

Sustainable Harvest Calculation for Forested State Trust Lands in Western Washington

2007 Adjustment Project

Presentation to the Board of Natural Resources
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WASHINGTON STATE DEPARTMENT OF
Natural Resources

Agenda

1. Overview of September 2004 Board decision on sustainable harvest
2. New Information
 - Settlement Agreement
 - Riparian Forest Restoration
3. Review Department's recommendation
4. Next Steps

Why adjust the 2004 Sustainable Harvest level?

Policy of Recalculation of the Sustainable Harvest

- The department, with Board of Natural Resources approval, will recalculate the statewide sustainable harvest level, for Board of Natural Resources adoption no less frequently than every ten years.
- The department will adjust the calculation and recommend adoption by the Board of Natural Resources when the department determines changing circumstances within the planning decade suggest that an adjusted harvest level would be prudent. Such circumstances may include major changes in legal requirements, significant new policy direction from the Board of Natural Resources, new information about the resource base available for harvest, or changes in technology.

Source: Policy for Sustainable Forests, 2006

Why adjust the 2004 Sustainable Harvest level?

Policy of Recalculation of the Sustainable Harvest

- Changing circumstances within the planning decade suggesting that adjusting the harvest would be prudent.
- Major changes is legal requirements
 - Settlement Agreement
- New information about the resource base available for harvest
 - Riparian Forest Restoration Strategy

Source: Policy for Sustainable Forests, 2006

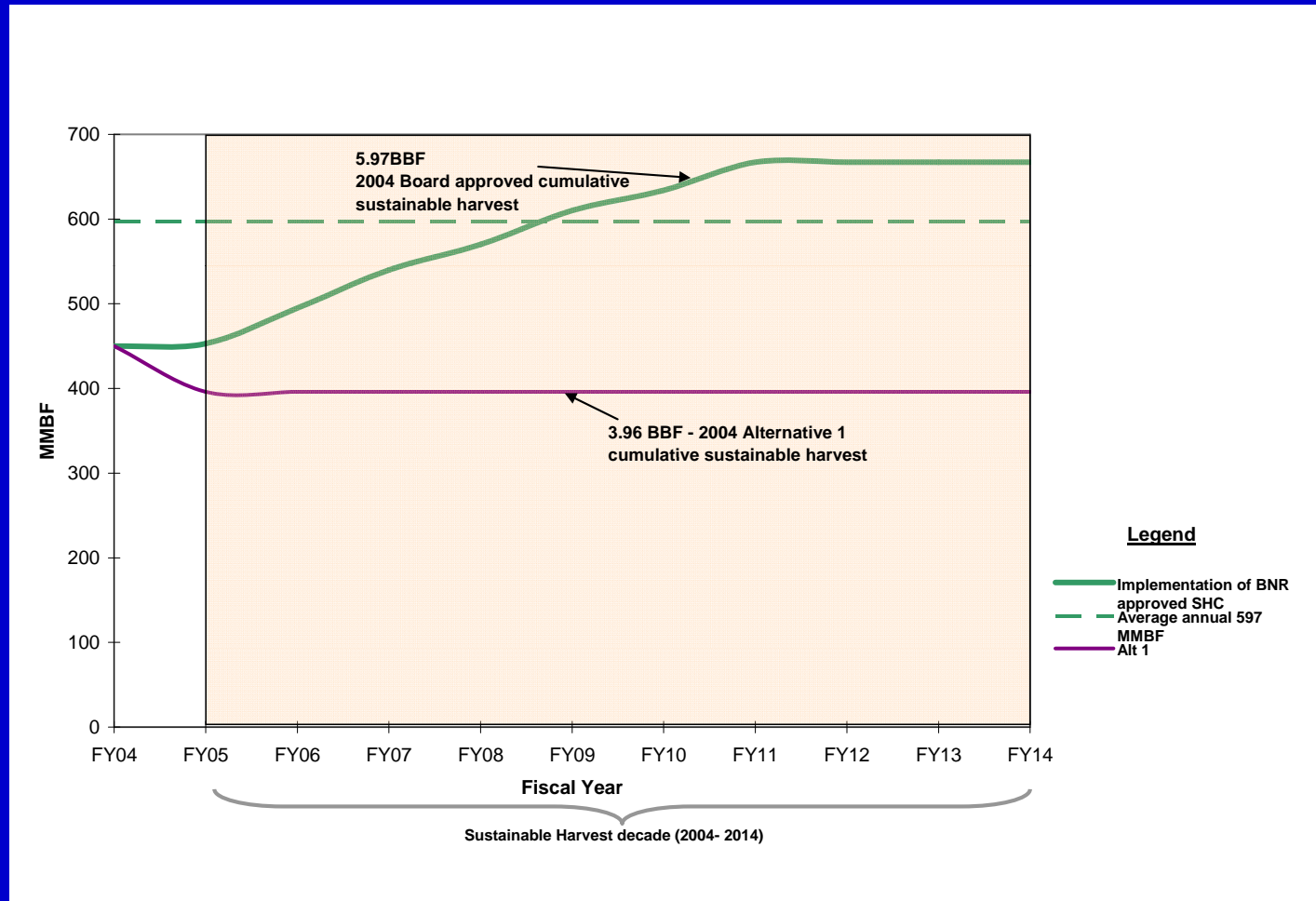
The story so far....

In September 2004, the Board approved a distinct policy direction included:

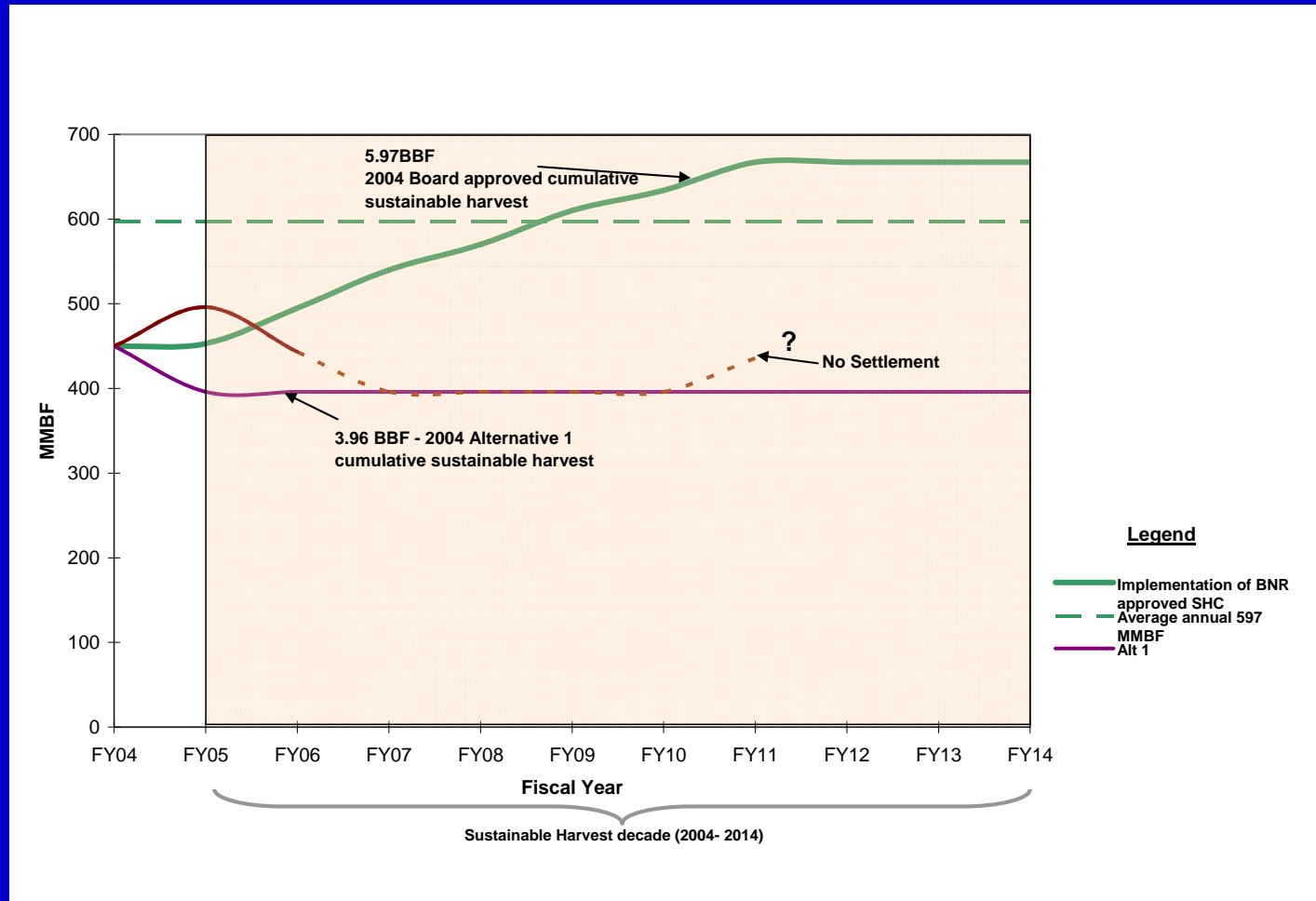
- Flexibility in the long-term sustainable harvest flow
- Grouping of the federally granted and State Board Purchase ownerships into one Westside sustainable harvest unit
- Active stewardship of as much of the landscape as allowable by law
- Use innovative silvicultural practices (known as “biodiversity pathways”) to address DNR’s HCP commitments and forest health concerns by creating more structurally diverse forests while simultaneously increasing production of trust revenue
- Annual average harvest level of 597 MMBF for the decade (2004-2014)

Source: Resolutions 1110 and 1134

Implementation of the 2004 Board Sustainable Harvest in decade 1



Implementation of the 2004 Board Sustainable Harvest in decade 1



Some important considerations

The 2004 decision on sustainable harvest did not include:

- Settlement Agreement
- Implementation Procedures for the Riparian Forest Restoration Strategy (RFRS)

Source: Resolutions 1110 and 1134

Combined Effect of these decisions

Scenario	1 st decade harvest level MMBF/yr	Net Present Value after 1 decade \$ millions	Cumulative harvest volume 7 decades BBF	Net Present Value over 7 decades \$ millions	Older Forest Condition after 7 decades Acres
Board adopted	597	\$804	38.3	\$1,980	137,000
<ul style="list-style-type: none"> •Settlement Agreement •Riparian Forest Restoration Strategy 	550	\$793	33.8	\$1,780	213,000
Percentage difference	-8%	-1%	-12%	-10%	55%

All values represent Western Washington State Trusts Forests; prices are 2004; real interest rate = 5 percent; discount period 10 years; Older Forest = Niche diversification and Fully Functional development stages

Settlement Agreement

- **September 2004** – Washington Environmental Council, Conservation Northwest, National Audubon Society, and Olympic Forest Coalition (WEC et al) brought suit against DNR
- **April 2006** – WEC et al, DNR and Interveners negotiated a settlement agreement, which the Board approved
- Selected elements of Settlement Agreement on sustainable harvest*:
 - No net loss of northern spotted owl habitat in State Trust Habitat Conservation Plan management areas (Nesting Roosting Foraging, Dispersal and Olympic Experimental State Forest) and Owl Areas (selected owl circles) until 2014
 - This is achieved through a number of strategies:
 - No timber harvest activities in high quality habitat in NRF, dispersal, OESF and Owl areas
 - Maintain and enhance low quality habitat in NRF, dispersal and Owl Areas
 - Maintain or enhance low quality habitat in OESF with the use of innovative silviculture

Source: Settlement Agreement, 2006

*These highlighted notes do not replace the Settlement Agreement

Implementation Effects of the Settlement Agreement

Scenario	1 st decade harvest level MMBF/yr	Net Present Value after 1 decade \$ millions	Cumulative harvest volume 7 decades BBF	Net Present Value over 7 decades \$ millions	Older Forest Condition after 7 decades Acres
Board adopted	597	\$804	38.3	\$1,980	137,000
•Settlement Agreement	575	\$851	38.4	\$2,040	213,000
Percentage difference	-4%	6%	0%	3%	55%

All values represent Western Washington State Trusts Forests; prices are 2004; real interest rate = 5 percent; discount period 10 years; Older Forest = Niche diversification and Fully Functional development stages

Implementation Procedures for the Riparian Forest Restoration Strategy (RFRS)

- **Strategy objectives** (DNR 1997, HCP III. 60)
 1. Maintain or restore salmonid freshwater habitat on DNR-managed forestlands,
 2. Contribute to conservation of other aquatic and riparian obligate species – those that depend solely or mostly on this environment
 3. Restoration goal – shorten the time period a riparian forest would spend in competitive exclusion developmental stages (DNR 2006, RFRS page 6)
 4. Long-term riparian restoration goal – manage for structurally complex riparian forests – assumed to be equivalent to the ecological function of old growth conditions (Old Growth Task Group 1986), or fully functional development stage (DNR 2004, Final EIS). (DNR 2006, RFRS page 8)
- **Stakeholders (Tribes, environmental community)** expressed concerns about opening size, hardwood conversions, risk of blow-down due to heavy thinnings based on Final EIS modeling assumptions.

Source: DNR 2006, Implementation Procedures for the Riparian Forest Restoration Strategy

DRAFT – Subject to Change

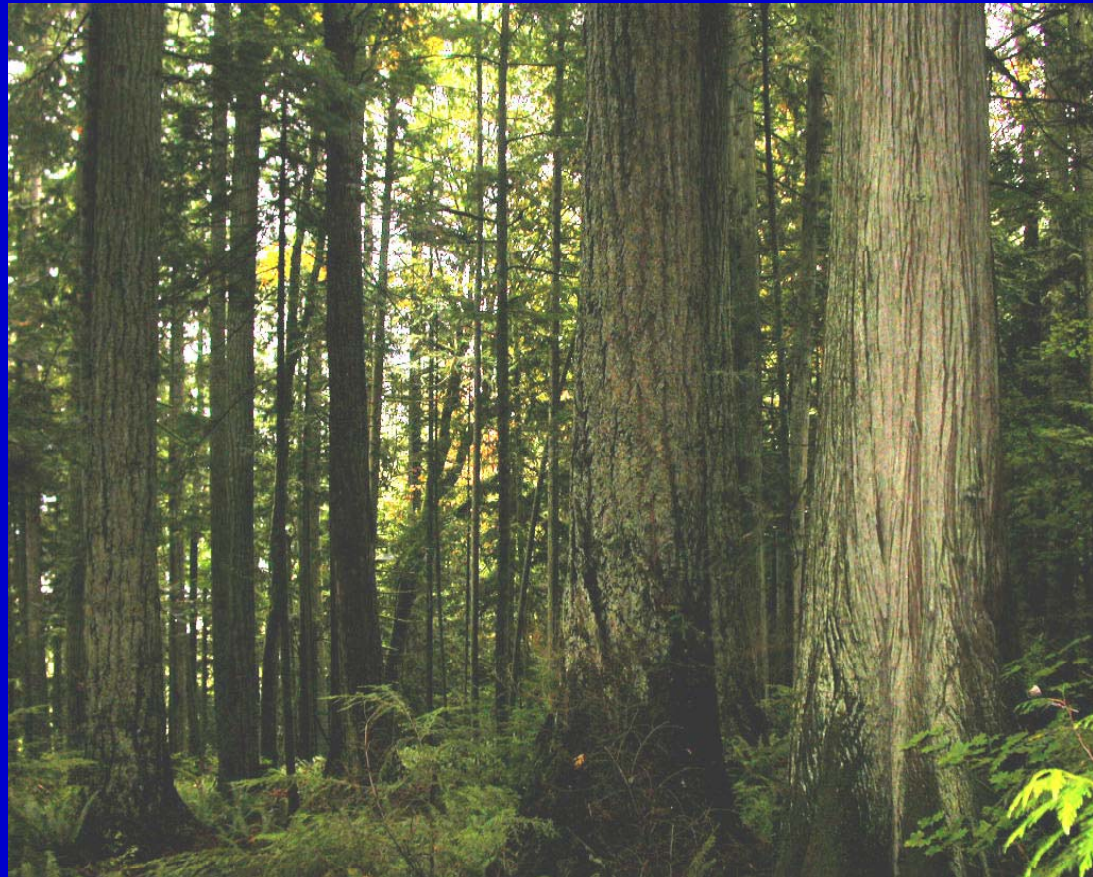
Implementation Procedures for the Riparian Forest Restoration Strategy

- DNR developed and adopted Riparian Forest Restoration Strategy to address HCP objectives and Stakeholder concerns
- The riparian strategy includes:
 - Intermediate restoration goal, described as the ‘riparian desired future condition’

Source: DNR 2006, Implementation Procedures for the Riparian Forest Restoration Strategy

Implementation Procedures for the Riparian Forest Restoration Strategy

- Intermediate restoration goal, described as the 'riparian desired future condition' is measured as stands that have:
 - At least 300 sq ft of basal area and,
 - Average diameter of 21 inches



Source: DNR 2006, Implementation Procedures for the Riparian Forest Restoration Strategy

Implementation Procedures for the Riparian Forest Restoration Strategy

- DNR developed and adopted Riparian Forest Restoration Strategy to address HCP objectives and Stakeholder concerns
- The riparian strategy includes:
 - Intermediate restoration goal, described as the ‘riparian desired future condition’
 - No management in riparian stands in riparian desired future condition or in stands over the age of 70 years
 - Lower priority on hardwood conversions to conifer forests
 - Limits gap/opening size to ¼ acre
 - Maintain relatively high density/stocking to reduce risk of blow-down
 - Limit number of entries into riparian areas to two for all time

Source: DNR 2006, Implementation Procedures for the Riparian Forest Restoration Strategy

Implementation Effects of the HCP Implementation Procedures for Riparian Forest Restoration Strategy

Scenario	1 st decade harvest level MMBF/yr	Net Present Value after 1 decade \$ millions	Cumulative harvest volume 7 decades BBF	Net Present Value over 7 decades \$ millions	Older Forest in Riparian Areas after 7 decades Acres
Board adopted	597	\$804	38.3	\$1,980	57,000
Riparian Forest Restoration Strategy	576	\$846	34.8	\$1,870	23,000
Percentage difference	-4%	5%	-9%	-6%	-60%

All values represent Western Washington State Trusts Forests; prices are 2004; real interest rate = 5 percent; discount period 10 years; Older Forest = Niche diversification and Fully Functional development stages

Combined Effect of these decisions

Scenario	1 st decade harvest level MMBF/yr	Net Present Value after 1 decade \$ millions	Cumulative harvest volume 7 decades MMBF	Net Present Value over 7 decades \$ millions	Older Forest Condition after 7 decades Acres
Board adopted	597	\$804	38.3	\$1,980	137,000
<ul style="list-style-type: none"> •Settlement Agreement •Riparian Forest Restoration Strategy 	550	\$793	33.8	\$1,780	213,000
Percentage difference	-8%	-1%	-12%	-10%	55%

All values represent Western Washington State Trusts Forests; prices are 2004; real interest rate = 5 percent; discount period 10 years; Older Forest = Niche diversification and Fully Functional development stages

Comparison of the effects on sustainable harvest units

DRAFT 2007 Sustainable Harvest Adjustment - Decade 1 (2004-2014) Harvest Volume (MMBF/year)

Sustainable Harvest Unit	BNR Approved	2007 SHC adjustment	difference	percent change	
Federally Granted Trusts and State Board Purchase	299.2	248.8	-50.4	-17%	
Olympic Experimental State Forest	63.8	57.6	-6.2	-10%	
Capitol State Forest	38.8	49.1	10.3	26%	
State Board Transfer	Clallam	22.3	18.5	-3.8	-17%
	Clark	9.8	12.6	2.8	29%
	Cowlitz	4.7	6.3	1.6	33%
	Grays Harbor	0.4	0.0	-0.4	0%
	Jefferson	5.7	7.4	1.8	31%
	King	7.4	8.9	1.5	20%
	Kitsap	2.1	2.5	0.4	20%
	Lewis	17.7	20.5	2.8	16%
	Mason	4.9	6.3	1.4	30%
	Pacific	9.0	9.6	0.6	6%
	Pierce	4.4	1.2	-3.1	-72%
	Skagit	38.3	32.6	-5.8	-15%
	Skamania	15.4	6.0	-9.3	-61%
	Snohomish	26.5	32.8	6.3	24%
	Thurston	5.0	5.2	0.2	5%
Wahkiakum	5.6	7.5	1.8	33%	
Whatcom	15.8	16.5	0.7	4%	
Total in WWA	596.8	550.0	-46.8	-8%	

Note: Future anticipated adjustments not incorporated in the 2007 SHC adjustment include: the Long-term conservation strategy for marbled murrelets; Forest Land plans; the Headwater Stream strategy.

Comparison of effects on trusts

Harvest Volume

DRAFT 2007 Sustainable Harvest Adjustment - Decade 1 (2004-2014)
Harvest Volume (MMBF/year)

TRUST	BNR Approved	2007 SHC adjustment	difference	percent change
Agricultural School	16.2	14.3	-1.9	-11.7%
Capitol Grant	56.4	40.6	-15.8	-28.0%
Charitable/Educational/Penal & Reformatory Instit	19.1	16.1	-3.0	-15.7%
Common School and Indemnity	188.9	162.5	-26.4	-14.0%
Community College Forest Reserve	0.8	1.9	1.1	140.1%
Escheat	1.4	1.1	-0.3	-21.9%
Normal School	9.1	9.3	0.1	1.6%
Scientific School	31.5	34.9	3.4	10.7%
State Forest Board Purchase	41.8	38.6	-3.2	-7.7%
State Forest Board Transfer	222.3	221.8	-0.5	-0.2%
University - Original	0.4	0.7	0.3	63.4%
University - Transferred	8.6	8.1	-0.6	-6.7%
Total WWA	596.8	550.0	-46.8	-7.8%

All values represent Western Washington State Trusts Forests

Comparison of effects on trusts

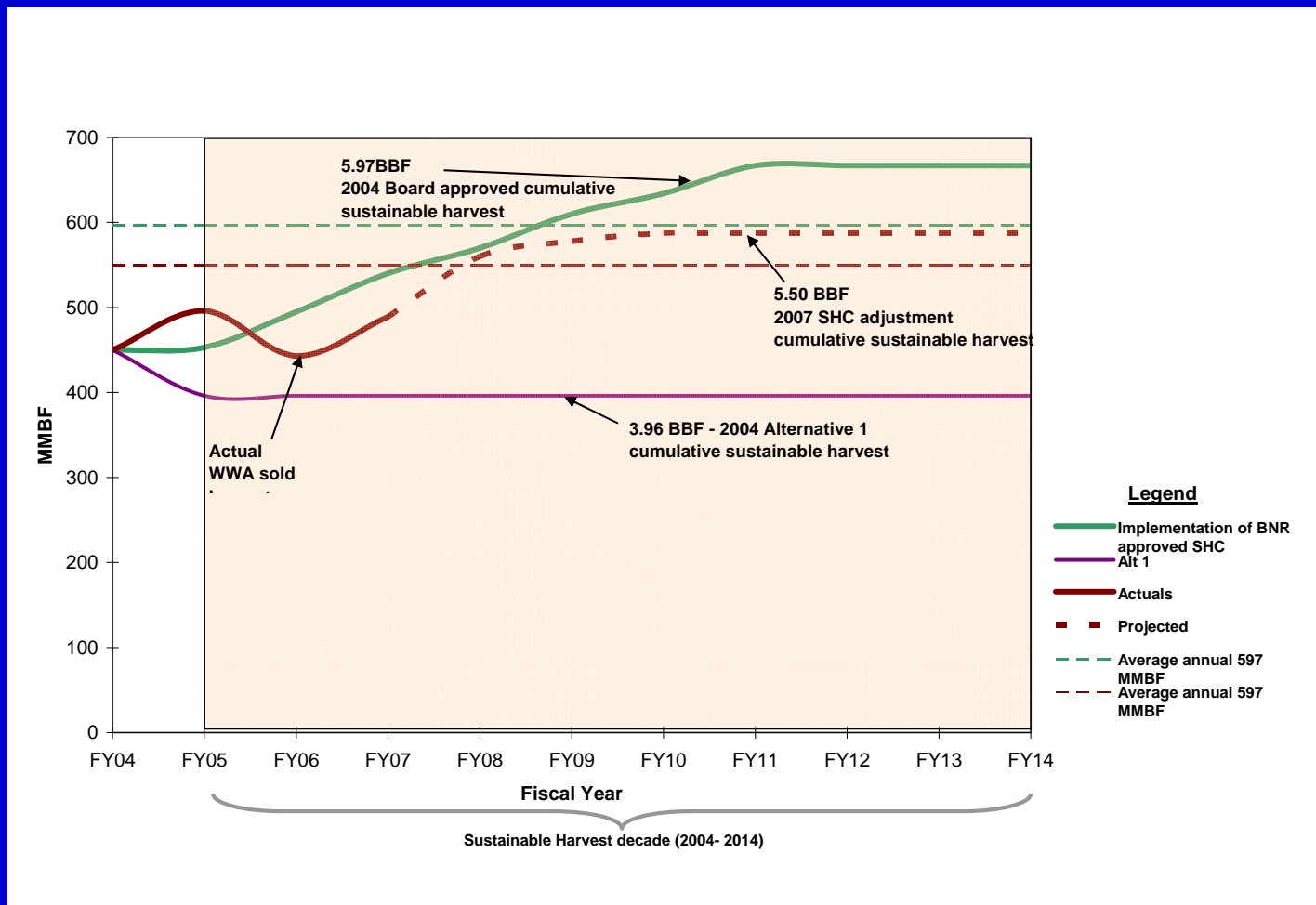
Net Present Value

DRAFT 2007 Sustainable Harvest Adjustment - Decade 1 (2004-2014) Cumulative Net Present Value (\$ millions)

TRUST	BNR Approved	2007 SHC adjustment	difference	percent change
Agricultural School	\$21.5	\$21.9	\$0.3	1.6%
Capitol Grant	\$73.3	\$54.1	-\$19.2	-26.2%
Charitable/Educational/Penal & Reformatory Instit	\$27.4	\$23.4	-\$4.0	-14.6%
Common School and Indemnity	\$242.9	\$213.0	-\$29.8	-12.3%
Community College Forest Reserve	\$0.8	\$2.9	\$2.2	272.0%
Escheat	\$1.9	\$1.6	-\$0.3	-15.6%
Normal School	\$11.8	\$12.8	\$1.1	8.9%
Scientific School	\$42.7	\$55.0	\$12.3	28.9%
State Forest Board Purchase	\$60.4	\$55.8	-\$4.6	-7.7%
State Forest Board Transfer	\$313.0	\$343.2	\$30.2	9.7%
University - Original	\$0.5	\$1.3	\$0.8	171.4%
University - Transferred	\$8.4	\$7.5	-\$0.9	-10.8%
Total WWA	\$804.7	\$792.7	-\$12.0	-1.5%

All values represent Western Washington State Trusts Forests; prices are 2004; real interest rate = 5 percent ; discount period 10 years

Implementation of the 2007 Sustainable Harvest adjustment in decade 1



Next Steps

- DNR reviewed changes to the 2004 sustainable harvest level due to:
 - Settlement Agreement
 - Implementation Procedures for the Riparian Forest Restoration Strategy
 - Policy for Sustainable Forests
- DNR staff are developing an addendum to Final EIS on Alternatives for Sustainable Forest Management of State Trust Lands in Western Washington
- In July 2007, return to the Board with a resolution recommending an adjustment to the Sustainable Harvest

Comparison of effects on State Forest Board forest lands, by County

DRAFT 2007 Sustainable Harvest Adjustment - Decade 1 (2004-2014)
Harvest Volume (MMBF/year)

County	BNR Approved			2007 SHC adjustment			difference	percent change
	State Forest Board Purchase	State Forest Board Transfer	Total	State Forest Board Purchase	State Forest Board Transfer	Total		
Clallam	0.0	41.7	41.7	0.2	38.6	38.8	-2.9	-7%
Clark	2.5	9.8	12.3	0.3	12.6	12.9	0.6	5%
Cowlitz	0.2	4.7	4.9	0.4	6.3	6.8	1.8	37%
Grays Harbor	15.1	0.8	15.9	17.1	0.8	17.9	1.9	12%
Jefferson	0.0	5.7	5.7	0.0	7.4	7.4	1.7	31%
King	-	7.4	7.4	-	8.9	8.9	1.5	20%
Kitsap	0.1	2.1	2.2	0.0	2.5	2.6	0.4	18%
Lewis	2.0	17.7	19.7	2.5	20.5	23.1	3.3	17%
Mason	0.1	4.9	4.9	0.1	6.3	6.5	1.5	31%
Pacific	7.3	9.0	16.3	3.8	9.6	13.4	-3.0	-18%
Pierce	3.0	4.4	7.4	0.4	1.2	1.6	-5.8	-78%
Skagit	-	38.3	38.3	-	32.6	32.6	-5.8	-15%
Skamania	4.7	15.4	20.1	0.4	6.0	6.4	-13.7	-68%
Snohomish	0.1	26.5	26.6	0.0	32.8	32.8	6.3	24%
Thurston	6.5	12.5	19.0	13.4	11.6	25.0	6.0	31%
Wahkiakum	-	5.6	5.6	-	7.5	7.5	1.8	33%
Whatcom	0.2	15.8	16.0	0.0	16.5	16.5	0.5	3%
Total	41.8	222.3	264.2	38.6	221.8	260.4	-3.8	-1%