

# Arch Cape Watershed Finance Committee Minutes - August 24, 2023

A. Public Comment

B. Work Assignments Completed

C. Assumptions

1. Costs – Forestry Operations & Admin
2. Revenues
3. Scenarios

D. Meeting Schedule & Objectives. Set next meeting date

E. Public Comment

## Work Done Since Last Meeting

- Add revenue risk deduction factor in model to address catastrophic conditions: <<Ben>>
- ~~Confirm constraints in FPS model report that drive timber volume: <<David D & Ben H>>~~ *(Action Item)*
- Confirm stumpage pricing: <<Doug C & Ben H>>
- Confirm operational line items, timing & and cost estimates: <<Mike A, David D, Ben H>>
- Confirm inflation factor of costs: <<Beth M & Mike W>>
- Proposed Scenarios – with and without logging. <<Rick G, Beth M & Bill C>>
- Determine options for levies (cap & duration) <<Casey S>>

# Cost Assumptions – Forest Operations

Cost	Harvest Event Yrs	No Harvest Yrs.	Comment
Property Manager	Harvest – 3 year window (pre, harvest, post) 16 hrs/month @ \$58 / hr	8 hrs / month @ \$58.00 / hr	Assumes District Staff
Consulting Forester	Harvest – 3 year window (pre, harvest, post) 12 hrs / month @ \$125/hr	3 hrs / month @ \$125/ hr	
Replanting Survey	If single harvest, survey 5 years later by Forester: 4 hrs @\$125/hr	N.A.	If multiple harvest, cost included within Forester cost above
Precommercial Thinning	If any harvest, 112 acres in 2030. If ongoing harvest, then every 5 years. All @ \$240/acre	If no harvest, 53 acres in 2030 @ \$240/acre.	
Commercial Thinning	Done as part of the Stewardship scenario harvesting.	Not Done	
Inventory	If harvest at 10 year and then every 5 year interval, inventory pre harvest @\$ 25,000	\$14,000/10yr	If only 10 yr harvest, inventory cost included as Forester cost above
FSC Certification	If single 10 yr harvest - 5 years before and 1 yr after. \$2350 yr .	N.A.	FMC to determine whether or not to certify
Targeted Invasive Plant Mitigation	\$100 / exposed acre (20% of harvest area)	Tree growth shade will mitigate	
Brushing and Road Maintenance	If more than one harvest - \$20,000 yr If 1 harvest - \$14,000 /yr	\$14,000/yr	

- Costs without inflation



# Cost Assumptions – Administrative

Cost	Average Annual Costs
Insurance	Included in District Policy
ODF Fire Assessment	\$ 2,335
Finance and Management	\$ 6,000
Grant Writer / Manager	TBD
Legal / Marketing Research for Levy	TBD
Project Mgmt	\$ 0
Legal	\$ 1,500
Audit	\$ 3,200
Mgmt Planning (per FLP)	\$ 12,000 /every 10 yrs
Signs/ Miscellaneous	\$ 500
Contingency	TBD
Inflation Rate on Costs	3% (currently 3.18%)



- Average Cost is per year (unless otherwise indicated) without inflation Costs to be confirmed

# Revenue Assumptions

Revenue	Assumption
Stumpage Pricing	DF - \$428.50. GF - \$301.75. RA - \$245 RC - \$1115. SF - \$314.75. SS - \$100. WH - \$339.25  Use these prices for 10 year harvest and inflate them at 3% after that ( <i>Action Item</i> )
Harvest Revenue Future Discount Factor	3%
Stewardship Fund	Principle available through 2026 \$180,000. Then \$400,000 Interest rate: TBD. ( <i>Action Item</i> )
Local Option Levy	TBD (see considerations)
Grants	TBD
Donations	TBD
New Levy	TBD
Rate increases	TBD
Carbon Sequestration	A future consideration



# Scenario Assumptions

- Stewardship “Lite”: No harvest projected
- Stewardship “Moderate”: Moderate harvest projected in 10 years.
  - Version a: No harvest projected after that
  - Version b: Moderate harvests projected in 5 years intervals after that
- “Optimized” Harvest: Optimized harvest projected in 10 years and every 5 years after that.



Note: 2021 6-Harvest Baseline Scenario was in-between Stewardship-Moderate b and Optimized Harvest.  
*(Action Item)*

## Action Items

- **Bill will** ask David D, Mike A and Doug C to review/comment on the scenario design/constraint considerations in the FPS Model Report.
- **Clark will** review current trends in timber pricing and recommend stumpage pricing for a 10 yr harvest. Rick and Ben will see if they can retrieve and forward to Clark the log line data sent via email in Summer of 2021.
- **Mike W and Beth M will** research and make recommendation for interest rate to be used for Stewardship Fund.
- **Ben will** create an additional scenario for prudently maximizing harvests outside of the Watershed. (this scenario is anticipated to have higher harvest yield than Stewardship - Moderate but less than Optimized)
- Next Meeting Date: TDB

# Appendix



## Explanation of Assumptions: Forestry Operations Line items Detail

Line Item	Discussion - Detail
Property Manager	<b>Responsibilities:</b> <i>In non-harvest years:</i> 1) 24/7 response to events that might occur. Get contractors involved if/as necessary and monitor them 2) Be the emergency point of contact for fire response and contractors working in the Forest. 3) Manage the keys to the Watershed gates and track who is on the property, including but not limited to contractors', in accordance with District Policy. 4) Determine, in conjunction with the consulting Forester, when the Watershed property should be closed. <i>In harvest years:</i> Same responsibilities, getting, more intense plus working with Forester on contracting.
Consulting Forester	<b>Responsibilities:</b> <i>During harvest events,</i> deal with all contracting / sale of the timber sales, as well as reforestation, pre-commercial thinning, road work, etc. This estimate is based on what we charge similar scale and type of public watershed landowners in NW Oregon and SW Washington for A) base "on-call" services and B) an estimate of the cost for harvest associated expenses. <i>In non-harvest years:</i> "on-call" for consultation as needed and periodic visit, if no significant active mgmt. Part of their cost is also covered in the mgmt plan updates.
Replanting Survey	This is a post harvest event: <i>If on-going harvests:</i> There would be a 1 year and a 5 year survey of harvested area to ensure ODF required tree growth. This cost is included as part of the harvest event costs of Consulting Forester. <i>If single 10 yr harvest event:</i> a separate cost as the Forester has no scheduled activities on site.
Inventory	<i>If single 10 yr harvest event:</i> High accuracy inventory to establish value to stands to be harvested <i>If ongoing harvests:</i> Moderate accuracy inventory to Monitor / Assess growth for future stands to be harvested <i>If no harvest:</i> low accuracy inventory to monitor forest health issues, invasive plants, potential fire issues, habitat metrics, etc. As well as keeping track of inventory in case it becomes absolutely necessary to harvest for operating expenses.
FSC Certification	<i>Rationale for:</i> Because of watershed, ensure quality of growing and harvesting process. Oversight of forester who may not have watershed specialization. Also decrease social concern of harvesting in watershed. <i>Rationale against:</i> Little value for the money spent. Existing forest practice rules are sufficient for water and other resource protection. Certifying staff themselves may not have sufficient experience in watershed.  Certifying agency likely will require at least a 5 year period. Typically cannot start and stop certification just for harvest years.
Targeted Invasive Plant Mitigation	Harvest events will leave open area in which invasive species can grow as there is plenty of light. In the current harvest plan, 20% of total area to be harvested would be exposed and require invasive species mitigation. A decision about use of herbicide or manual mitigation would need to be made.
Brushing and Road Maintenance	If one time harvest, brushing and road maintenance be the same as if no harvest and any difference in road work is paid for via stumpage arrangement. If ongoing harvesting, more road work is required



## Explanation of Assumptions: Other Costs & Revenue

### Costs

Line Item	Discussion
Interest Rate on Costs	A change in the Fed's monetary policy over time is generally credited in part for the higher inflation rates earlier in that time span. As the Fed's target inflation rate was pegged lower, at 2%, average actual inflation has been lower. Looking at that , in combination with the Fed's 30-year inflation forecast, was the basis for bringing our number closer to 3% rather than the 50-year average of 3.69 which is skewed by early monetary policy.
Grant Writer / Manager	Research / apply for grants. Manage grant reporting requirements. Pursue Donations
Contingency	



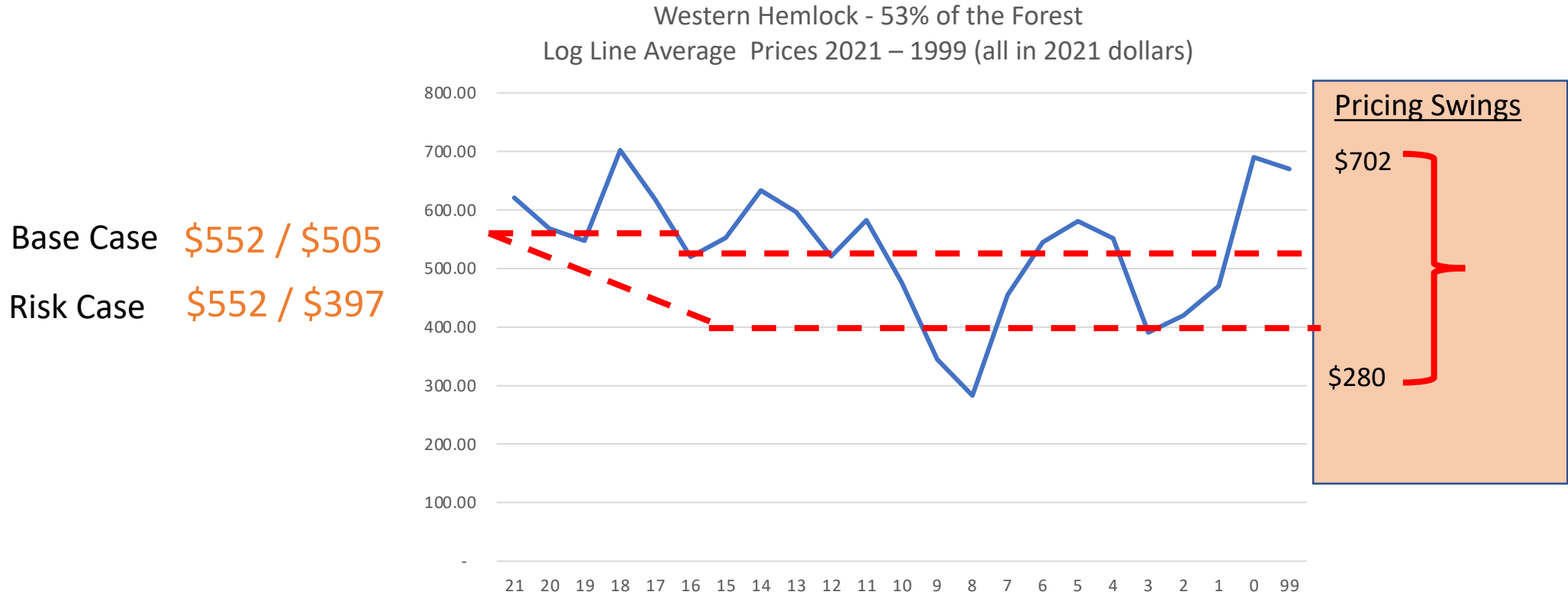
### Revenue

Line Item	Discussion
Stumpage Pricing	<p>Prices:</p> <ul style="list-style-type: none"> <li>• Are net revenue. Contractor will pay for all costs.</li> <li>• Includes some level of non-intensive slash abatement by contractor. (Need to confirm the level of work to be done and that it is appropriate)</li> <li>• Include \$15/thousand board feet for separate replanting contract where District can select stock</li> </ul>
Harvest Revenue Future Discount Factor	This discount factor is to account for risks to future revenues. Risks include, but are not limited to, fire / wind damage, extensive disease, more restricting legislation that impact harvest volumes, growth does not align with model
Stewardship Fund	The account has \$400,00 ish in working capital. Cash is used to pay for expenses until ARPA reimburses. \$200,000 should always be available to pay for expenses through 2026 when all ARPA monies are to be spent. The current balance is \$183,000. After 2026, the balance is likely to be \$400,000
Local Option Levy	<p><u>Revenue:</u> Duration is 5 years. Cap is whatever tax payers will tolerate within the allowed \$10 / \$1000 property valuation</p> <p><u>Costs:</u> Legal work to research and prepare, market research to best determine amount, and work of political action committee to organize and mount a campaign. (Costs associated with campaign cannot be paid by the District)</p>



# Timber Harvest Revenue

## Determining Future Pricing Assumptions from Historical Data. **1999-2021**



**LESSON LEARNED: When you log really matters**  
(Current log pricing higher than historic average and will likely fall)

## Timber Harvest Revenue Pricing Assumptions To Be Used in Scenarios

	Base Case		Risk Case	
	years 0-5	years 6-43	years 0-5	years 6-43 (Std Dev.)
<b>DF #3</b>	\$ 692	\$ 669	Gradual Decline	\$ 520
<b>WW #3</b>	\$ 552	\$ 505		\$ 397
<b>RA</b>	\$ 505	\$ 505		\$ 397
<b>SS</b>	\$ 394	\$ 394		\$ 275
<b>RC</b>	\$ 1,235	\$ 1,235		\$ 989
<b>SF</b>	\$ 552	\$ 505		\$ 397

The mill prices above are discounted by \$15

The prices inflate 2% per year

**LESSON LEARNED: Pricing Varies by Species. Our Watershed is mostly Hemlock (WW)  
Assume near term high pricing transitioning to average pricing over time**



# Characteristics of 2021 Baseline, Current Optimized & Stewardship-Moderate b Harvests

2021 Baseline SCENARIO - 6 harvest	
<b>Timber Harvest Volume (MBF)</b>	
DF	338
RA	299
RC	1,059
SF	
SS	4,775
WH	10,886
<b>Total Removed</b>	<b>17,357</b>
<b>Residual Volume MBF (NOT DEPLETED UNTIL YR 10)</b>	
<b>Residual Volume tCO2e (INCORRECT)</b>	
<b>Harvested Acres</b>	<b>662</b>

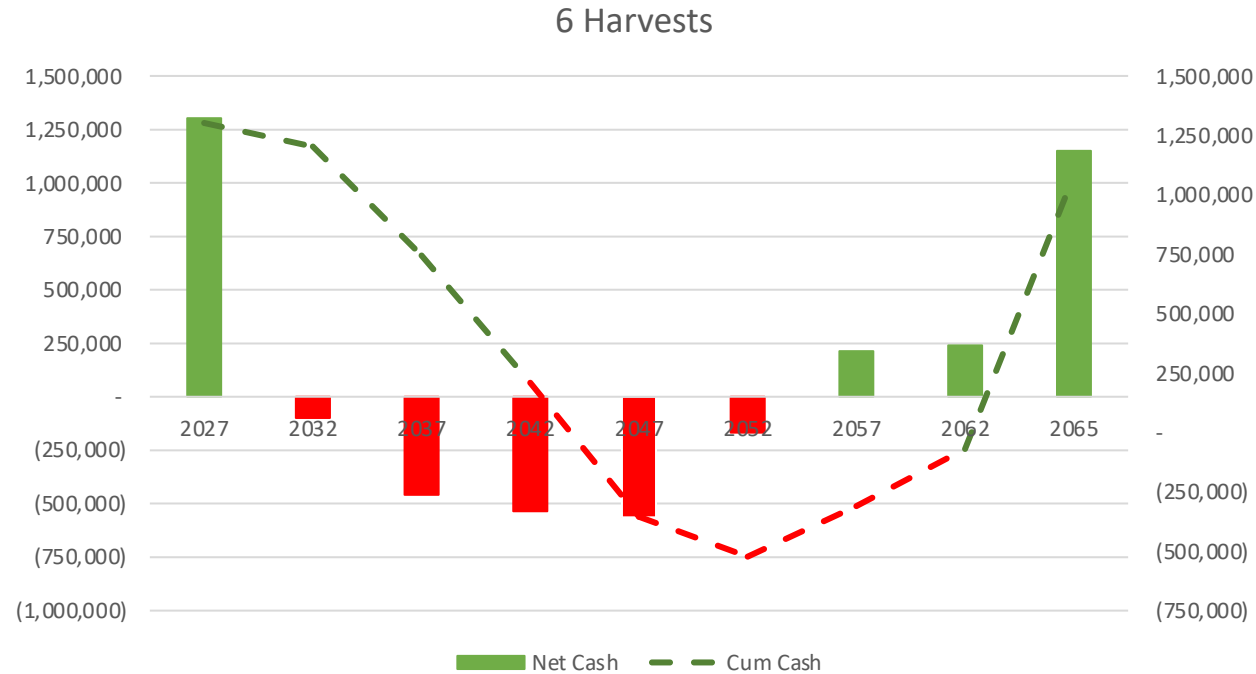
OPTIMIZED REVENUE SCENARIO	
<b>Timber Harvest Volume (MBF)</b>	
DF	5,578
GF	253
RA	2,653
RC	1,388
SF	76
SS	6,052
WH	15,289
<b>Total Removed</b>	<b>31,289</b>
<b>Residual Volume MBF (NOT DEPLETED UNTIL YR 10)</b>	56,056
<b>Residual Volume tCO2e (INCORRECT)</b>	673,574
<b>Harvested Acres</b>	<b>1,240</b>
STEWARDSHIP - Moderate 'b' SCENARIO	
<b>Timber Harvest Volume (MBF)</b>	
DF	1,411
RA	1,062
RC	68
SF	79
SS	909
WH	5,110
<b>Total Removed</b>	<b>8,639</b>
<b>Residual Volume MBF (NOT DEPLETED UNTIL YR 10)</b>	158,616
<b>Residual Volume tCO2e (INCORRECT)</b>	2,839,258
<b>Harvested Acres</b>	<b>218</b>

	<b>Net Revenue</b>
Optimized Harvest	\$ 9,888,346
2021 6 Harvest Baseline	\$ 4,775,326 *
Stewardship Moderate b	\$ 2,708,582

\* \$5,303,000 assuming ARPA would pay for logging costs



# 2021 6-harvest baseline -Cumulative Cash Flow



- ARPA paid logging costs (increasing net revenues)
- \$500,000 in donations

