations borne by DNR. When lands are transferred into an NRCA, there are frequently Road Maintenance and Abandonment Plan obligations that remain unmet, maintenance and operating costs that include weed control, the cost of developing management plans; and sometimes restoration is required to maintain or create the values desired for the NRCA. None of these costs are provided for in the legislation, but could be addressed through a variety of mechanisms. To cover any unmet RMAP obligations, when trust land is transferred through the program, a portion of the timber value could be discounted from the total appraised value and deposited into the Access Road Revolving Fund (ARRF). That funding could remain earmarked for DNR to complete those obligations subsequent to the transfer. To cover maintenance and operating costs of managing the new NRCA, there are two possible options. A portion of the proceeds from the appraised timber value could be transferred to the DNR Natural Areas Program for management of those lands. Alternatively, DNR could include the increase in ongoing costs in its maintenance and operating budget request submitted to the Legislature.

The legislation does provide for the costs of acquiring replacement lands for the trust. It stipulates that the land value is to be deposited into the Park Land Trust Revolving Fund to be used to acquire real property that can be actively managed as working forest within the same county as the transferred property (RCW 43.30.385). It also states that “all reasonable costs associated with these acquisitions” are included as appropriate use of those funds. Forest land acquisition costs are documented by DNR’s asset transactions program.

Purchasing property requires time and cost to research the property to ensure the state is not taking on any liability such as hazardous materials, liens or other defects. A purchase and sale agreement must be negotiated with the seller to document the terms and conditions of the transaction, again a part of reducing risk for the state. Staff time also is required for assisting with the appraisal, reviewing the appraisal and preparing the transaction for review and approval by the Board of Natural Resources. Closing a transaction typically occurs in escrow which incurs escrow fees in addition to other closing costs, such as recording fees. Average staff time for a straightforward purchase is about 1.5 staff months, or \$9,000 based on the current rate. Complicated property issues or extensive negotiations may extend the time and thus increase the costs.

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Based on DNR's historical program expenditures, the typical cost of an appraisal for individual parcels range from about \$4,000 to \$12,000. Though the size of the property is one factor, the location, complexity, and the urgency of the need for completion all factor into overall cost of an appraisal. Some forest land appraisals can be done by DNR appraisers, costing moderately less than contracting with a third-party appraiser.

Overall, the cost of implementing this program will depend on the number of transfers and acquisitions required, and the length of time over which the program is funded. The funding for the acquisition of replacement properties will be paid from the asset value of the land transferred out of trust status. A greater number of transactions over fewer years will result in greater administrative costs per year and a smaller proportion of the funds going to purchase replacement properties. However, the sooner replacement properties are acquired, the sooner they will reach the point of producing revenue. Hence, there is a tension between completing this program as quickly and economically as feasible for administrative efficiency and the sake of the trust, and the need to provide more incremental, "sustainable" revenue to the beneficiaries.

## **What management considerations are necessary to make this program successful?**

There are a few management issues that must be considered by DNR as its sets about to transfer these ESA-related habitat lands into Natural Resources Conservation Areas (NRCAs).

1. **ESA-species deferral areas must continue to serve to fulfill state trust lands Habitat Conservation Plan (HCP) obligations.** When written in 1997, certain HCP lands were designated to meet conservation goals based upon the concept that the "HCP offsets harm caused to individual listed animals with a plan that promotes conservation of the species as a whole" (HCP, I.1)." All existing northern spotted owl and marbled murrelet habitat on state trust lands within the boundaries of the HCP were evaluated in the agreement and specific conservation areas were designated to promote the long-term recovery of these species. These conservation lands serve as a 'conservation benefit' that allows DNR to manage its other lands primarily for timber production. It is, in essence, mitigation for the potential harm to listed species from management of the rest of state trust lands. For that reason, to function as HCP mitigation for management activity on other DNR-managed trust lands, these harvest-deferral lands must remain covered by the trust lands HCP after they are transferred under this program. DNR also must be able to monitor those lands to assure that they are being managed according to the HCP. Both Natural Area Preserves (NAPs) and NRCAs and the benefits they provide to ESA-listed species are included under the HCP. Therefore, the transfer of these lands to NRCA status should not affect their role under that plan. However, the US Fish and Wildlife Service (FWS) reviews all of DNR's asset

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management transactions to assure their consistency with the HCP agreement, and the proposed administrative change to the ownership of these lands would require FWS review.

2. **DNR must maintain existing management access to these lands after they become NRCAs.** Though the administrative ownership of these lands will change, very little if any practical change to the management of these lands will occur. Currently, as deferred habitat areas, very little management activity is allowed on these lands. This will not change when they become NRCAs. However, DNR must maintain the existing management access to these lands that is currently granted according to the trust lands HCP. This includes existing non-timber uses such as road rights-of-way, and existing easements for uses such as utilities and recreation. Any necessary new management access is reviewed by the FWS for its potential to impact habitat values.
3. **The newly established Natural Resources Conservation Areas will require management planning.** Once an NRCA is established, DNR must develop a management plan for each given area (RCW 79.71.070). In addition to identifying significant resources to be conserved, DNR must identify areas with potential for low-impact public and environmental education uses. DNR makes these decisions on a site-by-site basis through the management planning process, which includes public involvement, and writes plans as funding and staffing allow. At the outset, however, these lands will have to be transferred without having completed the process of establishing area boundaries, which is typically completed before lands are transferred or acquired within an established NRCA boundary.
4. **Criteria for screening the acquisition of “unencumbered” working forestlands must be developed.** The purpose of this program is to replace encumbered forest lands with productive, unencumbered working forest lands for the State Forest trust to provide sustainable revenue for the benefit of small timber dependant counties. DNR must identify criteria for screening potential replacement lands that qualify them as suitable “unencumbered” lands before new acquisitions can be made.

## **What are the anticipated impediments to DNR’s implementation of this legislation?**

Issues that may threaten the successful implementation of this program include funding and the availability of replacement lands.

While this legislation provides a program for DNR to implement that will provide sustainable revenue to these smaller counties whose budgets are heavily dependent on State Forest trust land revenues, no funding has been appropriated for its

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implementation. As indicated by this analysis, the initial phase of this program will cost between \$54 and \$82 million, and subsequent phases may cost well in excess of that range, given the large number of acres of partially encumbered lands in these counties.

Another issue which may hamper full implementation of this program is the availability of suitable replacement lands to purchase with proceeds from the land value of the transferred lands. The legislation requires that transferred State Forest lands be replaced by acquiring unencumbered forest lands for the trust within the same county. In some counties, such as Wahkiakum, there may be ample private industrial lands to draw from to purchase lands that meet the requirements of the legislation. In others, like Skamania, the lack of availability of industrial forestlands with willing sellers in the existing forest land base may make acquiring replacement lands very difficult. Even if suitable replacement lands do in fact exist, market opportunities for land acquisition (i.e., willing sellers) must present themselves in order to replace lands transferred out of State Forest trust status.

## KEY UNCERTAINTIES

While a clear plan has been identified to accomplish this program, there are several key issues that remain uncertain, and may influence the full realization of this legislation.

- **Funding:** This program relies entirely on legislative appropriation to achieve its objectives. If the Legislature finds itself unable to fund this program at any point during its implementation, its goal of providing sustainable revenue to those beneficiaries will not be achieved.
- **Partial encumbrances:** The legislation does not specifically speak to the issue of lands that may be less than fully encumbered. Marbled murrelet occupied sites and northern spotted owl nest patches are fully encumbered by conservation commitments required under the Endangered Species Act. However, other areas — such as northern spotted owl Nesting Roosting Foraging, and dispersal management areas — and yet-undefined future marbled murrelet management areas — are or may be only partially encumbered. The legislation does not specifically discuss this distinction, but as it was the intention of the legislation’s authors to not exclude those lands. DNR has included them in this analysis.
- **Trust Land Transfer Program:** This legislation relies on the Trust Land Transfer program to transfer encumbered lands out of trusts status and into Natural Resources Conservation Areas. The TLT program is authorized solely by biennial budget proviso, but is entirely independent of the program established by this legislation to transfer State Forest lands. If the TLT program were to cease being funded, this program created by this legislation would not have a mechanism to complete its goals.

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- **Qualifying Counties:** The legislation qualifies counties to participate in this program based on their population. If this program lasts in duration for the next 10 to 30 years, and some of those counties grow in population greater than 25,000 (or less likely — others shrink to a qualifying population), presumably those counties would lose or gain qualification under this program. The legislation does not specifically speak to this subject.
  - **Marbled Murrelet Long-Term Conservation Strategy:** As previously mentioned, the Marbled Murrelet Long-Term Conservation Strategy has not been completed, and its adoption has the potential to significantly impact the encumbrance of state trust lands, including State Forest lands. That plan currently is under development, and once completed, will require an assessment of its influence on State Forest land encumbrance.
  - **HCP Adaptive Management:** A fundamental principle on which the trust lands HCP is built is that of “adaptive management.” Adaptive management acknowledges that over time, science will improve and data will be collected on the effectiveness of the HCP strategies at meeting their conservation objectives. As this new information is evaluated, both DNR and FWS expect that current management approaches may be modified to improve the effectiveness of habitat conservation efforts. This can include changes in location and management of designated habitat management areas, such as northern spotted owl nest patches and marbled murrelet occupied sites, and other designations qualifying as harvest encumbrances under this legislation. These changes, while beneficial to conservation efforts of the target species, frequently also have benefits for the management of state trust lands. By transferring encumbered lands into a permanent NRCA, DNR will lose some flexibility in moving these conservation commitments to different locations on the trust land base. If management changes are beneficial to the state trusts, and the best available science suggests that conservation efforts should be made elsewhere, it is uncertain how this program will impact the flexibility DNR will have to negotiate changes with FWS.
  - **Distribution of ESA-based habitat commitments:** As stated in the legislative findings for this legislation, ESA compliance has put a large burden on smaller timber-dependent counties because of the disproportionate role State Forest trust revenues play in those counties’ budgets. Further, habitat lands are not distributed evenly across state trust lands because of the life histories and habitat requirements of ESA-listed species. County beneficiaries are particularly prone to the heterogeneous distribution of habitat designations because, unlike the other trust beneficiaries, they do not benefit from well-distributed assets throughout the state, inherently spreading the risk of such influences. When combined with the varied and often regional landscape conditions existing today as a result of the history of forest management in Washington, counties find themselves the

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beneficiaries of trust assets encumbered by circumstance. Further, as a dynamic social, economic, and regulatory environment in Washington continues to change forest management as it has over the last few decades, trust assets may become encumbered by new management considerations. In short, while this legislation remedies specific encumbrances for specific beneficiaries, it does not address the larger challenge. Disproportionate trust land encumbrance is an issue that will not be resolved by this legislation for all trust beneficiaries, and could benefit from a more comprehensive and enduring solution.

## CONCLUSIONS

The Legislature has provided the necessary mechanism in SSHB 1484 for DNR to achieve the objective of maintaining long-term trust revenue to State Forest trust beneficiaries by replacing State Forest lands in Klickitat, Pacific, Skamania, and Wahkiakum counties that have endangered species-based harvest encumbrances with productive forest lands in those same counties. While DNR has the necessary expertise and experience to implement the program enabled by this legislation, there remain uncertainties to be addressed over time — particularly related to its funding and the identification and evaluation of all lands qualified as encumbered by this legislation.

This legislation will achieve its purposes and DNR recommends that it be implemented as proposed in this report. Yet, as discussed, inequities remain that have trust beneficiaries not sharing in both the responsibility and benefit of local regulatory, social, and economic conditions that affect the productivity of State Forest lands. DNR recommends that innovative solutions continue to be considered by the Legislature that protect the corpus of the state trusts and provide ongoing reliable and consistent revenue to the beneficiaries. DNR offers its continued assistance in helping craft and examine forward-thinking approaches to managing State Forest lands — and indeed all state trust lands — in perpetuity, as was intended at their inception.

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# Appendix A

## SSHB 1484: Overview of Valuation Estimate for Fully Encumbered State Forest Lands, with Methods and Assumptions

### BACKGROUND

DNR's Asset and Property Management Division (APM) appraisal section provided preliminary timber and land value estimates of fully encumbered State Forest lands to support the analysis required in the report to the Legislature for Second Substitute House Bill 1484. The valuation analysis was undertaken by Kymm Boire, Property Acquisition Specialist, in August 2010. Data queries and mapping were provided by Eric Aubert, GIS Unit Lead, Forest Resources and Conservation Division.

Though the analysis was completed by APM appraisal section staff, the value estimates do not constitute an "appraisal" per se, and should not be construed to be an appraisal. While the analysis relies on DNR's best available data, it has its own accuracies and limitations. The report's author attempts to state clearly throughout this document that it was necessary to make many assumptions. Though based on reasonable assumptions, due to changes in land and commodity values over time, market conditions, or the resolution and accuracy of DNR data, actual asset values could vary significantly. One example of this are the changes and volatility in log markets, which are highly correlated to national housing starts, home mortgage lending rates, etc. Historically, therefore, delivered log prices have shown dramatic volatility to these economic influences. In addition, all values in this analysis are expressed in 2010 dollars; no accounting for inflation was attempted, given the projected and indeterminate time period of this program's implementation.

### METHODS

#### Stand Identification

Forest Resources and Conservation Division staff prepared baseline state lands data from corporate data sources, including ownership and habitat data contained in the Large Data Overlay (ver. June 3, 2010), and stand level data contained in the Forest Resource Inventory System (FRIS). APM staff used data queried by Forest Resources and Conservation staff to identify stands that qualify under the legislation for transfer. Included were those stands on State Forest lands meeting the following criteria:

1. Forest stands encumbered with timber harvest deferrals — greater than 30 years in length — associated with wildlife species listed under the federal Endangered Species Act, and
2. Forest stands that also are in counties with a population of less than 25,000.

Forest resource staff also provided stand level data from the FRIS database for those qualifying stands to allow asset management staff to evaluate asset values.

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Staff prepared a geographic information system (GIS) coverage of encumbered State Forest land timber stands occurring in Klickitat, Pacific, Skamania and Wahkiakum Counties. Klickitat County only has partially encumbered State Forest lands and was therefore omitted from this analysis, which focused solely on fully encumbered State Forest lands.

The GIS coverage accounted for encumbrances from northern spotted owls and marbled murrelets and keyed on specific habitat classifications contained within the GIS “Policy” layers for the respective species. Data layers used for this analysis included those for northern spotted owl nest patches (“NSO\_NestPatches”), and marbled murrelet occupied sites and buffers (“MM\_SWWA\_Occupied” and “MM\_SWWA\_Occupied\_Buffer”, respectively). The GIS coverage included FRIS stand-level data for the areas falling under the qualifying polygons and also reflected DNR’s “land class” data for those stands (classified as having a “General ecological management strategy” designation or “GEMS”, “Upland” and “Riparian” designations) for each inventory stand polygon in the GIS coverage.

## Data Compilation

Asset and Property Management Division staff queried the data to stratify the information by county and isolate only the “GEMS” and “Upland” land class components of the FRIS polygons. These tabular queries were exported into separate worksheets of an Excel workbook where additional compilation and value analysis was completed.

In the course of evaluating the data, certain State Forest trust properties in Pacific County showed that the land was owned by the State Forest Purchase (“surface.own” field), but that the merchantable timber had a split interest between the State Forest trust beneficiary (Pacific County) and the University trust (see “TIM.Trust” field - specifically University Repayment Trust, Tim.Trust Code “41”). This joint interest in the timber is the result of Board of Natural Resources (Board) Resolution No. 756 and is the outcome of the Interfund Loan Repayment transaction dating back to 1992. The distribution of timber proceeds from certain State Forest Purchase parcels under this Board resolution distributed approximately 68 percent of the timber value to the State Forest trust, the remaining 32 percent distributed to the University trust. As a result, Pacific County’s compiled value estimates are reported in separate columns to account for the timber contribution from that of the wholly owned State Forest trust timber interest, and that of the comingled partial timber interest. The University Repayment trust partial interest also has been shown in an additional column.

## Volume Determination

DNR’s FRIS stand-level data does not report timber volumes by species, but reports it as scribner board foot volume per acre for the generally defined categories of “conifer” and “hardwood.” DNR’s Planning and Tracking (P&T) database generates stand-level reports that provide volumes by species for state trust lands. In order to determine a probable distribution of volume by species, P&T stand reports were run on a subset of randomly-selected stands in the GIS coverage. A compiled summary of the species distribution of these stands was stratified by county (Table A1).

Table A1. Tree species distribution estimated for lands within qualifying counties and trusts

County	Tree Species Distribution (percentage)			
	Western Hemlock	Douglas-fir	Red Cedar	Red Alder
Pacific (State Forest)	62	24	8	6
Pacific (State Forest/ University Repayment)	62	28	0	10
Skamania	6	91	0	3
Wahkiakum	70	25	1	4

## Asset Value Estimates

This species distribution, though only an estimate, facilitated assigning appropriate unit stumpage prices. These prices were then applied to the corresponding timber volumes for each of the counties. The concluded stumpage rates applied can be found in Table A2.

Table A2. Average stumpage price per thousand board feet (MBF) estimated for State Forest lands within qualifying counties and trusts

County	Average gross stumpage price (\$/MBF)
Pacific (State Forest)	199
Pacific (State Forest/University Repayment)	183
Skamania	336
Wahkiakum	176

Stumpage prices used in the analysis are gross estimates based on a sampling of stands occurring in the FRIS data. More precise species, grade and sort breakdowns can only be determined by a formal timber cruise.

A summary worksheet in Excel has a roll up of the asset values for the respective trusts for the three subject counties. Maps of qualifying properties were created by Forest Resources and Conservation Division staff.

## Reported Analysis Components

The data (Table 3 in the main body of the report) was analyzed and reported in the following categories:

**County:** The county within which the encumbered State Forest lands are located.

**Trust:** This refers to the trust ownership on which the encumbered forest land assets are located. While all of the lands are in State Forest trust ownership, on a few lands in Pacific County, the timber interest is split between State Forest trust and University trust ownership due to Board Resolution No. 756 authorizing Interfund Loan Trust Balance transactions. The timber interest distribution coming from these specific State Forest Purchase lands designates approximately 68 percent of the revenue to go to State Forest trust beneficiaries and 32 percent to be paid to the University trust beneficiaries.

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**Qualifying encumbered habitat area:** These are the acres of habitat found in the DNR corporate data (queried from the Large Data Overlay, ver. June 3, 2010) that meet the requirements of the legislation. In short, they include all polygons in the GIS “Policy” layers for northern spotted owl nest patches (“NSO\_NestPatches”), and marbled murrelet occupied sites (“MM\_SWWA\_Occupied”) and buffers (“MM\_SWWA\_Occupied\_Buffer”) polygons on State Forest land in Pacific, Skamania, and Wahkiakum Counties.

**Area of proposed Natural Resources Conservation Areas:** The encumbered stands of habitat are generally irregular shapes on a map, and in many cases, represent no spatial order relevant to operational considerations. To make these areas functional, reasonable and operationally feasible units for ongoing management, a rationale for defining future NRCA boundaries will need to be conceived and implemented by DNR. For the purposes of this analysis, the necessary total acreage in this category to “square off” NRCA boundaries only can be estimated. However, it is expected that additional area beyond that strictly encumbered under this legislation will be required to make logical NRCA boundaries. This will be necessary in order to facilitate the legal description, transfer and management of these properties into the future. It’s probable that squaring NRCA boundaries up to aliquot portions of sections may be necessary. A very rough estimate of an additional 20 percent of the identified encumbered acres has been applied to account for additional acres that may fall into the NRCA but that are not *per se* encumbered. The amount of this overrun will not be known until actual NRCA boundaries are negotiated and finalized over the course of implementation of this program.

**Encumbered area with timber value:** This represents the estimated net operable state trust acres that otherwise would be available to harvest if corresponding timber harvest restrictions due to the identified encumbrances were to be removed. They are defined by those encumbered acres in the “GEMS” and “Upland” land classes. The “Riparian” land class category was excluded, as the timber is not considered operable for the purposes of this analysis; the Washington Forest Practices Rules would restrict harvesting on some but not all lands in this category. Staff time limitations dictated simplifying the value estimate approach to exclude riparian areas.

**Encumbered timber volume:** This represents the expected harvest volume from these State Forest lands on the above identified “encumbered area with timber value” if ESA-related harvest encumbrances were lifted and all other Forest Practice Rules remained in effect. Estimated volumes are in million board feet (MMBF) and were determined using total GEMS and Upland acres multiplied by the average timber volume per acre for individual stands as reported in FRIS. The timber volumes of all subject stands were then totaled. Lastly, a fall down adjustment to the compiled FRIS inventory volume of 15 percent was applied to adjust for hidden defect and breakage; actual harvest volumes are typically short of estimated FRIS inventory volumes.

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**Encumbered timber market value:** This is the estimated market value of the encumbered timber if the encumbrances were not in force. It is based on the volumes reported above in “encumbered timber volume” and the average stumpage estimated in Table A2. It represents what the net proceeds or receipts might be expected to be returned to the landowner from timber harvest of those lands. Values include a net adjustment for what would be owed the logger and log hauler, and payment of all other associated out-of-pocket fees and expenses, etc. from the gross log receipts received from the log purchaser or mill.

**Land and reproduction market value:** This column represents the market value of the bare land and reproduction timber. Reproduction, also referred to as “pre-merchantable” timber, refers to the component of younger stands that is not yet ready for harvest. In market appraisals, the reproduction is evaluated together with the land value. The contribution of a plantation of newly planted trees to the value of land is significantly less than a stand that is close to reaching economic maturity and ready to be harvested. Valuation of pre-merchantable stands is handled via a net present value approach, and relies on a discounted cash flow analysis.

Land values for this exercise were assumed to be in the range of \$400-to-\$500 per acre. Areas with predominantly white wood (western hemlock) stands were valued closer to \$400 per acre whereas areas with proportionally more Douglas-fir stands were set at a rate of \$500 an acre. A refined evaluation of the respective site class of the subject properties was not undertaken.

**Combined land and timber market value:** This is the estimated market value of the fee simple interest of the property including components of merchantable timber, bare land and reproduction timber. It is the sum of the “encumbered timber market value” and the “land and reproduction market value.”

**Total estimated asset market value:** This value adds 20 percent to the “combined land and timber market value” to account for the probable need to “square up” subject NRCAs’ final boundary configurations consistent with the discussion above on “areas of proposed NRCAs.” Lastly, to account for variation in total estimated market values, a grossly estimated range of variation in value of  $\pm 20$  percent is provided.

## ADDITIONAL ASSUMPTIONS AND LIMITING CONDITIONS

The value estimates presented do not constitute an appraisal. Values presented (particularly for timber) are intended to represent the market value of the subject assets, not necessarily what DNR would expect to realize from these properties under its own unique set of operating constraints and management objectives, such as the trust lands Habitat Conservation Plan.

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Though the analysis is based on the best available information, certain subjective and discretionary assumptions were necessary in the analysis due to time and budget constraints. Additional time and resources spent on this project could have yielded a more detailed analysis that could have resulted in more refined value estimates. Regardless, this type of analysis yields only *value estimates*; implementation of this legislation will require actual appraisals that will assure that trust beneficiaries are fairly compensated for their assets according to the requirements of the legislation.

The hypothetical condition applied to this analysis is that timber harvest encumbrances associated with federal ESA-listed threatened and endangered species (northern spotted owl and marbled murrelet) would not apply to the subject parcels. However, all other regulatory requirements and constraints would remain in force. As these properties are being evaluated for their “market value”, State Forest land management considerations, such as the trust lands HCP, are not considered. Instead, Washington Forest Practices Rules form the regulatory baseline against which asset values were evaluated. This would include riparian management zone limitations, slope stability limitations, wetland management zones, etc. or any of the numerous others as prescribed in the state Forest Practices Rules.

No independent verification of stand volumes has been conducted. Staff did not complete site visits to any of the subject properties in completing this analysis. DNR corporate data used for the analysis is assumed to be correct. Stand growth rates since the FRIS sample year are modeled and are therefore themselves *estimated* rather than measured values. Incidental damage such as blow down from wind storms, insect infestation, etc also have not been assessed in the field or factored in the analysis.