Impacts of Wood Products Contributions and Stand Structure Changes on Carbon Reductions

Version 3.1 of the CAR Forestry Protocol

Prepared for The Nature Conservancy under Contract CARO[01252010],

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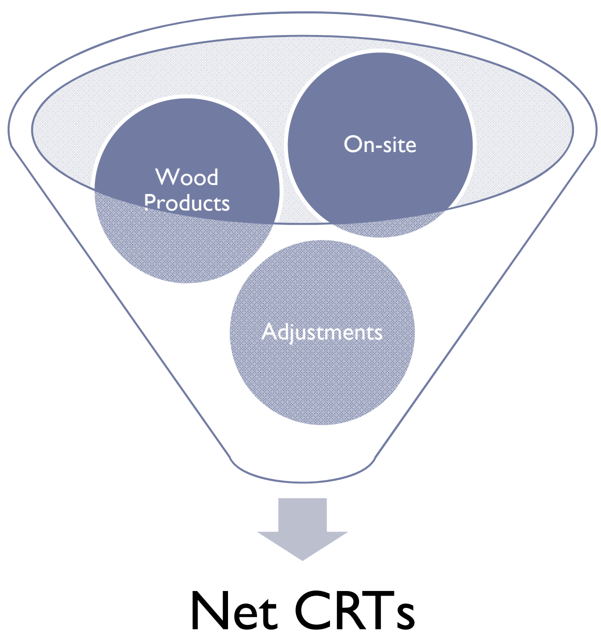


Summary

This study examines the potential influence of wood products on reduction credits using the Climate Action Reserve Forestry Protocol version 3.1, improved forest management project type. A second goal was to examine the potential to derive CRTs while converting from natural stands to plantations.

California mixed conifer and coast redwood/Douglas-fir forests were modeled using FVS-WESSIN (Westside Sierra variant) and CRYPTOS growth simulators. Initial inventory conditions well above and below common practice were modeled as were varying ending inventory levels. Medium and high site classes were also modeled. High-yielding ponderosa pine, interior Douglas-fir and coast Douglas-fir plantations were simulated. Harvest schedules were constructed to simulate project activity and baselines. CRTs were calculated but did not include the project-specific risk analysis and buffer pool contributions.

In most scenarios the wood products contributions were negative. Positive contributions only occurred where initial stocking levels were well above the common practice, but were still less than about 10% of project CRTs. Plantation yields were not sufficient to cause gains in CRTs except for some stands with low initial stocking. These gains were modest, usually less than about 5%, and would be offset by dead wood losses if converting complex stands.

This study indicates that the wood products pool has mostly a negative effect on CRTs due to the substantial harvest necessary in the baseline simulations. While this will have substantial ramifications for projects that propose reduced harvest levels, there is no evidence that the wood products may be relied upon for the majority of CRTs in a project. No clear gain in CRTs was evident from conversion of multi-species natural stands to monoculture plantations.

Contents

Methods

The methods were divided into two analyses: wood products impacts on Climate Reserve Tonnes (CRTs) and forest structural change impacts on CRTs. Accounting was done per the Climate Action Reserve *Forest Project Protocol, Version 3.1* (October 22, 2009). The *Improved Forest Management* project type was utilized (CAR 2009).

Wood Products Impact Analysis

The coast redwood/Douglas-fir and Sierra mixed conifer forest types were analyzed. Two site classes were analyzed for each forest type: high site I and medium site III. Within each forest type and site class, two starting conditions were considered: well below and well above the common practice. Common practice was given in Appendix F of the protocol:

- Northern California Coast, Redwood: 72 tonnes/acre live tree carbon
- Sierra Nevada-Southern Cascades, California mixed conifer: 39 tonnes/acre live tree carbon

Initial stands were generated using a normal distribution of diameters by species and plot (R 2010). Stands were defined as groupings of plots, as found in a typical forest inventory, with 10 plots per stand that met the 5% sampling error threshold defined in the protocol. Tree height and crown ratios were imputed based on Biging et al. (1994) for the mixed conifer and the Jackson Demonstration State Forest functions for redwood and coast Douglas-fir. The volume and biomass functions used were the FIA regional functions used for the common practice estimates in the protocol (FIA 2009b, a).

Yield streams were constructed that modeled the initial stands through time, simulating growth, mortality and harvest (see Table 8 for an example). Harvests were simulated at the mid-point of each decade. Commercial thinning from below was simulated by harvesting to a residual basal area per acre from the smallest trees first that met minimum merchantability standards. Two residual basal areas were modeled, the minimum under the California Forest Practice Regulations and twice that amount. For each scenario the following yield streams were constructed.

- Grow only, no harvests
- Thin every decade (two levels of residual stocking)
- Thin, clearcut, replant, thin (clearcut once)

Growth, mortality and harvest were simulated using CRYPTOS (Wensel et al. 1987) for the coast stands and FVS-WESSIN (west-side Sierra Nevada variant) (Dixon 1994) for the mixed conifer stands. There were 184 yield streams created for the wood products impacts analysis.

Schedules of growth and harvest were constructed using the yield streams created above. The schedules were for 100 years (ten 10-year periods). A linear programming application (GIPALS 2010) was used to optimize given functions subject to given constraints. Three optimization functions were specified for each scenario.

1. Maximize the 100-year on-site carbon difference between the project activity and the average on-site baseline.
2. Maximize the 100-year off-site in-use carbon difference between the project activity and the average off-site in-use baseline.

3. Maximize the 100-year total on and off-site in-use carbon difference between the project activity and the average baseline. This combines 1 and 2 above.

In calculating CRTs, all the variables in equation 6.1 (CAR 2009, page 38) of the protocol were considered. This included onsite carbon in the project activity and baseline, secondary effects due to reductions in harvest in the project activity relative to the baseline, and any negative carryover. Also, the penalty for landfill carbon in the baseline exceeding the pool in the project activity was also included. Project specific deductions for the buffer pool, which are based on a risk assessment, were not included as they may have influenced the results so as to not make them general across projects.

Forest Structural Change Impact Analysis

The existing carbon yield streams from the wood products impact analysis were used to represent initial mixed species stands. Plantations of Douglas-fir replaced the mixed coast stands and ponderosa pine and Douglas-fir plantations replaced mixed conifer stands. The plantations were grown at two site classes higher than the initial stands and were modeled to represent an optimal condition of growth that may be obtained by attending to competing vegetation control, optimum site growing conditions, and genetically superior planted stock. The original stands used site class 3 while the plantations were grown at site class 1. In addition to the 184 yield streams created for the wood products impacts analysis, 60 additional yield streams were created for a total of 244.

Six harvest schedules were simulated, two for each plantation type. The schedules were run with an optimization goal of total carbon production, relative to a baseline, for the low and high starting conditions. The results were compared to the analogous results from the standard schedules in the wood products impact analysis. The silvicultural options for the plantations were as follows:

- Clearcut, plant on a 16'x16' spacing (no hardwood competition), commercial thin to the regulatory minimum of 125 ft^2 per acre in basal area (100 for pine), clearcut again at the regulatory minimum age of 50 years (for site 1) and 80 years (for site 3); continue planting and thinning.
- All plantations are initiated in the first 50 years.

Additional constraints were added to the six schedules to ensure that the intensive plantation yield streams could only be used for the project activity and not the baseline.

Results

The results of the 48 individual harvest schedules for the wood products impact analysis are shown in the figures in Appendix B (B1 – B48). See the sidebar on page 6 for a detailed description on how to read the output. A summary of the results is presented in Table 1. When projects were optimized for on-site carbon credit production (blue) the total tonnes per acre ranged from 3.0 to 69.3. Note that this equates to 11.0 to 254.3 tonnes of CO2e per acre; all results are reported in C. Offsite in-use contributions to these projects was usually negative and at most 4.1 tonnes per acre or 10%.

When projects were set to optimize the production of offsite in-use carbon credits, all but one produced infeasible projects because of the negative on-site consequences. The one project that did work produced substantially less CRTs than the ones that utilized onsite credits, 15.1 versus 62.3.

Table 1. Results of project schedules for analyzing the impacts of wood products on CRTs. NF means Not Feasible.

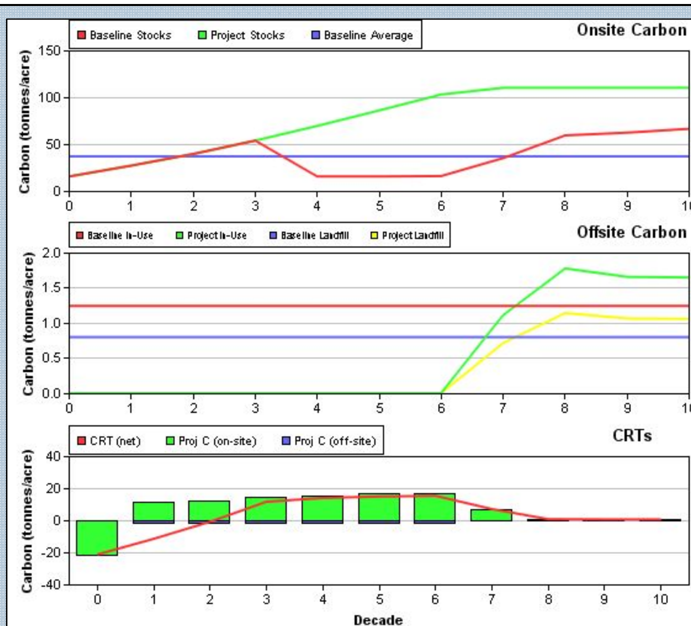
				Project Length (years)			Objective to Maximize								
							On-site C			Off-site, In-use C			Total C		
Forest Type	Initial Stocking	Site Class	Ending Inventory	On-Site	Off-Site	Total	On-Site (t/a)	Off-Site (t/a)	**Total (t/a)**	On-Site (t/a)	Off-Site (t/a)	**Total (t/a)**	On-Site (t/a)	Off-Site (t/a)	**Total (t/a)**
mixed conifer	Low	3	CP	40	NA	40	18.0	-2.4	**14.8**	NF	NF	**NF**	18.0	-2.4	**14.8**
mixed conifer	Low	3	Between Initial and CP	20	NA	20	4.9	-1.4	**3.0**	NF	NF	**NF**	4.9	-1.4	**3.0**
mixed conifer	Low	1	CP	70	100	70	73.2	-7.3	**62.3**	2.2	10.8	**15.1**	73.2	-7.3	**62.3**
mixed conifer	Low	1	Between Initial and CP	50	NA	50	45.7	-5.7	**37.3**	NF	NF	**NF**	45.7	-5.7	**37.3**
mixed conifer	High	3	CP	20	NA	20	62.3	-0.9	**60.5**	NF	NF	**NF**	62.3	-0.9	**60.8**
mixed conifer	High	3	Between Initial and CP	40	NA	40	30.6	0.8	**31.0**	NF	NF	**NF**	30.6	0.8	**31.0**
mixed conifer	High	1	CP	20	NA	20	54.2	-0.9	**52.5**	NF	NF	**NF**	54.2	-0.9	**52.6**
mixed conifer	High	1	Between Initial and CP	20	NA	20	22.2	2.4	**25.1**	NF	NF	**NF**	22.2	2.4	**24.8**
redwood/Doug-fir	Low	3	CP	20	NA	20	28.9	-2.0	**26.0**	NF	NF	**NF**	28.9	-1.8	**26.2**
redwood/Doug-fir	Low	3	Between Initial and CP	10	NA	10	15.6	-1.2	**13.9**	NF	NF	**NF**	15.6	-1.1	**14.0**
redwood/Doug-fir	Low	1	CP	20	NA	20	17.7	-1.6	**15.2**	NF	NF	**NF**	17.7	-1.6	**15.2**
redwood/Doug-fir	Low	1	Between Initial and CP	20	NA	20	10.0	-1.0	**8.2**	NF	NF	**NF**	10.0	-1.0	**8.2**
redwood/Doug-fir	High	3	CP	20	NA	20	67.7	-0.6	**66.8**	NF	NF	**NF**	67.7	0.1	**67.8**
redwood/Doug-fir	High	3	Between Initial and CP	20	NA	20	35.7	2.4	**38.6**	NF	NF	**NF**	35.7	3.1	**39.5**
redwood/Doug-fir	High	1	CP	20	NA	20	68.7	0.9	**69.3**	NF	NF	**NF**	68.7	1.1	**69.7**
redwood/Doug-fir	High	1	Between Initial and CP	20	NA	20	35.7	4.1	**40.1**	NF	NF	**NF**	35.7	4.3	**40.4**

The projects that optimized for maximum total carbon production (on and off site) were similar and often identical to the projects that maximized onsite carbon (red compared to blue). The largest increase realized in managing for both on and off-site carbon was 1.1 tonne per acre or 1.6% of the project (67.7 versus 67.8 tonnes per acre). As before, offsite in-use contributions to these projects were often negative and was at most 4.3 tonnes per acre or 10.6% of the project total. The starting and ending inventories each had the largest effect on CRTs realized across type and site classes. Having a high versus low starting inventory or ending at a higher versus lower inventory averaged differences in CRTs realized by a factor of two.

Comparing the results of the projects that included high-yield plantations in the project activity to ones that did not (Table 2) resulted in 0% to 5.7% increases in CRTs. Where gains did occur, they were mostly due to higher returns (actually less loss) in offsite storage (i.e. wood products).

Table 2. Comparison of standard silviculture versus high-yield plantation options.

				Resulting CRTs						
				Standard Silviculture			High-Yield Plantation			
Initial Forest Type	Plantation Type	Initial Stocking	Project Length (years)	On-Site (t/a)	Off-Site (t/a)	**Total (t/a)**	On-Site (t/a)	Off-Site (t/a)	**Total (t/a)**	***Increase (%)***
mixed conifer	Ponderosa Pine	Low	40	18.0	-2.4	**14.8**	18.0	-2.0	**15.2**	***2.7%***
mixed conifer	Ponderosa Pine	High	20	62.3	-0.9	**60.8**	62.2	-0.6	**61.3**	***0.8%***
mixed conifer	Douglas-fir	Low	40	18.0	-2.4	**14.8**	18.0	-2.0	**15.2**	***2.7%***
mixed conifer	Douglas-fir	High	20	62.3	-0.9	**60.8**	62.3	-1.0	**60.7**	***0.0%***
redwood/Doug-fir	Douglas-fir	Low	20	28.9	-1.8	**26.2**	28.9	-0.7	**27.7**	***5.7%***
redwood/Doug-fir	Douglas-fir	High	20	67.7	0.1	**67.8**	67.7	0.1	**67.8**	***0.0%***



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	36.8	15.4	0.0	1.2	0.0	0.0	0.8	0.0
1	27.0	36.8	27.0	0.0	1.2	0.0	0.0	0.8	0.0
2	39.4	36.8	39.4	0.0	1.2	0.0	0.0	0.8	0.0
3	53.7	36.8	53.7	0.0	1.2	0.0	0.0	0.8	0.0
4	15.4	36.8	69.3	5.5	1.2	0.0	3.5	0.8	0.0
5	15.4	36.8	85.9	0.7	1.2	0.0	0.5	0.8	0.0
6	15.9	36.8	102.9	1.6	1.2	0.0	1.0	0.8	0.0
7	35.0	36.8	110.0	0.0	1.2	1.1	0.0	0.8	0.7
8	59.2	36.8	110.0	0.0	1.2	1.8	0.0	0.8	1.1
9	62.2	36.8	110.0	2.3	1.2	1.7	1.5	0.8	1.1
10	66.3	36.8	110.0	2.2	1.2	1.6	1.4	0.8	1.1

Schedule Info

Description:
MCLowStockingSite1End100%CPMaxTotal
Objective Function:
Max Total CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
100

Stand Name:
Mixed conifer, low stocking, even-aged

CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	-21.4	0.0	0.0	0.0	0.0	-21.4
1	11.5	-1.2	0.2	-0.8	-21.4	-11.6
2	12.4	-1.2	0.2	-0.8	-11.6	-1.0
3	14.3	-1.2	0.2	-0.8	-1.0	11.5
4	15.7	-1.2	0.2	-0.8	0.0	13.9
5	16.6	-1.2	0.2	-0.8	0.0	14.8
6	17.0	-1.2	0.2	-0.8	0.0	15.2
7	7.1	-0.1	0.0	-0.1	0.0	6.9
8	0.0	0.5	0.1	0.0	0.0	0.6
9	0.0	0.4	0.1	0.0	0.0	0.5
10	0.0	0.4	0.1	0.0	0.0	0.5
Total	**73.2**	**-6.2**	**-1.8**	**-4.9**		**29.9**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
222.6	777.4	0.0	1,000.0	0.0	0.0
222.6	0.0	777.4	1,000.0	0.0	0.0
777.4	162.2	60.3	685.7	314.3	0.0
837.8	0.0	162.2	685.7	314.3	0.0
1,000.0	0.0	0.0	603.8	314.3	81.9
222.6	777.4	0.0	572.9	314.3	112.8
222.6	777.4	0.0	592.7	314.3	93.0
162.2	837.8	0.0	602.0	314.3	83.7
566.8	**333.2**	**100.0**	**774.3**	**188.6**	**37.1**

This sidebar describes how to read output from the scheduler, which uses linear programming optimization to construct a baseline and project activity schedule to optimize the production of Certified Reduction Tonnes (CRTs). Information about the schedule is shown in the upper right corner. The description is given as "MCLowStockingSite1End100%CPMaxTotal", which means the following:

- MC = mixed conifer forest type
- LowStocking = initial inventory is below the common practice mean given by the CAR Protocol (39 tonnes/acre C)
- Site1 = site class one, the highest and most productive of five site classes
- End100%CP = schedule is constrained to end at 100% of the common practice figure (39)
- MaxTotal = the objective function of the schedule is to maximize the total (on-site plus off-site in-use carbon) over the 100-year projection.

Under the description is given the objective function, list of constraints, common practice carbon tonnes per acre, project target carbon tonnes per acre, and the name of the initial stand. In this example the ending on-site carbon stocking is set to 100 tonnes per acre because lower values were not feasible for the model to solve. The growth was too high in this scenario, but a target of 39 tonnes C per acre worked for site class 3.

The top graph shows the baseline and project activity projections of carbon stocks along with the averaged baseline stocking, which is constrained to be at or above the starting stocks. The top table shows the carbon yields for the various pools for the project and baseline projections. The middle graph shows the off-site carbon over time; there are lines for project and baseline contributions to the in-use and landfill pools. The baseline lines are for the average since this is what was used in calculating CRTs. The bars on the bottom graph show the on-site and off-site (in-use) contributions for each decade along with a line showing the net CRTs. The table to the right shows the CRT accounting by decade including on-site, off-site, the in-use leakage adjustment, landfill effect (negative or zero), carryover from decade to decade, and the net CRTs. The table in the lower right shows the allocation of acres to the project and baseline projections by general silvicultural treatment: grow with no harvest, commercial thin from below and clearcut. Even though the schedule is for 100 years, a practical project will likely be less, in this case 70 years.

Conclusions

The research questions that initiated this study are listed below with answers.

1) **Is it possible to derive a majority of CRTs from wood products over the life of an improved forest management project?**

   Answer: Based on the simulations done in this study it is not possible to derive a majority of CRTs from wood products. In most cases wood products pools of in-use and landfill negatively affects CRTs due to there being more harvesting simulated in the baseline than in the project activity. When harvesting occurs there is an assumed immediate emission from the above and below ground portions of trees, of which the merchantable portion is generally less than half. The amount of long-term storage estimated from wood products does not offset this emission enough to allow wood products to contribute positively to CRTs in most cases.

2) **Is it possible to derive large amounts of CRTs from wood products relatively early in the project?**

   Answer: This was not evident in any of the scenarios in this study. Baseline modeling requires substantial harvest throughout the planning horizon. This creates a deficit of off-site tonnes that must be matched before credits can be realized from wood products, which usually does not occur until decades have passed, if at all.

3) **At what point in a 100-year project could CRTs be derived primarily from wood products?**

   Answer: In no case that was modeled in this study were CRTs derived primarily from wood products, at least not without a substantial penalty from on-site carbon thereby negating the wood products carbon.

4) **How does the difference in baseline approaches (i.e., above FIA mean and below FIA mean) across different forest types affect total CRTs and their balance of carbon pools?**

   Answer: Positive CRT contributions from wood products only occurred where initial stocking levels were well above the common practice; in no case did this occur when initial stocking was below the common practice. The coast projects were more likely to have positive wood product contributions than were the mixed conifer types. Considering the factors of type, site, starting inventory, and ending inventory the starting and ending inventories were most influential on total CRTs.

5) **Is it feasible to convert a complex multi-species forest to a simplified monoculture and derive CRTs under the protocols?**

Answer: Based on the simulations conducted here, which were very aggressive in plantation productivity assumptions, there is no evidence that conversions to plantations will yield more than a 6% increase in project CRTs and usually less than 3%. While it is may be feasible to convert a complex multi-species forest to a monoculture it would be difficult to perpetuate a short rotation strategy. Once converted, the stand would need to be allowed to mature to offset the on-site losses incurred during conversion. This would also push CRTs decades into the project.

The simulations in this study did not show a preference for the plantation yield streams in almost all cases. Gains from this strategy were most beneficial when the initial inventories were relatively low. Dead wood was not considered in the simulations. If the converted stands were complex and contained relatively large pools of dead wood then this would negate any gains, given that the potential gains were shown to be modest.

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Appendix A: Methodological Detail

The species modeled in this paper are shown in Table 3.

Table 3. Species list.

Common Name	Scientific Name	Two-Character Code	Forest Type
ponderosa pine (pacific)	Pinus ponderosa *benthamiana*	PP	Sierra Mixed Conifer
sugar pine	Pinus lambertiana	SP	Sierra Mixed Conifer
incense-cedar	Calocedrus decurrens	IC	Sierra Mixed Conifer
Douglas-fir (coast)	Pseudotsuga menziesii *menziesii*	DF	Sierra Mixed Conifer, Coast Redwood/Douglas-fir
white fir (Sierra Nevada)	Abies concolor *lowiana*	WF	Sierra Mixed Conifer
California black oak	Quercus kelloggii	BO	Sierra Mixed Conifer
coast redwood	Sequoia sempervirens	RW	Coast Redwood/Douglas-fir
Tanoak	Lithocarpus densiflorus	TO	Coast Redwood/Douglas-fir

The initial conditions of the coast redwood/Douglas-fir stands were composed approximately of 45% redwood, 45% Douglas-fir and 10% tanoak, by basal area. The assumed elevation for the coast redwood/Douglas-fir analysis was 500 feet. Even-aged stands were simulated by using a normal distribution random number generator in R (2010), by species. Regeneration after clearcut was modeled by inputting post-pre-commercial thinned stands ten years after harvest. This is done because CRYPTOS does not have a small tree growth model so trees need to be 3-5 inches in dbh to be grown reasonably by the program. The regeneration was assumed to be on a 16x16 foot spacing (170 trees per acre) consisting of 45% redwood, 45% Douglas-fir and 10% tanoak by number of trees.

The initial conditions of the Sierra mixed conifer stands were composed approximately of 25% ponderosa pine, 5% sugar pine, 15% incense-cedar, 20% Douglas-fir, 25% white fir and 10% black oak, by basal area. The assumed elevation for the Sierra mixed conifer analysis was 4,000 feet. The target quadratic mean diameter (QMD), coefficient of variation (CV) and basal area are given in Table 4. The specifications for the other stands are shown in Tables 3-5. The results for a stand, consisting of 10 plots, is shown in Figure 1. Regeneration after clearcut was modeled using the ESTAB process in FVS. The PLANT keyword was used to specify the planting, which was done at the time of clearcut, since FVS has a small tree growth model. One year seedlings were planted assuming a 16x16 spacing (post-precommercial thin density). The mixed conifer was equal parts ponderosa pine, incense-cedar, Douglas-fir and white fir with black oak sprouting. The height of the seedlings varied by site class.

Table 4. Input specifications for the low stocking mixed conifer plots.

Species	Basal Area (ft^2/ac)	QMD (in.)	CV (%)
PP	12.5	16	16
SP	2.5	18	18
IC	7.5	14	14
DF	10.0	14	14
WF	12.5	12	12
BO	5.0	8	8
Total	50.0		

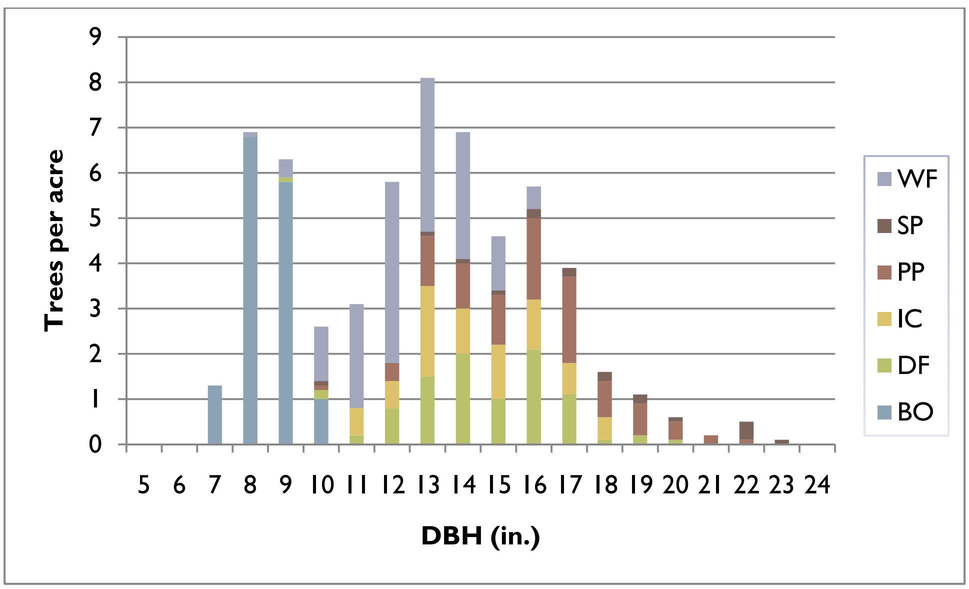


Figure 1. Diameter distribution, by species, of even-aged mixed conifer stand.

Table 5. Input specifications for the high stocking mixed conifer plots.

Species	Basal Area (ft^2/ac)	QMD (in.)	CV (%)
PP	62.5	22	22
SP	12.5	24	24
IC	37.5	20	20
DF	50.0	18	18
WF	62.5	16	16
BO	25.0	12	12
Total	250.0		

Table 6. Input specifications for the low stocking redwood/Douglas-fir plots.

Species	Basal Area (ft^2/ac)	QMD (in.)	CV (%)
RW	45.0	16	16
DF	45.0	16	16
TO	10.0	10	10
Total	100.0		

Table 7. Input specifications for the high stocking redwood-Douglas-fir plots.

Species	Basal Area (ft^2/ac)	QMD (in.)	CV (%)
RW	120.0	20	20
DF	120.0	20	20
TO	10.0	14	14
Total	250.0		

Yield streams were constructed using uncalibrated growth with full mortality enabled in both simulators. Harvesting was simulated in CRYPTOS using the R2 option, which simulated a commercial thinning from below to a residual basal area. Clearcuts also used the R2 option leaving 0.1 trees per acre. Harvests in FVS were simulated using the THINBBA and THINSDI keywords for commercial thins and clearcuts, respectively. An example yield stream from FVS is shown in Table 8.

Table 8. Example of a yield stream for the high-stocked mixed conifer forest type, site class 3.

		On-Site Inventory (per acre)						Harvest (per acre)			
Decade	Activity	No. Trees	Basal Area (sq. ft.)	Avg. Diam. (in.)	Volume (Bd. Ft.)	Carbon (tonnes)	WHR	Volume (Bd. Ft.)	Carbon (tonnes)	Off-site In-use Carbon (tonnes)	Off-site Landfill Carbon (tonnes)
0		147.1	257.6	17.9	36,307	96.8	SMC4D				
1	Thin to 150 sq ft/ac	102.8	160.2	16.9	29,376	68.4	SMC4M	12,985	37.0	4.5	2.9
2		101.1	179.3	18.0	35,502	79.6	SMC4M				
3	Clearcut & Plant	407.5	2	0.9	0	0.0	SMC1S	38,581	85.2	10.0	6.4
4		400.1	28.3	3.6	0	0.3	SMC2S				
5		392.6	62.6	5.4	12	5.7	SMC2P				
6		385.2	106.7	7.1	944	21.6	SMC3D				
7		377.9	156.4	8.7	4,602	39.3	SMC3D				
8		348.2	200.8	10.3	12,256	56.9	SMC3D				
9		308.9	237.3	11.9	21,735	74.9	SMC4D				
10	Thin to 150 sq ft/ac	181.0	191.4	13.9	24,108	69.4	SMC4D	7,332	15.1	2.6	1.7

The following residual basal areas were used for the commercial thinning.

- Mixed conifer site 3: 75 ft^2/acre (rule minimum), 150 ft^2/acre
- Mixed conifer site 1: 125 ft^2/acre (rule minimum), 250 ft^2/acre
- Redwood/Douglas-fir site 3: 100 ft^2/acre (rule minimum), 200 ft^2/acre

- Redwood/Douglas-fir site I: 125 ft^2/acre (rule minimum), 250 ft^2/acre
- Ponderosa pine plantation site I: 100 ft^2/acre (rule minimum)
- Douglas-fir plantation (coast and interior) site I: 125 ft^2/acre (rule minimum)

The calculation of wood products pools (off-site) followed the protocols. A thousand cubic feet of Douglas-fir sawlogs delivered to the mill will produce the following contributions to the in-use and landfill pools.

$$1,000\,ft^3 \times \left(\frac{26.77\,lbs}{ft^3}\right) \times \left(\frac{0.5\,lbs\text{ C}}{1.0\,lbs\text{ biomass}}\right) \times \left(\frac{1\,tonne}{2,204.6\,lbs}\right) \times 0.675\text{ mill efficiency} \times 0.463\text{ 100-yr in-use} = 1.9\text{ tonne C}$$

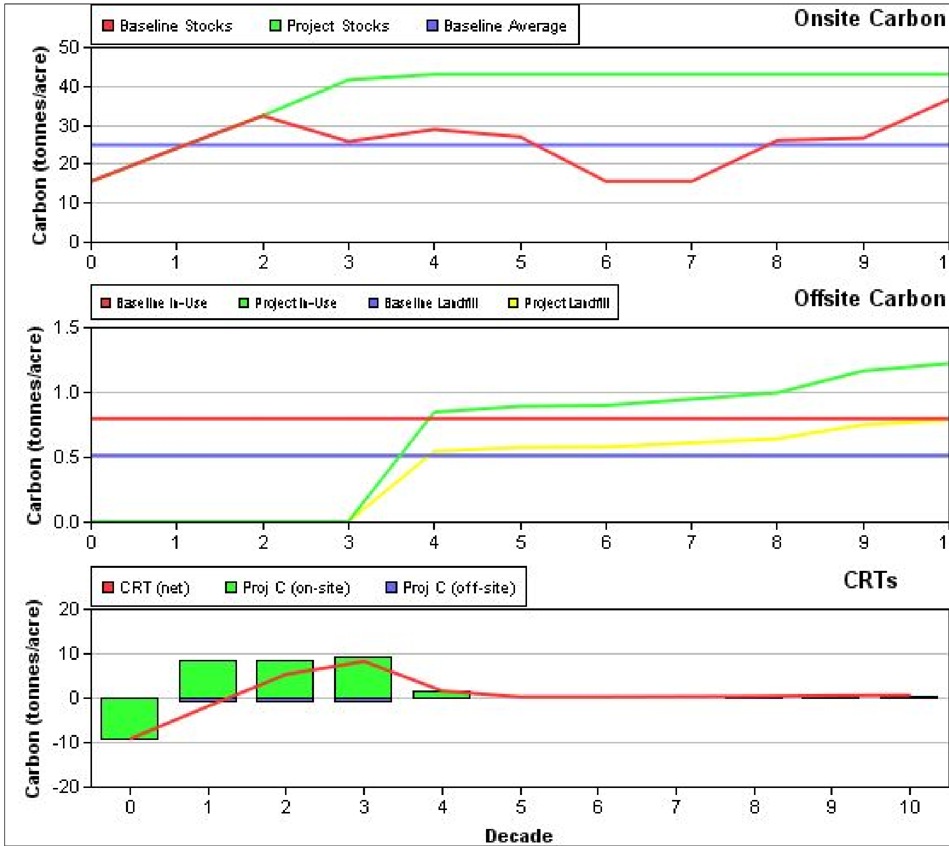
$$1,000\,ft^3 \times \left(\frac{26.77\,lbs}{ft^3}\right) \times \left(\frac{0.5\,lbs\text{ C}}{1.0\,lbs\text{ biomass}}\right) \times \left(\frac{1\,tonne}{2,204.6\,lbs}\right) \times 0.675\text{ mill efficiency} \times 0.298\text{ 100-yr landfill} = 1.2\text{ tonne C}$$

Using six board feet to the cubic foot for an approximate conversion, then about 6 MBF equals 1.9 tonnes C for in-use and 1.2 tonnes C in landfill storage. This assumes all of the wood is going to softwood lumber. For this analysis a statewide average production of 92% softwood lumber, 7.6% softwood plywood, and 0.4% miscellaneous products was used.

The harvest schedule used three different optimization functions. The following constraints were also used to ensure logical and reasonable results.

1. Sum of the acres for project activity equaled 1,000 acres.
2. Sum of the acres for the baseline equaled 1,000 acres.
3. Each period in a yield stream must have equal acres for the project activity and baseline.
4. On-site carbon in project activity and baseline greater than or equal to baseline and/or starting stocks where applicable.
5. On-site baseline carbon greater than or equal to common practice where applicable.
6. On-site project activity carbon within 10% of ending target constraint when set.

Appendix B: Project Schedules



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	24.8	15.4	0.0	0.8	0.0	0.0	0.5	0.0
1	23.9	24.8	23.9	0.0	0.8	0.0	0.0	0.5	0.0
2	32.2	24.8	32.2	0.0	0.8	0.0	0.0	0.5	0.0
3	25.6	24.8	41.5	1.5	0.8	0.0	1.0	0.5	0.0
4	28.7	24.8	42.9	0.3	0.8	0.8	0.2	0.5	0.5
5	26.8	24.8	42.9	1.0	0.8	0.9	0.7	0.5	0.6
6	15.4	24.8	42.9	2.3	0.8	0.9	1.5	0.5	0.6
7	15.4	24.8	42.9	0.8	0.8	0.9	0.5	0.5	0.6
8	25.9	24.8	42.9	0.0	0.8	1.0	0.0	0.5	0.6
9	26.5	24.8	42.9	1.4	0.8	1.2	0.9	0.5	0.7
10	36.5	24.8	42.9	0.6	0.8	1.2	0.4	0.5	0.8

Schedule Info

Description:
MCLowStockingSite3End100%CPMaxOnSite
Objective Function:
Max Onsite CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
39

Stand Name:
Mixed conifer, low stocking, even-aged

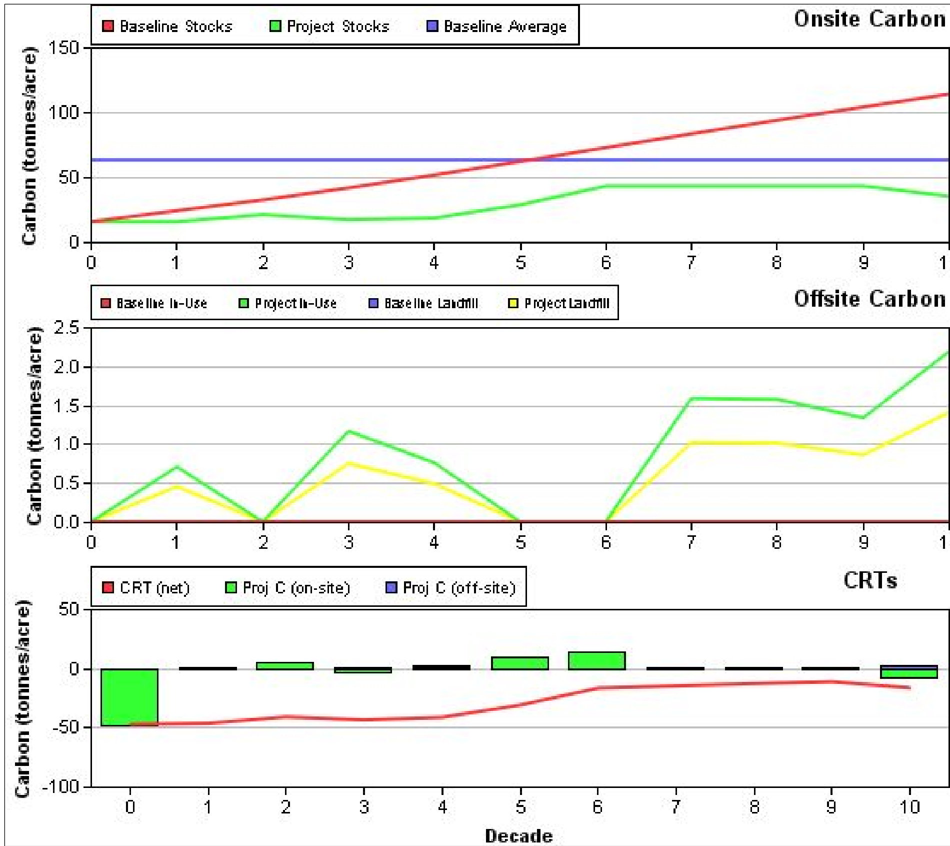
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	-9.4	0.0	0.0	0.0	0.0	-9.4
1	8.5	-0.8	0.2	-0.5	-9.4	-2.0
2	8.3	-0.8	0.2	-0.5	-2.0	5.2
3	9.2	-0.8	0.2	-0.5	0.0	8.1
4	1.4	0.0	0.0	0.0	0.0	1.5
5	0.0	0.1	0.0	0.0	0.0	0.1
6	0.0	0.1	0.0	0.0	0.0	0.1
7	0.0	0.1	0.0	0.0	0.0	0.2
8	0.0	0.2	0.0	0.0	0.0	0.2
9	0.0	0.4	0.1	0.0	0.0	0.4
10	0.0	0.4	0.1	0.0	0.0	0.5
Total	**18.1**	**-1.0**	**-0.8**	**-1.5**		**5.0**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
617.8	0.0	382.2	1,000.0	0.0	0.0
382.2	617.8	0.0	545.7	320.7	133.6
382.2	617.8	0.0	646.6	286.3	67.0
382.2	158.2	459.7	640.0	232.7	127.4
841.8	0.0	158.2	699.4	182.4	118.2
1,000.0	0.0	0.0	562.1	365.2	72.7
617.8	382.2	0.0	634.8	244.4	120.8
617.8	382.2	0.0	693.5	199.2	107.3
684.2	**215.8**	**100.0**	**742.2**	**183.1**	**74.7**

Figure 1. One hundred year schedule for mixed conifer, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 39 tonnes per acre. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	63.1	15.4	0.0	0.0	0.0	0.0	0.0	0.0
1	23.9	63.1	15.4	0.0	0.0	0.7	0.0	0.0	0.5
2	32.2	63.1	20.9	0.0	0.0	0.0	0.0	0.0	0.0
3	41.5	63.1	17.0	0.0	0.0	1.2	0.0	0.0	0.7
4	51.5	63.1	18.2	0.0	0.0	0.8	0.0	0.0	0.5
5	61.9	63.1	28.5	0.0	0.0	0.0	0.0	0.0	0.0
6	72.6	63.1	42.9	0.0	0.0	0.0	0.0	0.0	0.0
7	83.2	63.1	42.9	0.0	0.0	1.6	0.0	0.0	1.0
8	93.7	63.1	42.9	0.0	0.0	1.6	0.0	0.0	1.0
9	103.9	63.1	42.9	0.0	0.0	1.3	0.0	0.0	0.9
10	113.8	63.1	35.1	0.0	0.0	2.2	0.0	0.0	1.4

Schedule Info

Description:
MCLowStockingSite3End100%CPMaxInUse
Objective Function:
Max InUse CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
39

Stand Name:
Mixed conifer, low stocking, even-aged

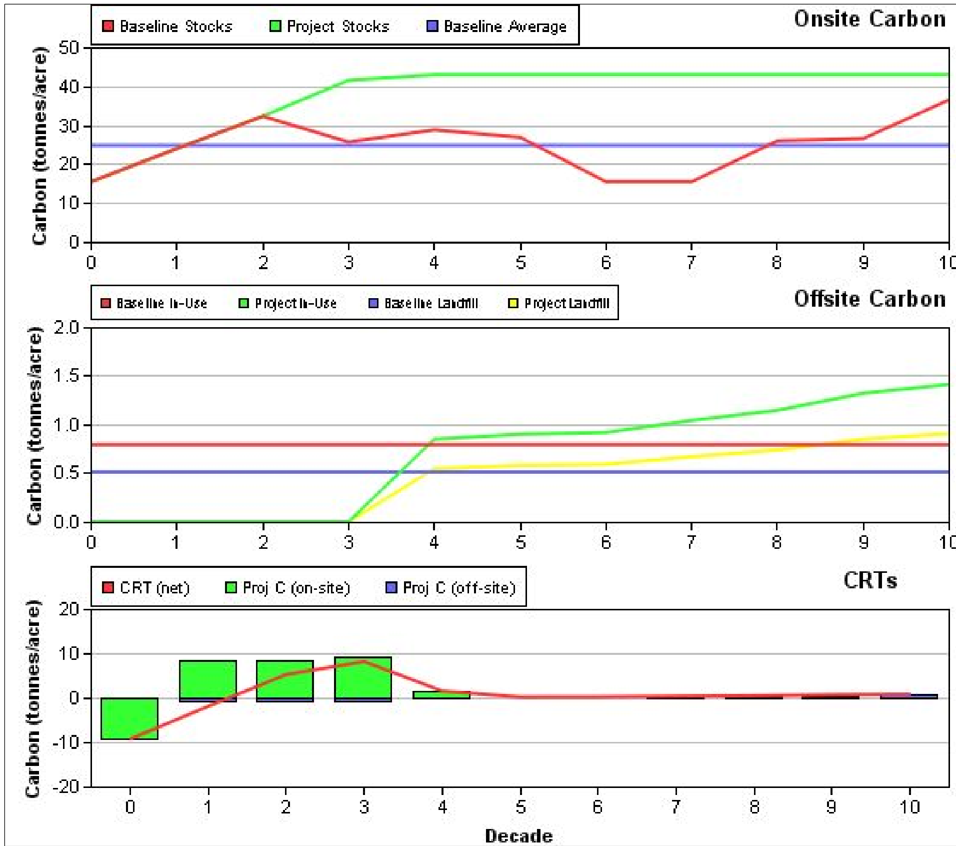
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	-47.6	0.0	0.0	0.0	0.0	-47.6
1	0.0	0.7	0.1	0.0	-47.6	-46.8
2	5.5	0.0	0.0	0.0	-46.8	-41.3
3	-3.9	1.2	0.2	0.0	-41.3	-43.9
4	1.3	0.8	0.2	0.0	-43.9	-41.7
5	10.3	0.0	0.0	0.0	-41.7	-31.4
6	14.4	0.0	0.0	0.0	-31.4	-17.0
7	0.0	1.6	0.3	0.0	-17.0	-15.1
8	0.0	1.6	0.3	0.0	-15.1	-13.2
9	0.0	1.3	0.3	0.0	-13.2	-11.6
10	-7.8	2.2	0.4	0.0	-11.6	-16.8
Total	**-28.0**	**9.3**	**-1.9**	**0.0**		**-326.4**

Silviculture (acres)

	Baseline			Project		
Decade	Grow	Thin	Clear	Grow	Thin	Clear
Initial						
1	1,000.0	0.0	0.0	644.6	0.0	355.4
2	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	1,000.0	0.0	0.0	704.0	0.0	296.0
4	1,000.0	0.0	0.0	851.5	0.0	148.5
5	1,000.0	0.0	0.0	1,000.0	0.0	0.0
6	1,000.0	0.0	0.0	1,000.0	0.0	0.0
7	1,000.0	0.0	0.0	647.3	292.6	60.0
8	1,000.0	0.0	0.0	504.5	407.6	87.9
9	1,000.0	0.0	0.0	296.5	703.5	0.0
10	1,000.0	0.0	0.0	147.9	799.9	52.2
Total	**1,000.0**	**0.0**	**0.0**	**679.6**	**220.4**	**100.0**

Figure 2. One hundred year schedule for mixed conifer, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 39 tonnes per acre. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	24.8	15.4	0.0	0.8	0.0	0.0	0.5	0.0
1	23.9	24.8	23.9	0.0	0.8	0.0	0.0	0.5	0.0
2	32.2	24.8	32.2	0.0	0.8	0.0	0.0	0.5	0.0
3	25.6	24.8	41.5	1.5	0.8	0.0	1.0	0.5	0.0
4	28.7	24.8	42.9	0.3	0.8	0.8	0.2	0.5	0.5
5	26.8	24.8	42.9	1.0	0.8	0.9	0.7	0.5	0.6
6	15.4	24.8	42.9	2.3	0.8	0.9	1.5	0.5	0.6
7	15.4	24.8	42.9	0.8	0.8	1.0	0.5	0.5	0.7
8	25.9	24.8	42.9	0.0	0.8	1.1	0.0	0.5	0.7
9	26.5	24.8	42.9	1.4	0.8	1.3	0.9	0.5	0.8
10	36.5	24.8	42.9	0.6	0.8	1.4	0.4	0.5	0.9

Schedule Info

Description:
MCLowStockingSite3End100%CPMax Total

Objective Function:
Max Total CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
39

Proj. Target C (t/a):
39

Stand Name:
Mixed conifer, low stocking, even-aged

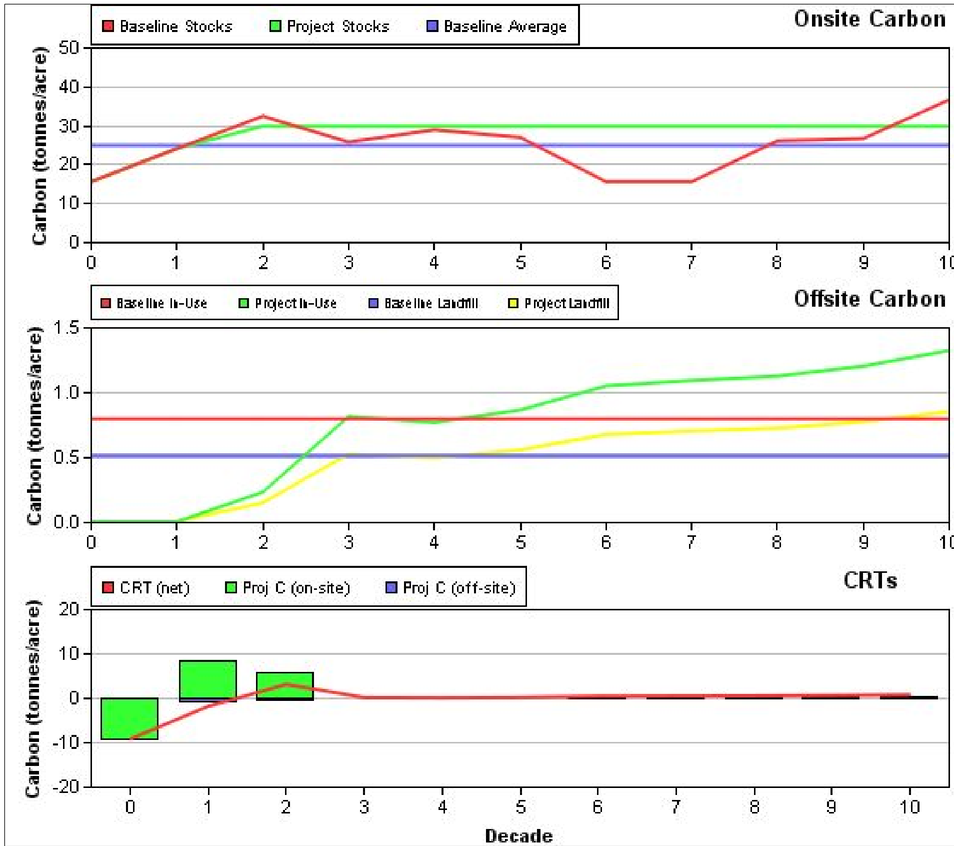
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-9.4	0.0	0.0	0.0	0.0	-9.4
1	8.5	-0.8	0.2	-0.5	-9.4	-2.0
2	8.3	-0.8	0.2	-0.5	-2.0	5.2
3	9.2	-0.8	0.2	-0.5	0.0	8.1
4	1.4	0.1	0.0	0.0	0.0	1.5
5	0.0	0.1	0.0	0.0	0.0	0.1
6	0.0	0.1	0.0	0.0	0.0	0.1
7	0.0	0.2	0.0	0.0	0.0	0.3
8	0.0	0.4	0.1	0.0	0.0	0.4
9	0.0	0.5	0.1	0.0	0.0	0.6
10	0.0	0.6	0.1	0.0	0.0	0.7
Total	**18.1**	**-0.4**	**-0.9**	**-1.5**		**5.8**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
617.8	0.0	382.2	1,000.0	0.0	0.0
382.2	617.8	0.0	833.7	0.0	166.3
382.2	617.8	0.0	858.5	0.0	141.5
382.2	158.2	459.7	880.2	0.0	119.8
841.8	0.0	158.2	884.0	0.0	116.0
1,000.0	0.0	0.0	663.4	251.8	84.7
617.8	382.2	0.0	748.2	135.4	116.5
617.8	382.2	0.0	864.6	0.0	135.4
684.2	**215.8**	**100.0**	**873.3**	**38.7**	**88.0**

Figure 3. One hundred year schedule for mixed conifer, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 39 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	24.8	15.4	0.0	0.8	0.0	0.0	0.5	0.0
1	23.9	24.8	23.9	0.0	0.8	0.0	0.0	0.5	0.0
2	32.2	24.8	29.7	0.0	0.8	0.2	0.0	0.5	0.1
3	25.6	24.8	29.7	1.5	0.8	0.8	1.0	0.5	0.5
4	28.7	24.8	29.7	0.3	0.8	0.8	0.2	0.5	0.5
5	26.8	24.8	29.7	1.0	0.8	0.9	0.7	0.5	0.6
6	15.4	24.8	29.7	2.3	0.8	1.0	1.5	0.5	0.7
7	15.4	24.8	29.7	0.8	0.8	1.1	0.5	0.5	0.7
8	25.9	24.8	29.7	0.0	0.8	1.1	0.0	0.5	0.7
9	26.5	24.8	29.7	1.4	0.8	1.2	0.9	0.5	0.8
10	36.5	24.8	29.7	0.6	0.8	1.3	0.4	0.5	0.8

Schedule Info

Description:
MCLowStockingSite3End50%CPMaxOnSite
Objective Function:
Max Onsite CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
27

Stand Name:
Mixed conifer, low stocking, even-aged

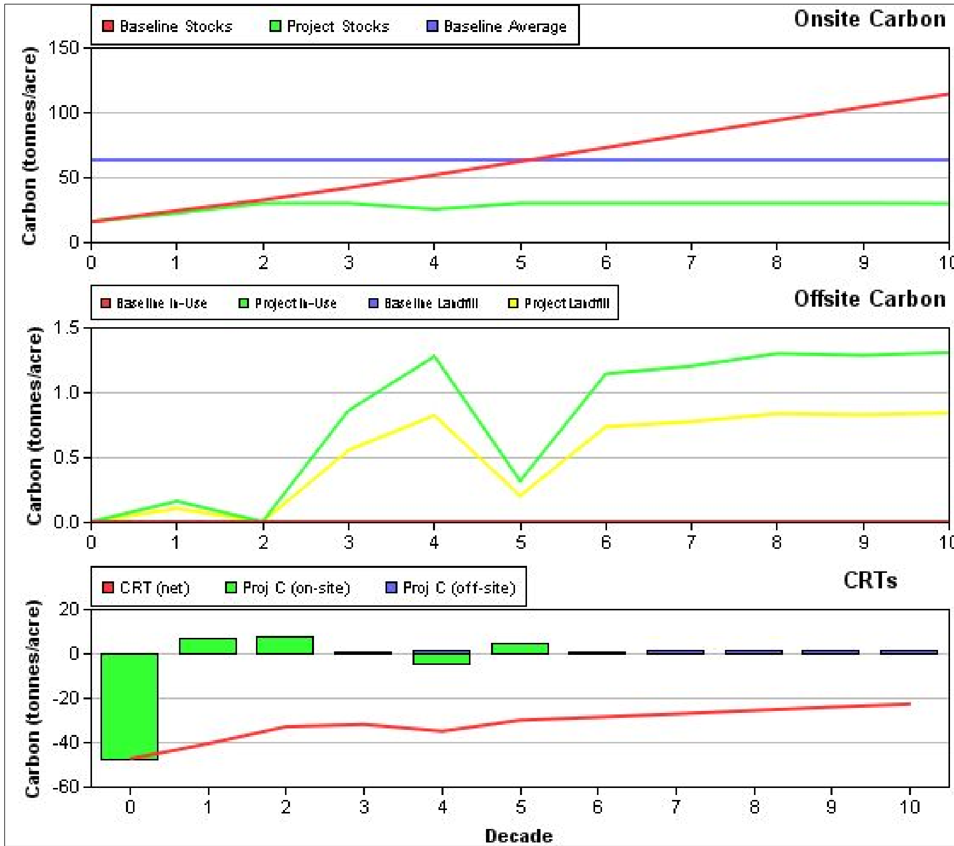
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	-9.4	0.0	0.0	0.0	0.0	-9.4
1	8.5	-0.8	0.2	-0.5	-9.4	-2.0
2	5.8	-0.6	0.1	-0.4	-2.0	3.0
3	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.1	0.0	0.0	0.0	0.0
6	0.0	0.3	0.1	0.0	0.0	0.3
7	0.0	0.3	0.1	0.0	0.0	0.4
8	0.0	0.3	0.1	0.0	0.0	0.4
9	0.0	0.4	0.1	0.0	0.0	0.5
10	0.0	0.5	0.1	0.0	0.0	0.6
Total	**4.9**	**0.5**	**-0.7**	**-0.9**		**-6.2**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	921.0	0.0	79.0
617.8	0.0	382.2	793.8	0.0	206.2
382.2	617.8	0.0	462.5	429.8	107.7
382.2	617.8	0.0	557.6	415.9	26.4
382.2	158.2	459.7	506.5	344.0	149.5
841.8	0.0	158.2	614.6	224.6	160.7
1,000.0	0.0	0.0	661.6	234.3	104.1
617.8	382.2	0.0	573.9	367.6	58.5
617.8	382.2	0.0	513.0	392.9	94.1
684.2	**215.8**	**100.0**	**660.5**	**240.9**	**98.6**

Figure 4. One hundred year schedule for mixed conifer, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the common practice and starting stocks (27 tonnes per acre). On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	15.4	63.1	15.4	0.0	0.0	0.0	0.0	0.0	0.0
1	23.9	63.1	22.0	0.0	0.0	0.2	0.0	0.0	0.1
2	32.2	63.1	29.7	0.0	0.0	0.0	0.0	0.0	0.0
3	41.5	63.1	29.7	0.0	0.0	0.9	0.0	0.0	0.6
4	51.5	63.1	25.1	0.0	0.0	1.3	0.0	0.0	0.8
5	61.9	63.1	29.7	0.0	0.0	0.3	0.0	0.0	0.2
6	72.6	63.1	29.7	0.0	0.0	1.1	0.0	0.0	0.7
7	83.2	63.1	29.7	0.0	0.0	1.2	0.0	0.0	0.8
8	93.7	63.1	29.7	0.0	0.0	1.3	0.0	0.0	0.8
9	103.9	63.1	29.7	0.0	0.0	1.3	0.0	0.0	0.8
10	113.8	63.1	29.5	0.0	0.0	1.3	0.0	0.0	0.8

Schedule Info

Description: MCLowStockingSite3End50%CPMaxInUse

Objective Function: Max InUse CRTs

Constraints: C>=Start C

Common Prac. (t/a): 39

Proj. Target C (t/a): 27

Stand Name: Mixed conifer, low stocking, even-aged

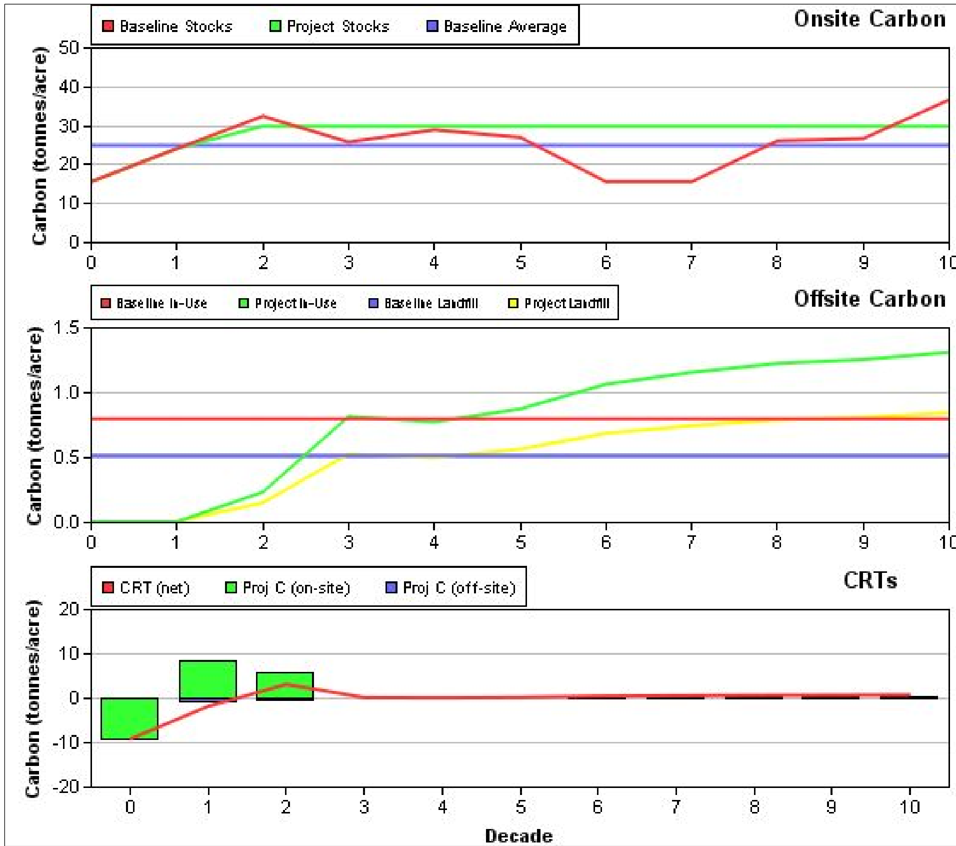
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-47.6	0.0	0.0	0.0	0.0	-47.6
1	6.6	0.2	0.0	0.0	-47.6	-40.8
2	7.7	0.0	0.0	0.0	-40.8	-33.2
3	0.0	0.9	0.2	0.0	-33.2	-32.1
4	-4.6	1.3	0.3	0.0	-32.1	-35.2
5	4.6	0.3	0.1	0.0	-35.2	-30.2
6	0.0	1.1	0.2	0.0	-30.2	-28.9
7	0.0	1.2	0.2	0.0	-28.9	-27.4
8	0.0	1.3	0.3	0.0	-27.4	-25.9
9	0.0	1.3	0.3	0.0	-25.9	-24.3
10	-0.2	1.3	0.3	0.0	-24.3	-23.0
Total	**-33.6**	**8.8**	**-1.8**	**0.0**		**-348.6**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	1,000.0	0.0	0.0	920.3	0.0	79.7
2	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	1,000.0	0.0	0.0	782.0	0.0	218.0
4	1,000.0	0.0	0.0	583.5	184.7	231.8
5	1,000.0	0.0	0.0	815.3	184.7	0.0
6	1,000.0	0.0	0.0	673.6	184.7	141.7
7	1,000.0	0.0	0.0	640.9	264.4	94.7
8	1,000.0	0.0	0.0	686.2	163.8	150.1
9	1,000.0	0.0	0.0	618.3	297.7	84.1
10	1,000.0	0.0	0.0	470.5	529.5	0.0
Total	**1,000.0**	**0.0**	**0.0**	**719.1**	**180.9**	**100.0**

Figure 5. One hundred year schedule for mixed conifer, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the common practice and starting stocks (27 tonnes per acre). Off-site In-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	15.4	24.8	15.4	0.0	0.8	0.0	0.0	0.5	0.0
1	23.9	24.8	23.9	0.0	0.8	0.0	0.0	0.5	0.0
2	32.2	24.8	29.7	0.0	0.8	0.2	0.0	0.5	0.1
3	25.6	24.8	29.7	1.5	0.8	0.8	1.0	0.5	0.5
4	28.7	24.8	29.7	0.3	0.8	0.8	0.2	0.5	0.5
5	26.8	24.8	29.7	1.0	0.8	0.9	0.7	0.5	0.6
6	15.4	24.8	29.7	2.3	0.8	1.1	1.5	0.5	0.7
7	15.4	24.8	29.7	0.8	0.8	1.2	0.5	0.5	0.7
8	25.9	24.8	29.7	0.0	0.8	1.2	0.0	0.5	0.8
9	26.5	24.8	29.7	1.4	0.8	1.2	0.9	0.5	0.8
10	36.5	24.8	29.7	0.6	0.8	1.3	0.4	0.5	0.8

Schedule Info

Description:
MCLowStockingSite3End50%CPMaxTotal

Objective Function:
Max Total CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
39

Proj. Target C (t/a):
27

Stand Name:
Mixed conifer, low stocking, even-aged

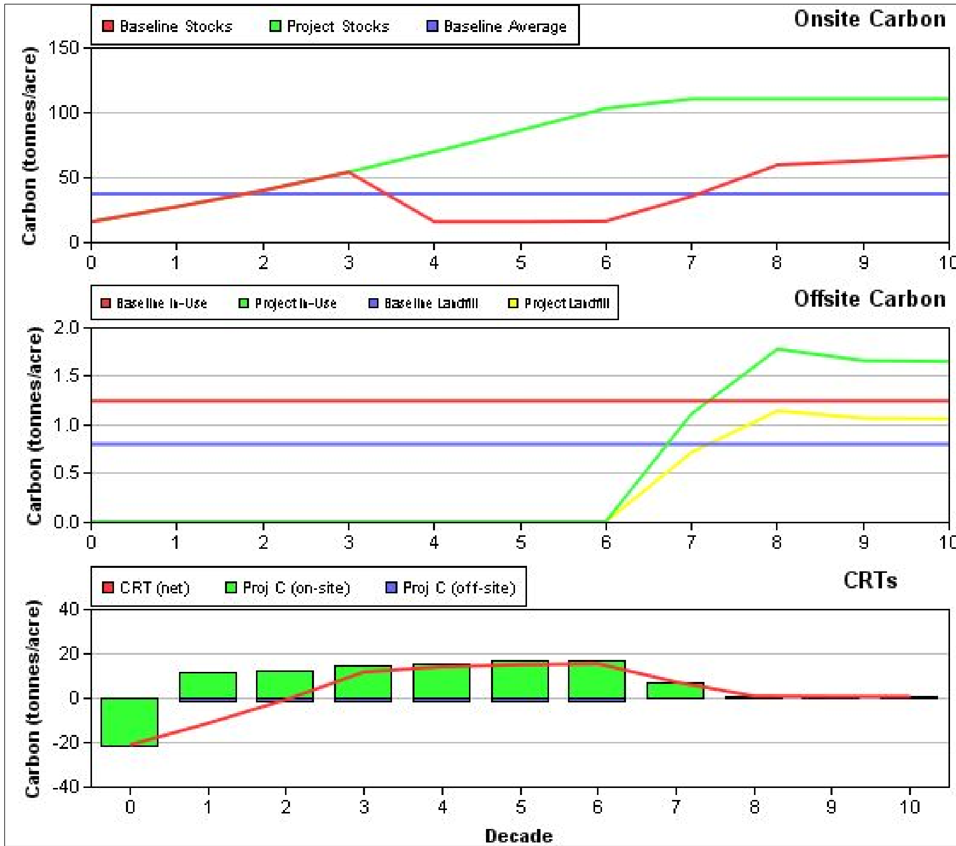
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-9.4	0.0	0.0	0.0	0.0	-9.4
1	8.5	-0.8	0.2	-0.5	-9.4	-2.0
2	5.8	-0.6	0.1	-0.4	-2.0	3.0
3	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.1	0.0	0.0	0.0	0.1
6	0.0	0.3	0.1	0.0	0.0	0.3
7	0.0	0.4	0.1	0.0	0.0	0.4
8	0.0	0.4	0.1	0.0	0.0	0.5
9	0.0	0.5	0.1	0.0	0.0	0.5
10	0.0	0.5	0.1	0.0	0.0	0.6
Total	**4.9**	**0.7**	**-0.7**	**-0.9**		**-5.9**

Silviculture (acres)

Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	921.0	0.0	79.0
617.8	0.0	382.2	793.8	0.0	206.2
382.2	617.8	0.0	652.5	218.2	129.3
382.2	617.8	0.0	702.9	218.2	78.9
382.2	158.2	459.7	651.9	218.2	129.9
841.8	0.0	158.2	661.9	218.2	119.8
1,000.0	0.0	0.0	664.0	235.7	100.3
617.8	382.2	0.0	558.2	374.7	67.2
617.8	382.2	0.0	496.0	414.4	89.5
684.2	**215.8**	**100.0**	**710.2**	**189.8**	**100.0**

Figure 6. One hundred year schedule for mixed conifer, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the common practice and starting stocks (27 tonnes per acre). Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	36.8	15.4	0.0	1.2	0.0	0.0	0.8	0.0
1	27.0	36.8	27.0	0.0	1.2	0.0	0.0	0.8	0.0
2	39.4	36.8	39.4	0.0	1.2	0.0	0.0	0.8	0.0
3	53.7	36.8	53.7	0.0	1.2	0.0	0.0	0.8	0.0
4	15.4	36.8	69.3	5.5	1.2	0.0	3.5	0.8	0.0
5	15.4	36.8	85.9	0.7	1.2	0.0	0.5	0.8	0.0
6	15.9	36.8	102.9	1.6	1.2	0.0	1.0	0.8	0.0
7	35.0	36.8	110.0	0.0	1.2	1.1	0.0	0.8	0.7
8	59.2	36.8	110.0	0.0	1.2	1.8	0.0	0.8	1.1
9	62.2	36.8	110.0	2.3	1.2	1.7	1.5	0.8	1.1
10	66.3	36.8	110.0	2.2	1.2	1.6	1.4	0.8	1.1

Schedule Info

Description:
MCLowStockingSit
e1End100%CPMax
OnSite
Objective Function:
Max Onsite CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
100

Stand Name:
Mixed conifer, low
stocking,
even-aged

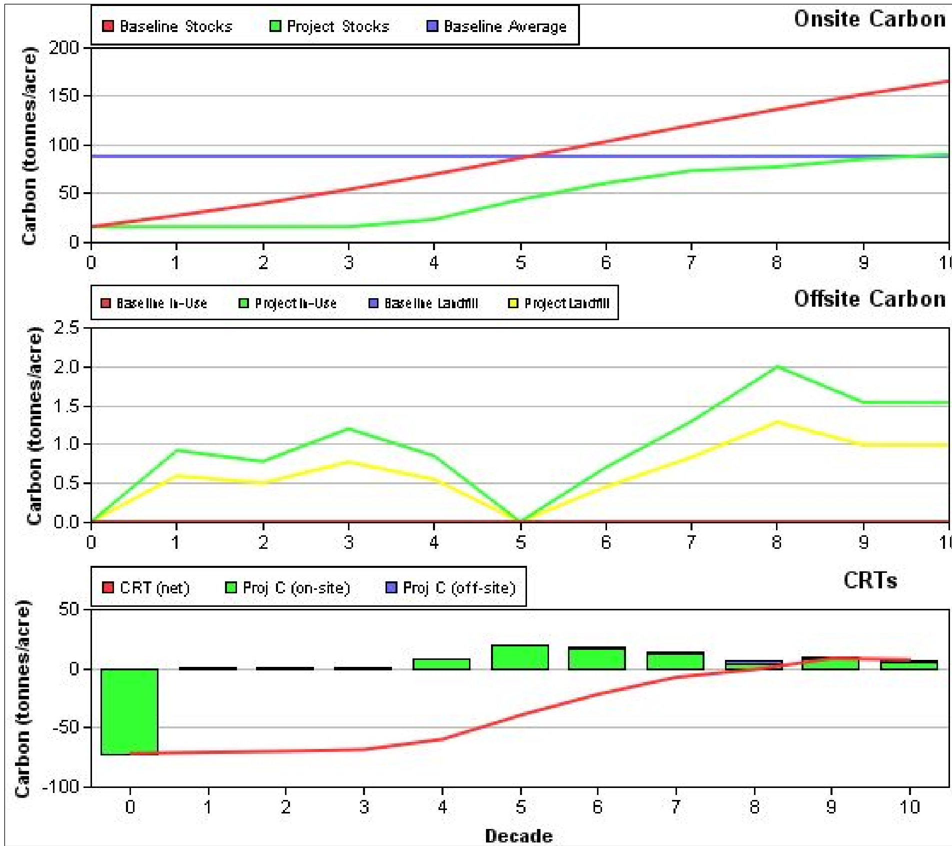
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-21.4	0.0	0.0	0.0	0.0	-21.4
1	11.5	-1.2	0.2	-0.8	-21.4	-11.6
2	12.4	-1.2	0.2	-0.8	-11.6	-1.0
3	14.3	-1.2	0.2	-0.8	-1.0	11.5
4	15.7	-1.2	0.2	-0.8	0.0	13.9
5	16.6	-1.2	0.2	-0.8	0.0	14.8
6	17.0	-1.2	0.2	-0.8	0.0	15.2
7	7.1	-0.1	0.0	-0.1	0.0	6.9
8	0.0	0.5	0.1	0.0	0.0	0.6
9	0.0	0.4	0.1	0.0	0.0	0.5
10	0.0	0.4	0.1	0.0	0.0	0.5
Total	**73.2**	**-6.2**	**-1.8**	**-4.9**		**29.9**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
222.6	777.4	0.0	1,000.0	0.0	0.0
222.6	0.0	777.4	1,000.0	0.0	0.0
777.4	162.2	60.3	685.7	314.3	0.0
837.8	0.0	162.2	685.7	314.3	0.0
1,000.0	0.0	0.0	603.8	314.3	81.9
222.6	777.4	0.0	572.9	314.3	112.8
222.6	777.4	0.0	592.7	314.3	93.0
162.2	837.8	0.0	602.0	314.3	83.7
566.8	**333.2**	**100.0**	**774.3**	**188.6**	**37.1**

Figure 7. One hundred year schedule for mixed conifer, low starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 39 tonnes per acre, however that was infeasible so target was set at 100 t/a. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	87.8	15.4	0.0	0.0	0.0	0.0	0.0	0.0
1	27.0	87.8	15.4	0.0	0.0	0.9	0.0	0.0	0.6
2	39.4	87.8	15.4	0.0	0.0	0.8	0.0	0.0	0.5
3	53.7	87.8	15.4	0.0	0.0	1.2	0.0	0.0	0.8
4	69.3	87.8	23.0	0.0	0.0	0.8	0.0	0.0	0.5
5	85.9	87.8	43.3	0.0	0.0	0.0	0.0	0.0	0.0
6	102.9	87.8	60.3	0.0	0.0	0.7	0.0	0.0	0.4
7	119.8	87.8	73.0	0.0	0.0	1.3	0.0	0.0	0.8
8	136.2	87.8	77.2	0.0	0.0	2.0	0.0	0.0	1.3
9	151.4	87.8	84.8	0.0	0.0	1.5	0.0	0.0	1.0
10	165.1	87.8	90.0	0.0	0.0	1.5	0.0	0.0	1.0

Schedule Info

Description: MCLowStockingSite1End100%CPMaxInUse

Objective Function: Max InUse CRTs

Constraints: C>=Start C

Common Prac. (t/a): 39

Proj. Target C (t/a): 100

Stand Name: Mixed conifer, low stocking, even-aged

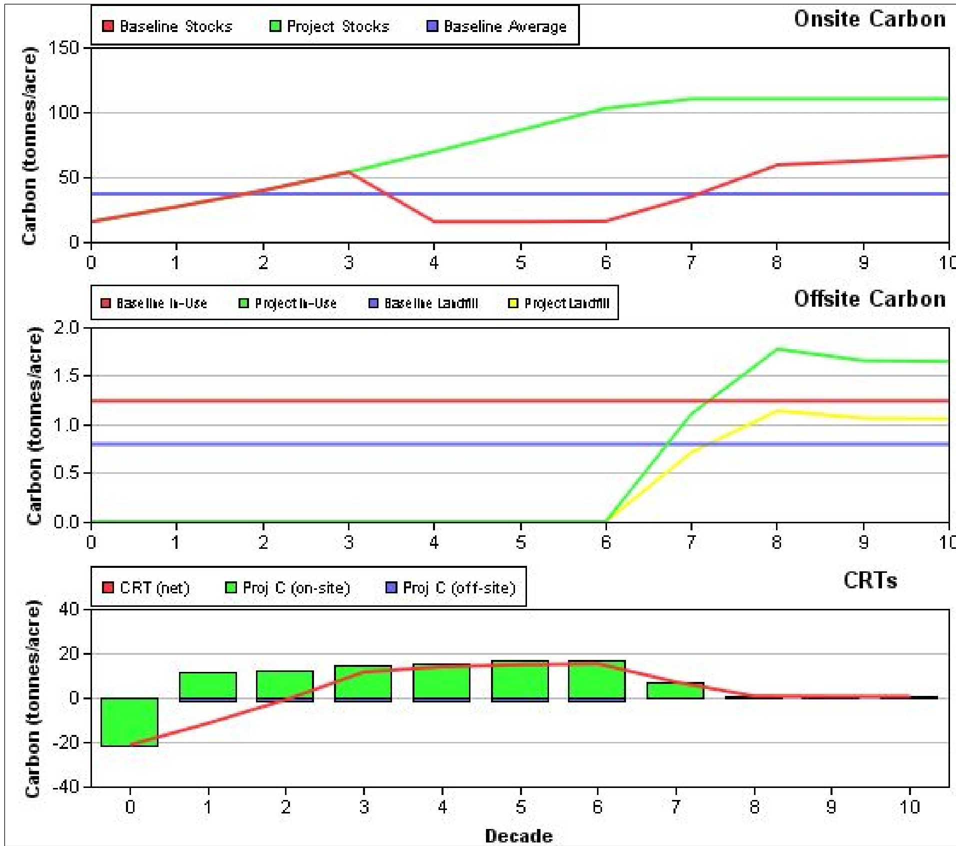
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-72.4	0.0	0.0	0.0	0.0	-72.4
1	0.0	0.9	0.2	0.0	-72.4	-71.3
2	0.0	0.8	0.2	0.0	-71.3	-70.4
3	0.0	1.2	0.2	0.0	-70.4	-68.9
4	7.5	0.8	0.2	0.0	-68.9	-60.4
5	20.3	0.0	0.0	0.0	-60.4	-40.1
6	17.0	0.7	0.1	0.0	-40.1	-22.3
7	12.8	1.3	0.3	0.0	-22.3	-7.9
8	4.1	2.0	0.4	0.0	-7.9	-1.4
9	7.7	1.5	0.3	0.0	-1.4	8.1
10	5.2	1.5	0.3	0.0	0.0	7.0
Total	**2.2**	**10.8**	**-2.2**	**0.0**		**-400.0**

Silviculture (acres)

	Baseline			Project		
Decade	Grow	Thin	Clear	Grow	Thin	Clear
Initial						
1	1,000.0	0.0	0.0	572.0	0.0	428.0
2	1,000.0	0.0	0.0	779.2	0.0	220.8
3	1,000.0	0.0	0.0	768.4	0.0	231.6
4	1,000.0	0.0	0.0	880.4	0.0	119.6
5	450.1	549.9	0.0	1,000.0	0.0	0.0
6	450.1	549.9	0.0	755.6	244.4	0.0
7	450.1	549.9	0.0	534.8	465.2	0.0
8	450.1	549.9	0.0	119.6	880.4	0.0
9	450.1	549.9	0.0	119.6	880.4	0.0
10	450.1	549.9	0.0	119.6	880.4	0.0
Total	**670.1**	**329.9**	**0.0**	**564.9**	**335.1**	**100.0**

Figure 8. One hundred year schedule for mixed conifer, low starting stocks, site I carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 39 tonnes per acre, however that was infeasible so target was set at 100 t/a. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	15.4	36.8	15.4	0.0	1.2	0.0	0.0	0.8	0.0
1	27.0	36.8	27.0	0.0	1.2	0.0	0.0	0.8	0.0
2	39.4	36.8	39.4	0.0	1.2	0.0	0.0	0.8	0.0
3	53.7	36.8	53.7	0.0	1.2	0.0	0.0	0.8	0.0
4	15.4	36.8	69.3	5.5	1.2	0.0	3.5	0.8	0.0
5	15.4	36.8	85.9	0.7	1.2	0.0	0.5	0.8	0.0
6	15.9	36.8	102.9	1.6	1.2	0.0	1.0	0.8	0.0
7	35.0	36.8	110.0	0.0	1.2	1.1	0.0	0.8	0.7
8	59.2	36.8	110.0	0.0	1.2	1.8	0.0	0.8	1.1
9	62.2	36.8	110.0	2.3	1.2	1.7	1.5	0.8	1.1
10	66.3	36.8	110.0	2.2	1.2	1.6	1.4	0.8	1.1

Schedule Info

Description: MCLowStockingSite1End100%CPMax Total
Objective Function: Max Total CRTs
Constraints: C>=Start C

Common Prac. (t/a): 39
Proj. Target C (t/a): 100

Stand Name: Mixed conifer, low stocking, even-aged

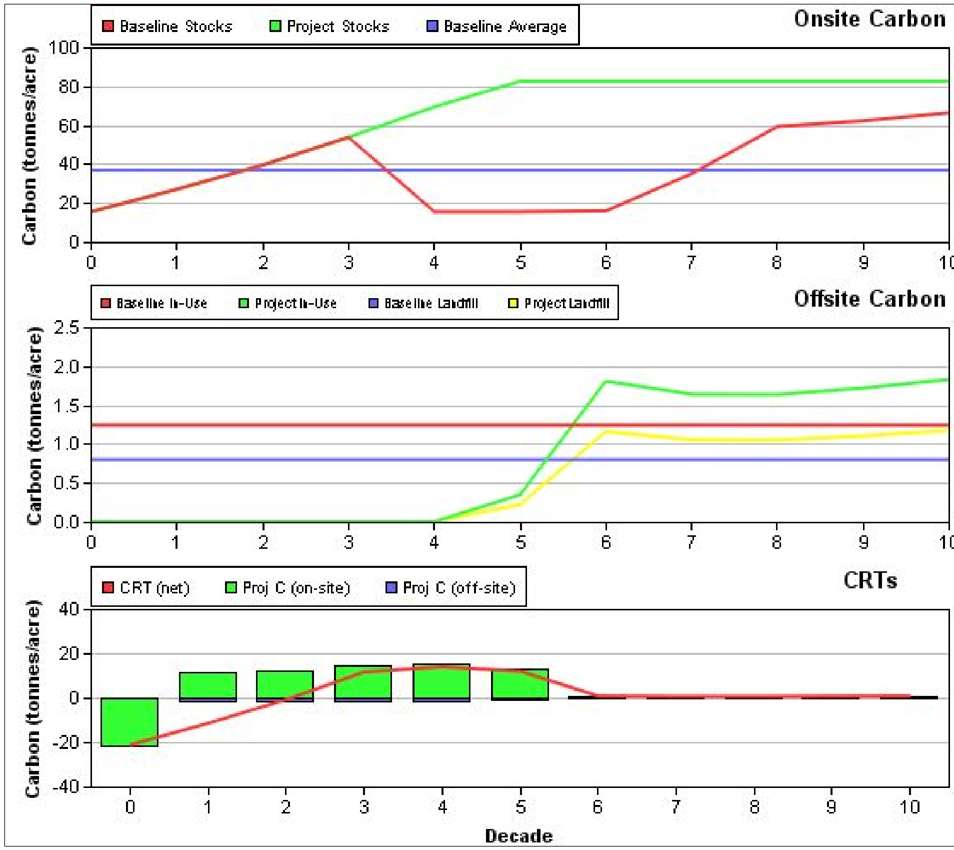
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-21.4	0.0	0.0	0.0	0.0	-21.4
1	11.5	-1.2	0.2	-0.8	-21.4	-11.6
2	12.4	-1.2	0.2	-0.8	-11.6	-1.0
3	14.3	-1.2	0.2	-0.8	-1.0	11.5
4	15.7	-1.2	0.2	-0.8	0.0	13.9
5	16.6	-1.2	0.2	-0.8	0.0	14.8
6	17.0	-1.2	0.2	-0.8	0.0	15.2
7	7.1	-0.1	0.0	-0.1	0.0	6.9
8	0.0	0.5	0.1	0.0	0.0	0.6
9	0.0	0.4	0.1	0.0	0.0	0.5
10	0.0	0.4	0.1	0.0	0.0	0.5
Total	**73.2**	**-6.2**	**-1.8**	**-4.9**		**29.9**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	1,000.0	0.0	0.0	1,000.0	0.0	0.0
2	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	222.6	777.4	0.0	1,000.0	0.0	0.0
4	222.6	0.0	777.4	1,000.0	0.0	0.0
5	777.4	162.2	60.3	685.7	314.3	0.0
6	837.8	0.0	162.2	685.7	314.3	0.0
7	1,000.0	0.0	0.0	603.8	314.3	81.9
8	222.6	777.4	0.0	572.9	314.3	112.8
9	222.6	777.4	0.0	592.7	314.3	93.0
10	162.2	837.8	0.0	602.0	314.3	83.7
Total	**566.8**	**333.2**	**100.0**	**774.3**	**188.6**	**37.1**

Figure 9. One hundred year schedule for mixed conifer, low starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 39 tonnes per acre, however that was infeasible so target was set at 100 t/a. Total off and on-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	36.8	15.4	0.0	1.2	0.0	0.0	0.8	0.0
1	27.0	36.8	27.0	0.0	1.2	0.0	0.0	0.8	0.0
2	39.4	36.8	39.4	0.0	1.2	0.0	0.0	0.8	0.0
3	53.7	36.8	53.7	0.0	1.2	0.0	0.0	0.8	0.0
4	15.4	36.8	69.3	5.5	1.2	0.0	3.5	0.8	0.0
5	15.4	36.8	82.5	0.7	1.2	0.3	0.5	0.8	0.2
6	15.9	36.8	82.5	1.6	1.2	1.8	1.0	0.8	1.2
7	35.0	36.8	82.5	0.0	1.2	1.6	0.0	0.8	1.1
8	59.2	36.8	82.5	0.0	1.2	1.6	0.0	0.8	1.0
9	62.2	36.8	82.5	2.3	1.2	1.7	1.5	0.8	1.1
10	66.3	36.8	82.5	2.2	1.2	1.8	1.4	0.8	1.2

Schedule Info

Description:
MCLowStockingSite1End50%CPMaxOnSite
Objective Function:
Max Onsite CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
75

Stand Name:
Mixed conifer, low stocking, even-aged

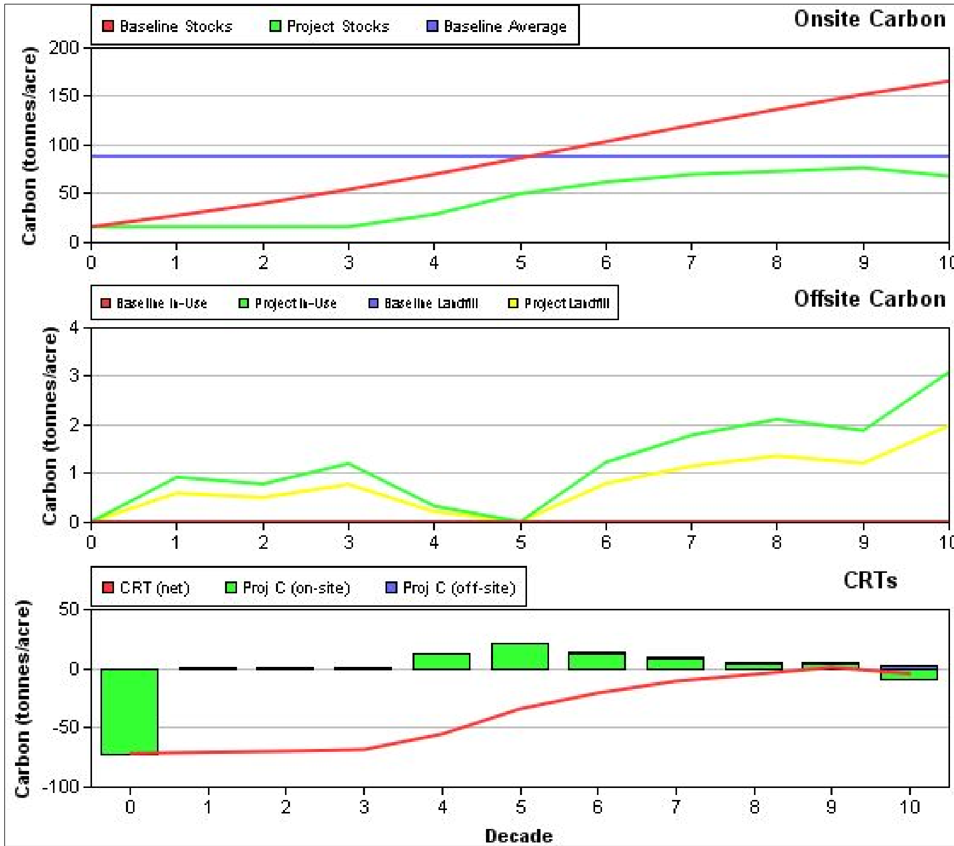
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-21.4	0.0	0.0	0.0	0.0	-21.4
1	11.5	-1.2	0.2	-0.8	-21.4	-11.6
2	12.4	-1.2	0.2	-0.8	-11.6	-1.0
3	14.3	-1.2	0.2	-0.8	-1.0	11.5
4	15.7	-1.2	0.2	-0.8	0.0	13.9
5	13.2	-0.9	0.2	-0.6	0.0	11.9
6	0.0	0.6	0.1	0.0	0.0	0.7
7	0.0	0.4	0.1	0.0	0.0	0.5
8	0.0	0.4	0.1	0.0	0.0	0.5
9	0.0	0.5	0.1	0.0	0.0	0.6
10	0.0	0.6	0.1	0.0	0.0	0.7
Total	**45.7**	**-3.4**	**-1.7**	**-3.8**		**6.2**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
222.6	777.4	0.0	1,000.0	0.0	0.0
222.6	0.0	777.4	1,000.0	0.0	0.0
777.4	162.2	60.3	571.9	416.8	11.2
837.8	0.0	162.2	491.3	375.5	133.3
1,000.0	0.0	0.0	540.0	337.4	122.7
222.6	777.4	0.0	593.0	300.8	106.1
222.6	777.4	0.0	627.9	264.7	107.4
162.2	837.8	0.0	660.2	233.6	106.3
566.8	**333.2**	**100.0**	**748.4**	**192.9**	**58.7**

Figure 10. One hundred year schedule for mixed conifer, low starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are the between the common practice and starting stocks, however that was infeasible so target was set at 75 t/a. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	15.4	87.8	15.4	0.0	0.0	0.0	0.0	0.0	0.0
1	27.0	87.8	15.4	0.0	0.0	0.9	0.0	0.0	0.6
2	39.4	87.8	15.4	0.0	0.0	0.8	0.0	0.0	0.5
3	53.7	87.8	15.4	0.0	0.0	1.2	0.0	0.0	0.8
4	69.3	87.8	28.1	0.0	0.0	0.3	0.0	0.0	0.2
5	85.9	87.8	49.3	0.0	0.0	0.0	0.0	0.0	0.0
6	102.9	87.8	61.3	0.0	0.0	1.2	0.0	0.0	0.8
7	119.8	87.8	69.2	0.0	0.0	1.8	0.0	0.0	1.1
8	136.2	87.8	72.4	0.0	0.0	2.1	0.0	0.0	1.4
9	151.4	87.8	76.1	0.0	0.0	1.9	0.0	0.0	1.2
10	165.1	87.8	67.5	0.0	0.0	3.1	0.0	0.0	2.0

Schedule Info

Description:
MCLowStockingSite1End50%CPMaxInUse
Objective Function:
Max InUse CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
75

Stand Name:
Mixed conifer, low stocking, even-aged

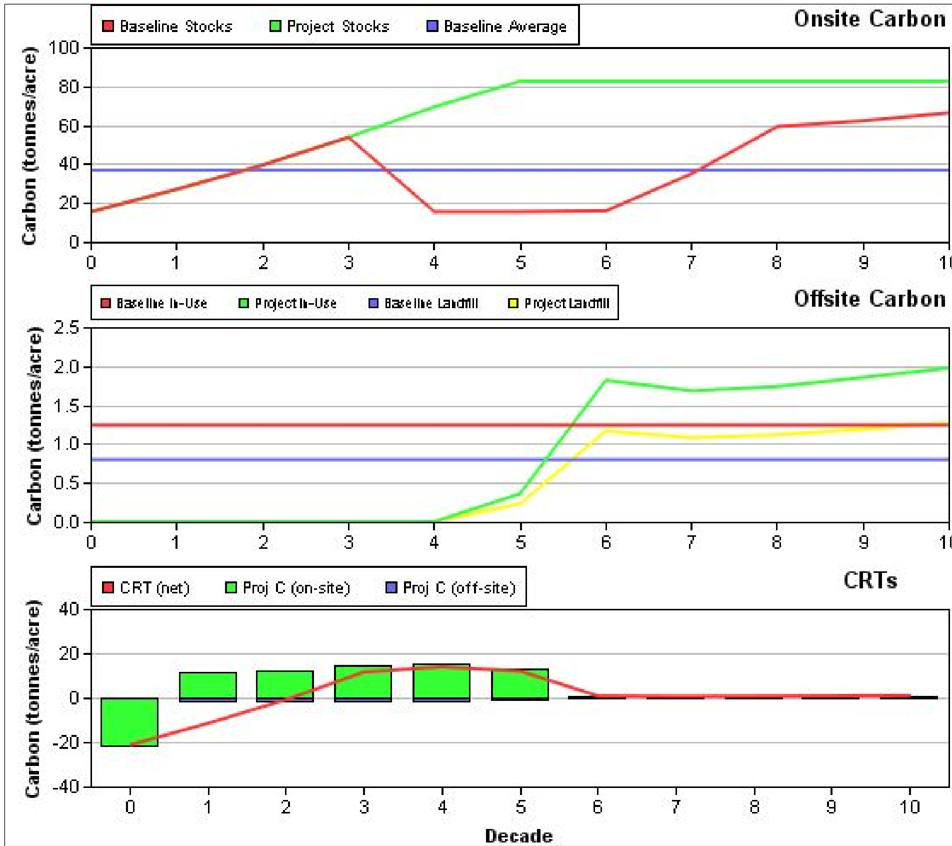
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-72.4	0.0	0.0	0.0	0.0	-72.4
1	0.0	0.9	0.2	0.0	-72.4	-71.3
2	0.0	0.8	0.2	0.0	-71.3	-70.4
3	0.0	1.2	0.2	0.0	-70.4	-68.9
4	12.7	0.3	0.1	0.0	-68.9	-55.9
5	21.3	0.0	0.0	0.0	-55.9	-34.6
6	12.0	1.2	0.2	0.0	-34.6	-21.2
7	7.8	1.8	0.4	0.0	-21.2	-11.2
8	3.2	2.1	0.4	0.0	-11.2	-5.4
9	3.6	1.9	0.4	0.0	-5.4	0.5
10	-8.6	3.1	0.6	0.0	0.0	-4.9
Total	**-20.3**	**13.3**	**-2.7**	**0.0**		**-415.7**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	1,000.0	0.0	0.0	572.0	0.0	428.0
2	1,000.0	0.0	0.0	779.2	0.0	220.8
3	1,000.0	0.0	0.0	722.7	45.7	231.6
4	1,000.0	0.0	0.0	954.3	0.0	45.7
5	500.0	500.0	0.0	1,000.0	0.0	0.0
6	500.0	500.0	0.0	572.0	428.0	0.0
7	500.0	500.0	0.0	351.2	648.8	0.0
8	500.0	500.0	0.0	73.9	926.1	0.0
9	500.0	500.0	0.0	73.9	926.1	0.0
10	500.0	500.0	0.0	0.0	926.1	73.9
Total	**700.0**	**300.0**	**0.0**	**509.9**	**390.1**	**100.0**

Figure 11. One hundred year schedule for mixed conifer, low starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are the between the common practice and starting stocks, however that was infeasible so target was set at 75 t/a. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	15.4	36.8	15.4	0.0	1.2	0.0	0.0	0.8	0.0
1	27.0	36.8	27.0	0.0	1.2	0.0	0.0	0.8	0.0
2	39.4	36.8	39.4	0.0	1.2	0.0	0.0	0.8	0.0
3	53.7	36.8	53.7	0.0	1.2	0.0	0.0	0.8	0.0
4	15.4	36.8	69.3	5.5	1.2	0.0	3.5	0.8	0.0
5	15.4	36.8	82.5	0.7	1.2	0.4	0.5	0.8	0.2
6	15.9	36.8	82.5	1.6	1.2	1.8	1.0	0.8	1.2
7	35.0	36.8	82.5	0.0	1.2	1.7	0.0	0.8	1.1
8	59.2	36.8	82.5	0.0	1.2	1.7	0.0	0.8	1.1
9	62.2	36.8	82.5	2.3	1.2	1.9	1.5	0.8	1.2
10	66.3	36.8	82.5	2.2	1.2	2.0	1.4	0.8	1.3

Schedule Info

Description:
MCLowStockingSite1End50%CPMaxTotal

Objective Function:
Max Total CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
39

Proj. Target C (t/a):
75

Stand Name:
Mixed conifer, low stocking, even-aged

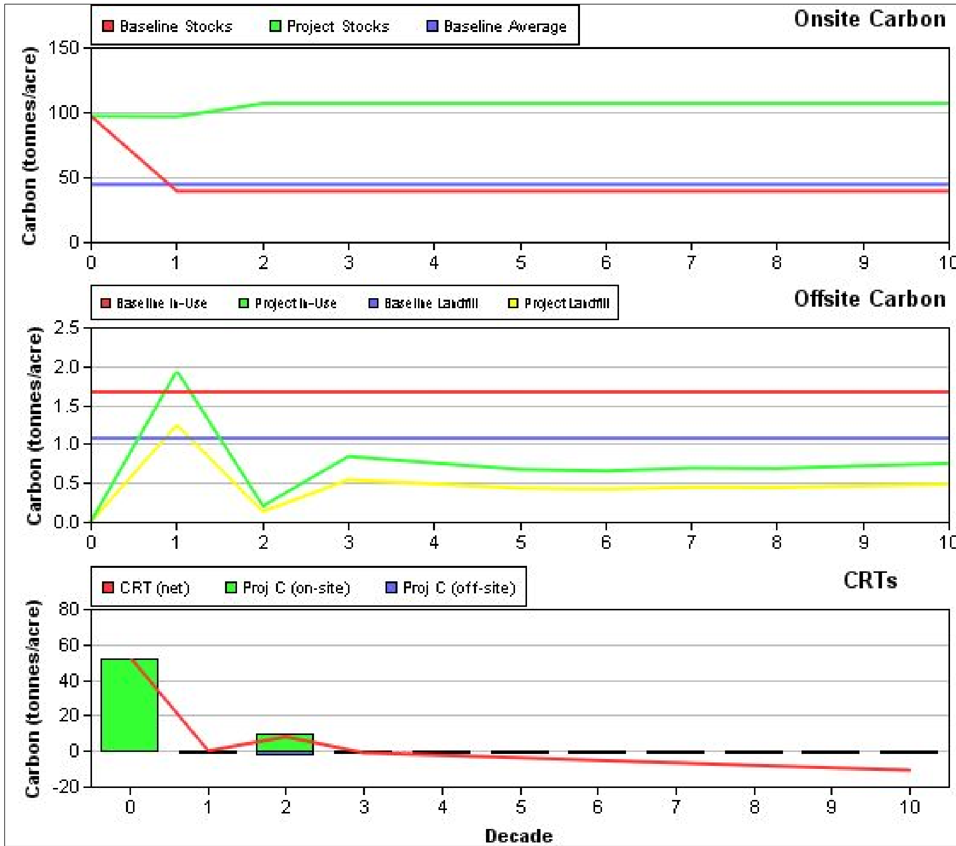
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-21.4	0.0	0.0	0.0	0.0	-21.4
1	11.5	-1.2	0.2	-0.8	-21.4	-11.6
2	12.4	-1.2	0.2	-0.8	-11.6	-1.0
3	14.3	-1.2	0.2	-0.8	-1.0	11.5
4	15.7	-1.2	0.2	-0.8	0.0	13.9
5	13.2	-0.9	0.2	-0.6	0.0	11.9
6	0.0	0.6	0.1	0.0	0.0	0.7
7	0.0	0.4	0.1	0.0	0.0	0.5
8	0.0	0.5	0.1	0.0	0.0	0.6
9	0.0	0.6	0.1	0.0	0.0	0.7
10	0.0	0.7	0.1	0.0	0.0	0.9
Total	**45.7**	**-3.0**	**-1.7**	**-3.8**		**6.7**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	1,000.0	0.0	0.0	1,000.0	0.0	0.0
2	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	222.6	777.4	0.0	1,000.0	0.0	0.0
4	222.6	0.0	777.4	1,000.0	0.0	0.0
5	777.4	162.2	60.3	780.0	180.7	39.3
6	837.8	0.0	162.2	659.0	180.7	160.3
7	1,000.0	0.0	0.0	695.3	180.7	124.0
8	222.6	777.4	0.0	708.9	180.7	110.4
9	222.6	777.4	0.0	715.0	180.7	104.2
10	162.2	837.8	0.0	718.9	180.7	100.4
Total	**566.8**	**333.2**	**100.0**	**827.7**	**108.4**	**63.9**

Figure 12. One hundred year schedule for mixed conifer, low starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are the between the common practice and starting stocks, however that was infeasible so target was set at 75 t/a. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.8	44.3	96.8	0.0	1.7	0.0	0.0	1.1	0.0
1	39.0	44.3	96.5	7.6	1.7	1.9	4.9	1.1	1.2
2	39.0	44.3	106.5	0.7	1.7	0.2	0.4	1.1	0.1
3	39.0	44.3	106.5	0.7	1.7	0.8	0.5	1.1	0.5
4	39.0	44.3	106.5	0.9	1.7	0.8	0.6	1.1	0.5
5	39.0	44.3	106.5	1.0	1.7	0.7	0.7	1.1	0.4
6	39.0	44.3	106.5	1.1	1.7	0.7	0.7	1.1	0.4
7	39.0	44.3	106.5	1.0	1.7	0.7	0.6	1.1	0.4
8	39.0	44.3	106.5	1.1	1.7	0.7	0.7	1.1	0.4
9	39.0	44.3	106.5	1.3	1.7	0.7	0.8	1.1	0.5
10	39.0	44.3	106.5	1.3	1.7	0.7	0.8	1.1	0.5

Schedule Info

Description:
MCHighStockingSite
3EndFlatMaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
96.8

Stand Name:
Mixed conifer, high stocking, even-aged

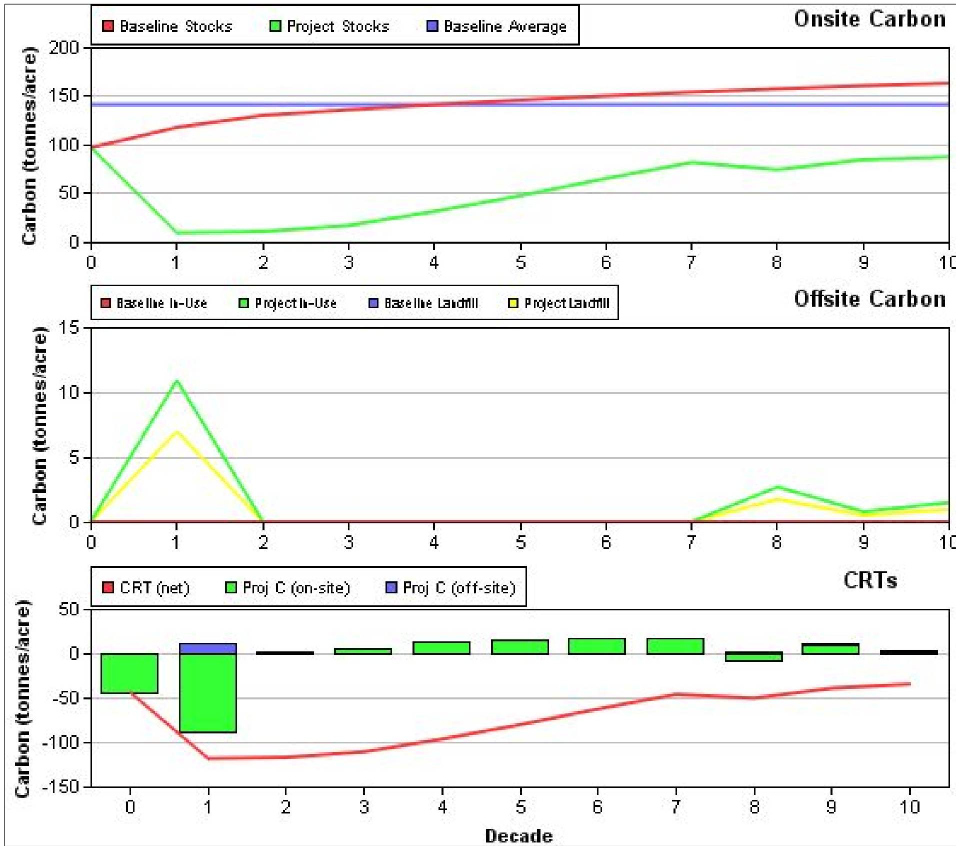
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	52.6	0.0	0.0	0.0	0.0	52.6
1	-0.3	0.3	0.1	0.0	0.0	0.0
2	10.0	-1.5	0.3	-0.9	0.0	7.9
3	0.0	-0.8	0.2	-0.5	0.0	-1.2
4	0.0	-0.9	0.2	-0.6	-1.2	-2.5
5	0.0	-1.0	0.2	-0.6	-2.5	-4.0
6	0.0	-1.0	0.2	-0.7	-4.0	-5.4
7	0.0	-1.0	0.2	-0.6	-5.4	-6.8
8	0.0	-1.0	0.2	-0.6	-6.8	-8.3
9	0.0	-0.9	0.2	-0.6	-8.3	-9.6
10	0.0	-0.9	0.2	-0.6	-9.6	-10.9
Total	**62.2**	**-8.8**	**-1.9**	**-5.8**		**11.7**

Silviculture (acres)

Decade	Baseline			Project		
	Grow	Thin	Clear	Grow	Thin	Clear
Initial						
1	0.0	805.1	194.9	571.2	428.8	0.0
2	892.1	0.0	107.9	976.7	0.0	23.3
3	714.0	252.9	33.2	594.5	397.6	7.9
4	575.4	383.7	40.9	918.4	0.0	81.6
5	703.3	199.3	97.4	684.0	298.8	17.1
6	852.1	0.0	147.9	932.2	0.0	67.8
7	516.3	438.5	45.3	769.0	191.6	39.4
8	510.7	433.1	56.3	931.2	0.0	68.8
9	507.2	384.8	108.0	854.0	90.2	55.8
10	566.6	327.6	105.8	901.8	31.2	66.9
Total	**583.8**	**322.5**	**93.7**	**813.3**	**143.8**	**42.9**

Figure 13. One hundred year schedule for mixed conifer, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is the starting stocks (+/- 10%) at 96.8 t/a. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.9	141.0	96.8	0.0	0.0	0.0	0.0	0.0	0.0
1	117.5	141.0	9.2	0.0	0.0	10.9	0.0	0.0	7.0
2	129.9	141.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3	135.7	141.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0
4	140.9	141.0	31.1	0.0	0.0	0.0	0.0	0.0	0.0
5	145.6	141.0	47.3	0.0	0.0	0.0	0.0	0.0	0.0
6	149.8	141.0	65.0	0.0	0.0	0.0	0.0	0.0	0.0
7	153.7	141.0	81.6	0.0	0.0	0.0	0.0	0.0	0.0
8	157.2	141.0	74.2	0.0	0.0	2.7	0.0	0.0	1.7
9	160.3	141.0	84.3	0.0	0.0	0.8	0.0	0.0	0.5
10	163.0	141.0	87.1	0.0	0.0	1.5	0.0	0.0	0.9

Schedule Info

Description:
MCHighStockingSite3EndFlatMaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

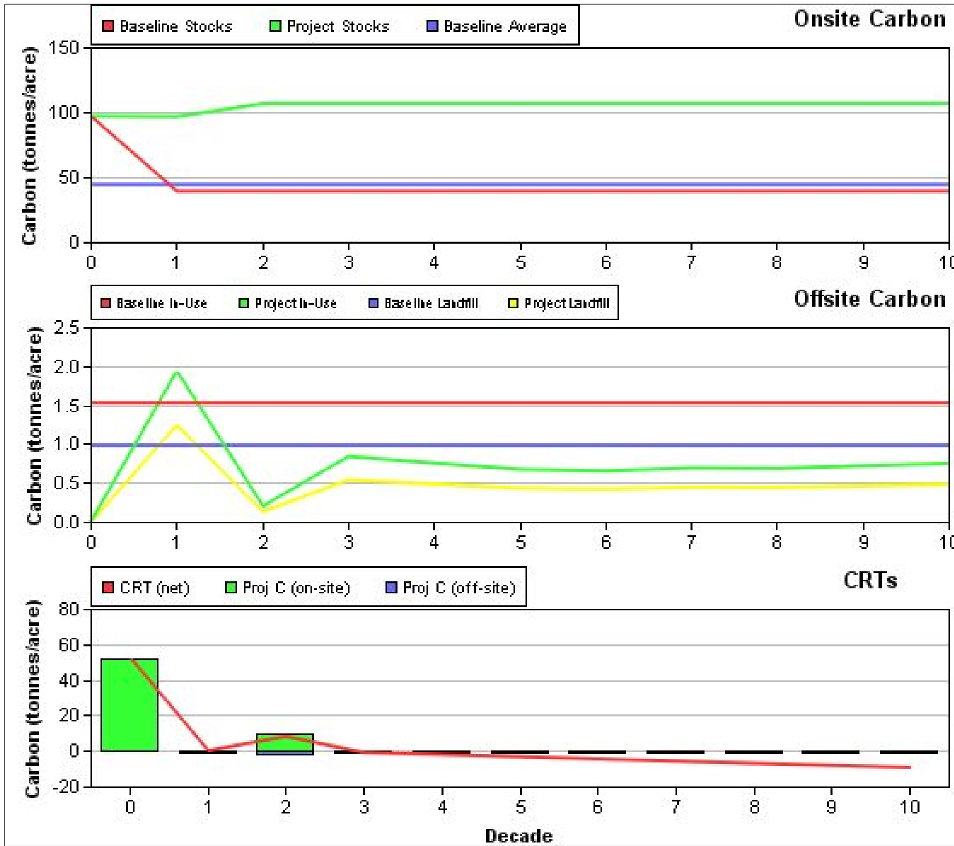
Proj. Target C (t/a):
96.8

Stand Name:
Mixed conifer, high stocking, even-aged

CRTs (C tonnes/acre) / **Silviculture (acres)**

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial	-44.2	0.0	0.0	0.0	0.0	-44.2						
1	-87.6	10.9	2.2	0.0	-44.2	-118.7	1,000.0	0.0	0.0	78.4	0.0	921.6
2	1.3	0.0	0.0	0.0	-118.7	-117.5	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	6.3	0.0	0.0	0.0	-117.5	-111.1	1,000.0	0.0	0.0	1,000.0	0.0	0.0
4	14.3	0.0	0.0	0.0	-111.1	-96.8	1,000.0	0.0	0.0	1,000.0	0.0	0.0
5	16.2	0.0	0.0	0.0	-96.8	-80.6	1,000.0	0.0	0.0	1,000.0	0.0	0.0
6	17.7	0.0	0.0	0.0	-80.6	-62.9	1,000.0	0.0	0.0	1,000.0	0.0	0.0
7	16.5	0.0	0.0	0.0	-62.9	-46.4	1,000.0	0.0	0.0	1,000.0	0.0	0.0
8	-7.4	2.7	0.5	0.0	-46.4	-50.6	1,000.0	0.0	0.0	78.4	921.6	0.0
9	10.2	0.8	0.2	0.0	-50.6	-39.5	1,000.0	0.0	0.0	78.4	921.6	0.0
10	2.8	1.5	0.3	0.0	-39.5	-34.9	1,000.0	0.0	0.0	78.4	921.6	0.0
Total	**-53.8**	**15.8**	**-3.2**	**0.0**		**-803.0**	**1,000.0**	**0.0**	**0.0**	**631.4**	**276.5**	**92.2**

Figure 14. One hundred year schedule for mixed conifer, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is the starting stocks (+/- 10%) at 96.8 t/a. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.8	44.3	96.8	0.0	1.5	0.0	0.0	1.0	0.0
1	39.0	44.3	96.5	7.5	1.5	1.9	4.8	1.0	1.2
2	39.0	44.3	106.5	0.7	1.5	0.2	0.4	1.0	0.1
3	39.0	44.3	106.5	0.7	1.5	0.8	0.4	1.0	0.5
4	39.0	44.3	106.5	0.8	1.5	0.8	0.5	1.0	0.5
5	39.0	44.3	106.5	0.9	1.5	0.7	0.6	1.0	0.4
6	39.0	44.3	106.5	1.0	1.5	0.7	0.6	1.0	0.4
7	39.0	44.3	106.5	0.9	1.5	0.7	0.6	1.0	0.4
8	39.0	44.3	106.5	0.9	1.5	0.7	0.6	1.0	0.4
9	39.0	44.3	106.5	1.0	1.5	0.7	0.6	1.0	0.5
10	39.0	44.3	106.5	0.9	1.5	0.7	0.6	1.0	0.5

Schedule Info

Description:
MCHighStockingSite3EndFlatMaxTotal

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
96.8

Stand Name:
Mixed conifer, high stocking, even-aged

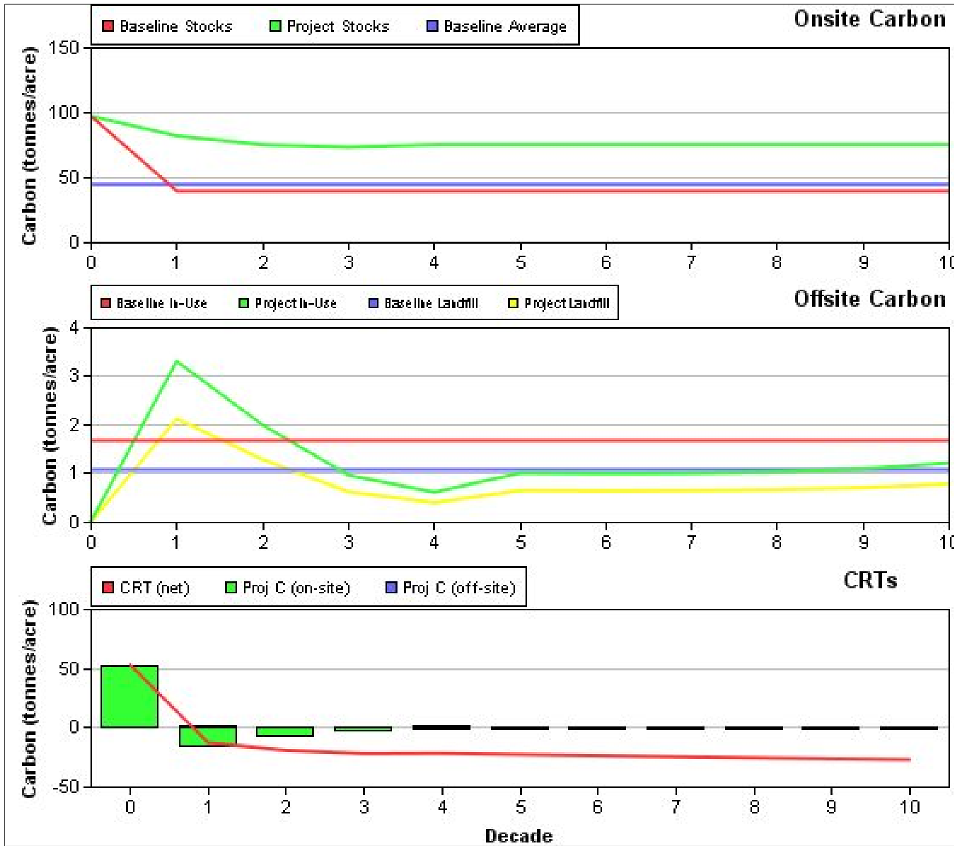
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	52.6	0.0	0.0	0.0	0.0	52.6
1	-0.3	0.4	0.1	0.0	0.0	0.1
2	10.0	-1.3	0.3	-0.9	0.0	8.1
3	0.0	-0.7	0.1	-0.4	0.0	-1.0
4	0.0	-0.8	0.2	-0.5	-1.0	-2.1
5	0.0	-0.9	0.2	-0.6	-2.1	-3.4
6	0.0	-0.9	0.2	-0.6	-3.4	-4.6
7	0.0	-0.8	0.2	-0.5	-4.6	-5.8
8	0.0	-0.8	0.2	-0.5	-5.8	-7.1
9	0.0	-0.8	0.2	-0.5	-7.1	-8.2
10	0.0	-0.8	0.2	-0.5	-8.2	-9.4
Total	**62.2**	**-7.4**	**-1.6**	**-5.0**		**19.2**

Silviculture (acres)

Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
0.0	889.6	110.4	571.2	428.8	0.0
857.8	0.0	142.2	976.7	0.0	23.3
741.1	210.8	48.0	594.5	397.6	7.9
511.5	488.5	0.0	918.4	0.0	81.6
789.2	142.4	68.4	684.0	298.8	17.1
899.3	0.0	100.7	932.2	0.0	67.8
359.4	625.0	15.5	769.0	191.6	39.4
267.9	732.1	0.0	931.2	0.0	68.8
590.8	326.7	82.4	854.0	90.2	55.8
691.9	193.6	114.6	901.8	31.2	66.9
570.9	**360.9**	**68.2**	**813.3**	**143.8**	**42.9**

Figure 15. One hundred year schedule for mixed conifer, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is the starting stocks (+/- 10%) at 96.8 t/a. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.8	44.3	96.8	0.0	1.7	0.0	0.0	1.1	0.0
1	39.0	44.3	81.6	7.6	1.7	3.3	4.9	1.1	2.1
2	39.0	44.3	74.8	0.7	1.7	2.0	0.4	1.1	1.3
3	39.0	44.3	73.0	0.7	1.7	1.0	0.5	1.1	0.6
4	39.0	44.3	74.8	0.9	1.7	0.6	0.6	1.1	0.4
5	39.0	44.3	74.8	1.0	1.7	1.0	0.7	1.1	0.6
6	39.0	44.3	74.8	1.1	1.7	1.0	0.7	1.1	0.6
7	39.0	44.3	74.8	1.0	1.7	1.0	0.6	1.1	0.6
8	39.0	44.3	74.8	1.1	1.7	1.0	0.7	1.1	0.7
9	39.0	44.3	74.8	1.3	1.7	1.1	0.8	1.1	0.7
10	39.0	44.3	74.8	1.3	1.7	1.2	0.8	1.1	0.8

Schedule Info

Description:
MCHighStockingSite3End68MaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
68

Stand Name:
Mixed conifer, high stocking, even-aged

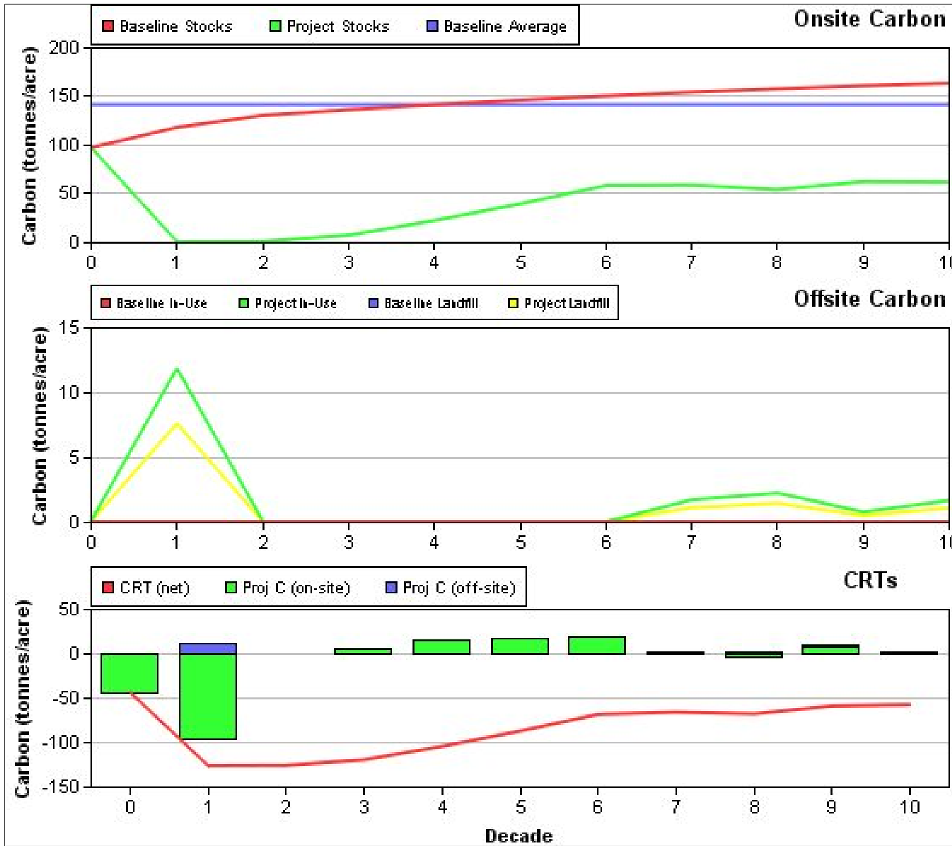
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	52.5	0.0	0.0	0.0	0.0	52.5
1	-15.1	1.6	0.3	0.0	0.0	-13.2
2	-6.8	0.3	0.1	0.0	-13.2	-19.7
3	-1.8	-0.7	0.1	-0.5	-19.7	-22.5
4	1.8	-1.1	0.2	-0.7	-22.5	-22.2
5	0.0	-0.7	0.1	-0.4	-22.2	-23.2
6	0.0	-0.7	0.1	-0.4	-23.2	-24.1
7	0.0	-0.7	0.1	-0.4	-24.1	-25.1
8	0.0	-0.6	0.1	-0.4	-25.1	-26.0
9	0.0	-0.6	0.1	-0.4	-26.0	-26.9
10	0.0	-0.5	0.1	-0.3	-26.9	-27.5
Total	**30.5**	**-3.5**	**-1.5**	**-3.5**		**-177.8**

Silviculture (acres)

	Baseline			Project		
Decade	Grow	Thin	Clear	Grow	Thin	Clear
Initial						
1	0.0	807.7	192.3	269.0	731.0	0.0
2	891.3	0.0	108.7	769.6	0.0	230.4
3	714.5	251.7	33.8	499.4	500.6	0.0
4	574.1	385.6	40.3	934.4	0.0	65.6
5	703.0	199.6	97.5	565.0	402.6	32.4
6	852.2	0.0	147.8	896.8	0.0	103.2
7	515.8	438.4	45.8	700.6	236.9	62.5
8	512.0	431.5	56.5	896.4	0.0	103.6
9	507.0	386.3	106.6	636.3	325.8	37.9
10	568.5	326.2	105.3	674.2	230.4	95.4
Total	**583.8**	**322.7**	**93.5**	**684.2**	**242.7**	**73.1**

Figure 16. One hundred year schedule for mixed conifer, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the starting stocks and common practice (68 t/a). On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.9	141.0	96.8	0.0	0.0	0.0	0.0	0.0	0.0
1	117.5	141.0	0.0	0.0	0.0	11.8	0.0	0.0	7.6
2	129.9	141.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3	135.7	141.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0
4	140.9	141.0	21.8	0.0	0.0	0.0	0.0	0.0	0.0
5	145.6	141.0	39.0	0.0	0.0	0.0	0.0	0.0	0.0
6	149.8	141.0	57.8	0.0	0.0	0.0	0.0	0.0	0.0
7	153.7	141.0	58.3	0.0	0.0	1.7	0.0	0.0	1.1
8	157.2	141.0	53.7	0.0	0.0	2.2	0.0	0.0	1.4
9	160.3	141.0	61.7	0.0	0.0	0.8	0.0	0.0	0.5
10	163.0	141.0	61.2	0.0	0.0	1.6	0.0	0.0	1.1

Schedule Info

Description:
MCHighStockingSite3End68MaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

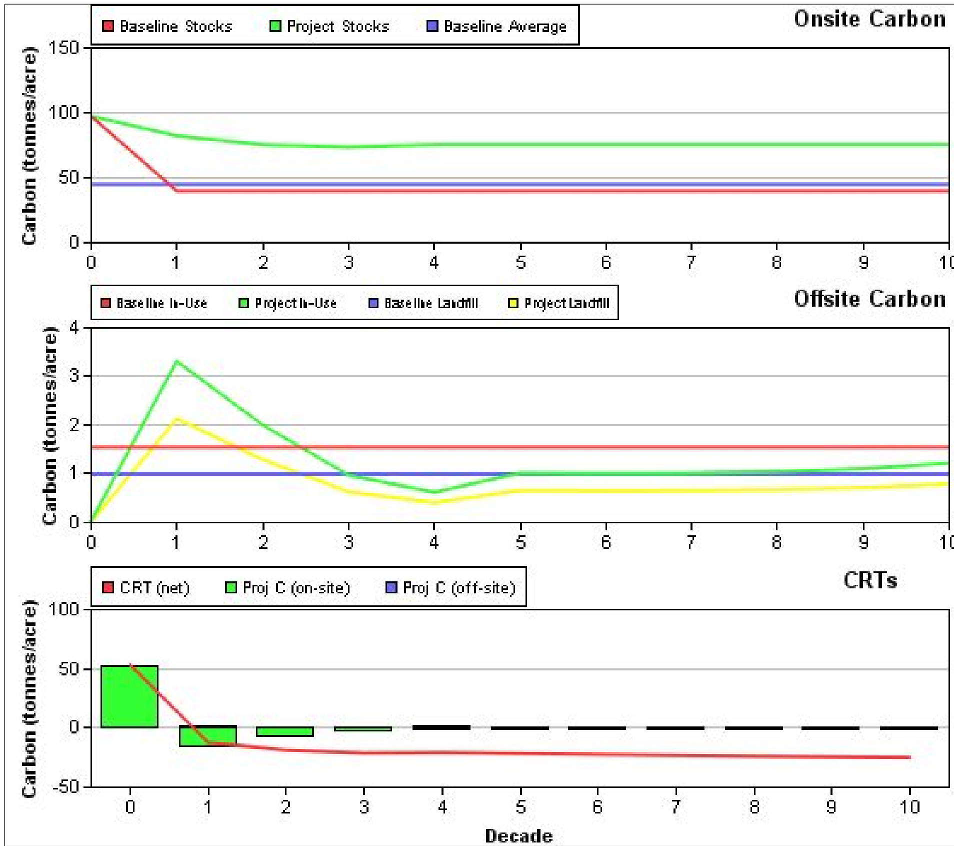
Proj. Target C (t/a):
68

Stand Name:
Mixed conifer, high stocking, even-aged

CRTs (C tonnes/acre) **Silviculture (acres)**

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Net	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-44.2	0.0	0.0	0.0	0.0	-44.2						
1	-96.8	11.8	2.4	0.0	-44.2	-126.8	1,000.0	0.0	0.0	0.0	0.0	1,000.0
2	0.3	0.0	0.0	0.0	-126.8	-126.5	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	6.4	0.0	0.0	0.0	-126.5	-120.1	1,000.0	0.0	0.0	1,000.0	0.0	0.0
4	15.1	0.0	0.0	0.0	-120.1	-105.0	1,000.0	0.0	0.0	1,000.0	0.0	0.0
5	17.2	0.0	0.0	0.0	-105.0	-87.8	1,000.0	0.0	0.0	1,000.0	0.0	0.0
6	18.8	0.0	0.0	0.0	-87.8	-69.0	1,000.0	0.0	0.0	1,000.0	0.0	0.0
7	0.4	1.7	0.3	0.0	-69.0	-66.5	1,000.0	0.0	0.0	499.2	500.8	0.0
8	-4.5	2.2	0.4	0.0	-66.5	-68.4	1,000.0	0.0	0.0	0.0	1,000.0	0.0
9	8.0	0.8	0.2	0.0	-68.4	-59.5	1,000.0	0.0	0.0	0.0	1,000.0	0.0
10	-0.5	1.6	0.3	0.0	-59.5	-58.1	1,000.0	0.0	0.0	0.0	1,000.0	0.0
Total	**-79.8**	**18.1**	**-3.6**	**0.0**		**-932.1**	**1,000.0**	**0.0**	**0.0**	**549.9**	**350.1**	**100.0**

Figure 17. One hundred year schedule for mixed conifer, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the starting stocks and common practice (68 t/a). Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.8	44.3	96.8	0.0	1.5	0.0	0.0	1.0	0.0
1	39.0	44.3	81.6	7.5	1.5	3.3	4.8	1.0	2.1
2	39.0	44.3	74.8	0.7	1.5	2.0	0.4	1.0	1.3
3	39.0	44.3	73.0	0.7	1.5	1.0	0.4	1.0	0.6
4	39.0	44.3	74.8	0.8	1.5	0.6	0.5	1.0	0.4
5	39.0	44.3	74.8	0.9	1.5	1.0	0.6	1.0	0.6
6	39.0	44.3	74.8	1.0	1.5	1.0	0.6	1.0	0.6
7	39.0	44.3	74.8	0.9	1.5	1.0	0.6	1.0	0.6
8	39.0	44.3	74.8	0.9	1.5	1.0	0.6	1.0	0.7
9	39.0	44.3	74.8	1.0	1.5	1.1	0.6	1.0	0.7
10	39.0	44.3	74.8	0.9	1.5	1.2	0.6	1.0	0.8

Schedule Info

Description:
MCHighStockingSite3End68MaxTotal

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
68

Stand Name:
Mixed conifer, high stocking, even-aged

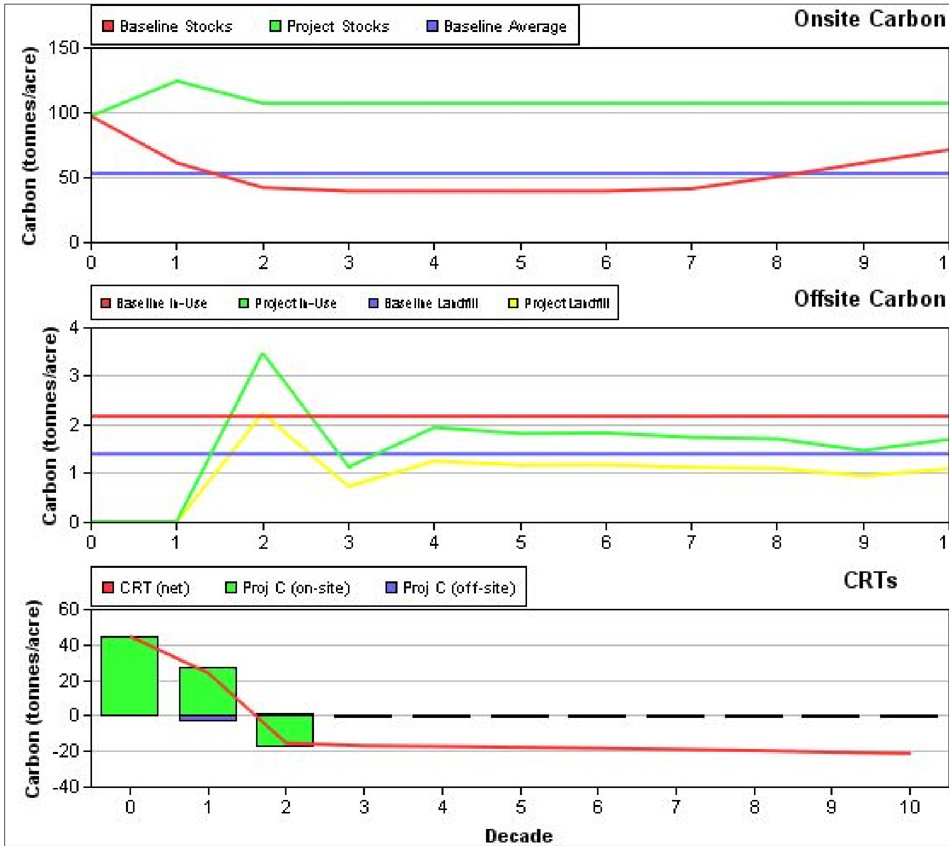
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	52.5	0.0	0.0	0.0	0.0	52.5
1	-15.1	1.8	0.4	0.0	0.0	-13.0
2	-6.8	0.5	0.1	0.0	-13.0	-19.3
3	-1.8	-0.6	0.1	-0.4	-19.3	-21.9
4	1.8	-0.9	0.2	-0.6	-21.9	-21.5
5	0.0	-0.5	0.1	-0.3	-21.5	-22.3
6	0.0	-0.5	0.1	-0.3	-22.3	-23.0
7	0.0	-0.5	0.1	-0.3	-23.0	-23.8
8	0.0	-0.5	0.1	-0.3	-23.8	-24.5
9	0.0	-0.4	0.1	-0.3	-24.5	-25.2
10	0.0	-0.3	0.1	-0.2	-25.2	-25.6
Total	**30.5**	**-2.1**	**-1.3**	**-2.8**		**-167.6**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	889.6	110.4	269.0	731.0	0.0
857.8	0.0	142.2	769.6	0.0	230.4
741.1	210.8	48.0	499.4	500.6	0.0
511.5	488.5	0.0	934.4	0.0	65.6
789.2	142.4	68.4	565.0	402.6	32.4
899.3	0.0	100.7	896.8	0.0	103.2
359.4	625.0	15.5	700.6	236.9	62.5
267.9	732.1	0.0	896.4	0.0	103.6
590.8	326.7	82.4	636.3	325.8	37.9
691.9	193.6	114.6	674.2	230.4	95.4
570.9	**360.9**	**68.2**	**684.2**	**242.7**	**73.1**

Figure 18. One hundred year schedule for mixed conifer, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the starting stocks and common practice (68 t/a). Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.8	52.6	97.0	0.0	2.2	0.0	0.0	1.4	0.0
1	60.8	52.6	123.9	5.9	2.2	0.0	3.8	1.4	0.0
2	41.7	52.6	106.7	3.6	2.2	3.5	2.3	1.4	2.2
3	39.0	52.6	106.7	1.3	2.2	1.1	0.9	1.4	0.7
4	39.0	52.6	106.7	1.4	2.2	1.9	0.9	1.4	1.2
5	39.0	52.6	106.7	1.7	2.2	1.8	1.1	1.4	1.2
6	39.0	52.6	106.7	2.0	2.2	1.8	1.3	1.4	1.2
7	40.9	52.6	106.7	1.8	2.2	1.7	1.2	1.4	1.1
8	50.3	52.6	106.7	1.3	2.2	1.7	0.8	1.4	1.1
9	60.7	52.6	106.7	1.4	2.2	1.5	0.9	1.4	0.9
10	70.9	52.6	106.7	1.4	2.2	1.7	0.9	1.4	1.1

Schedule Info

Description:
MCHighStockingSite
1EndFlatMaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
97

Stand Name:
Mixed conifer, high stocking, even-aged

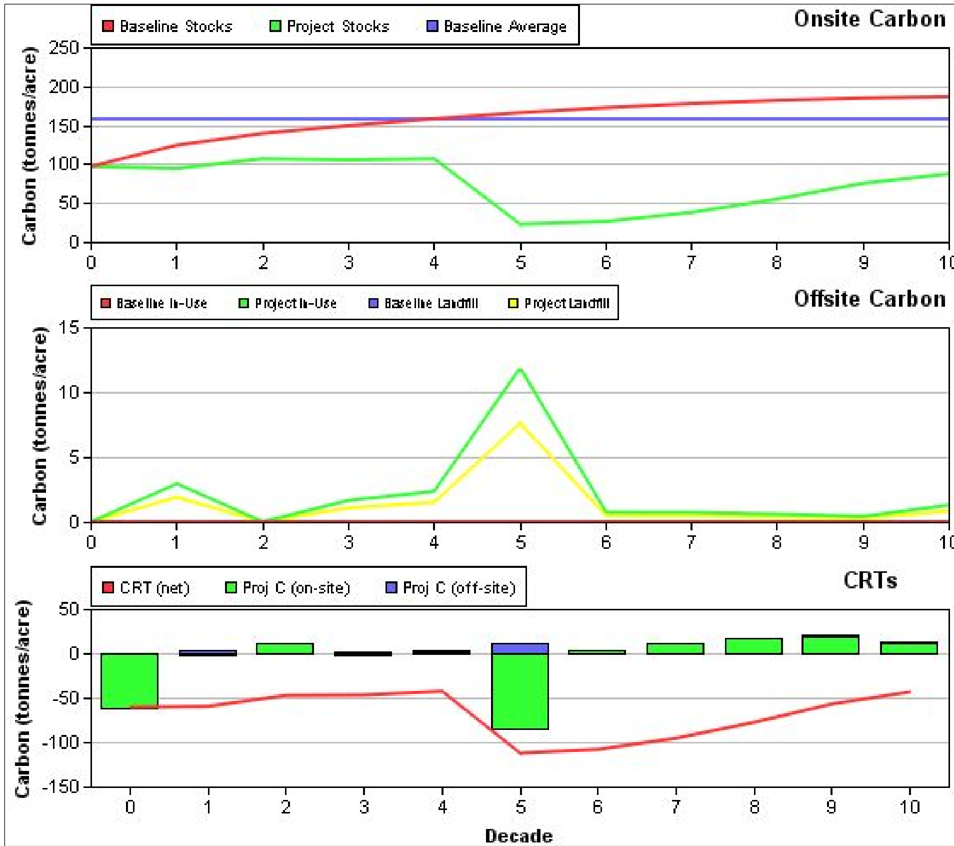
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	44.4	0.0	0.0	0.0	0.0	44.4
1	27.0	-2.2	0.4	-1.4	0.0	23.8
2	-17.2	1.3	0.3	0.0	0.0	-15.7
3	0.0	-1.0	0.2	-0.7	-15.7	-17.2
4	0.0	-0.2	0.0	-0.1	-17.2	-17.5
5	0.0	-0.4	0.1	-0.2	-17.5	-18.0
6	0.0	-0.3	0.1	-0.2	-18.0	-18.5
7	0.0	-0.4	0.1	-0.3	-18.5	-19.2
8	0.0	-0.5	0.1	-0.3	-19.2	-19.8
9	0.0	-0.7	0.1	-0.5	-19.8	-20.9
10	0.0	-0.5	0.1	-0.3	-20.9	-21.5
Total	**54.1**	**-4.9**	**-1.5**	**-4.0**		**-100.1**

Silviculture (acres)

	Baseline			Project		
Decade	Grow	Thin	Clear	Grow	Thin	Clear
Initial						
1	0.0	1,000.0	0.0	1,000.0	0.0	0.0
2	557.9	0.0	442.1	767.3	0.0	232.7
3	442.1	557.9	0.0	476.8	523.2	0.0
4	841.4	0.0	158.6	476.8	457.5	65.7
5	600.7	290.5	108.9	542.5	391.5	66.0
6	788.8	0.0	211.2	608.5	321.1	70.4
7	478.7	442.1	79.2	678.9	249.3	71.8
8	557.9	442.1	0.0	750.7	172.6	76.6
9	399.3	600.7	0.0	635.0	300.9	64.2
10	290.5	709.5	0.0	658.9	272.9	68.2
Total	**495.7**	**404.3**	**100.0**	**659.5**	**268.9**	**71.6**

Figure 19. One hundred year schedule for mixed conifer, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks is the starting stocks (+/- 10%) at 97 t/a. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.9	157.8	96.8	0.0	0.0	0.0	0.0	0.0	0.0
1	124.1	157.8	94.4	0.0	0.0	2.9	0.0	0.0	1.9
2	139.2	157.8	106.7	0.0	0.0	0.0	0.0	0.0	0.0
3	149.3	157.8	105.3	0.0	0.0	1.6	0.0	0.0	1.1
4	158.0	157.8	106.7	0.0	0.0	2.3	0.0	0.0	1.5
5	165.9	157.8	22.8	0.0	0.0	11.8	0.0	0.0	7.6
6	172.3	157.8	26.1	0.0	0.0	0.7	0.0	0.0	0.5
7	177.5	157.8	37.8	0.0	0.0	0.7	0.0	0.0	0.5
8	181.7	157.8	55.0	0.0	0.0	0.6	0.0	0.0	0.4
9	184.6	157.8	75.1	0.0	0.0	0.4	0.0	0.0	0.3
10	186.6	157.8	87.3	0.0	0.0	1.3	0.0	0.0	0.8

Schedule Info

Description:
MCHighStockingSite 1EndFlatMaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

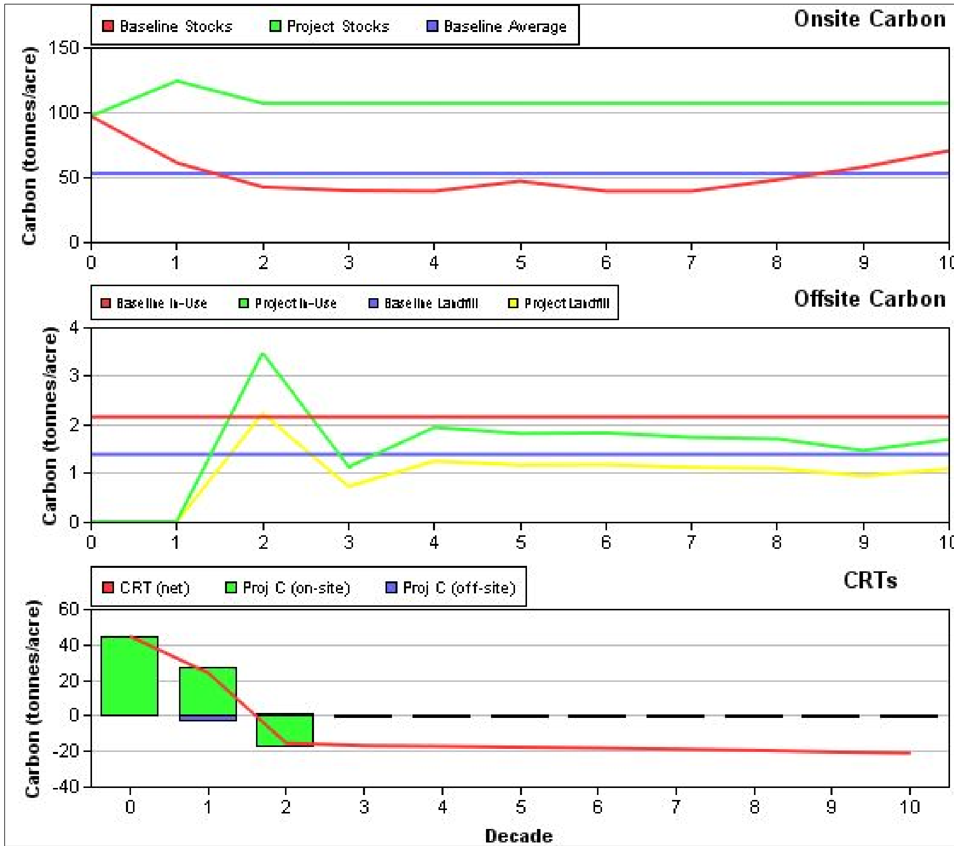
Proj. Target C (t/a):
97

Stand Name:
Mixed conifer, high stocking, even-aged

CRTs (C tonnes/acre) / **Silviculture (acres)**

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial	-61.0	0.0	0.0	0.0	0.0	-61.0						
1	-2.5	2.9	0.6	0.0	-61.0	-59.9	1,000.0	0.0	0.0	760.5	0.0	239.5
2	12.3	0.0	0.0	0.0	-59.9	-47.6	1,000.0	0.0	0.0	1,000.0	0.0	0.0
3	-1.4	1.6	0.3	0.0	-47.6	-47.1	1,000.0	0.0	0.0	239.5	760.5	0.0
4	1.4	2.3	0.5	0.0	-47.1	-42.8	1,000.0	0.0	0.0	239.5	697.6	63.0
5	-83.9	11.8	2.4	0.0	-42.8	-112.5	1,000.0	0.0	0.0	302.4	44.8	652.7
6	3.3	0.7	0.1	0.0	-112.5	-108.4	1,000.0	0.0	0.0	715.7	284.3	0.0
7	11.7	0.7	0.1	0.0	-108.4	-95.8	1,000.0	0.0	0.0	715.7	284.3	0.0
8	17.3	0.6	0.1	0.0	-95.8	-77.9	1,000.0	0.0	0.0	715.7	284.3	0.0
9	20.1	0.4	0.1	0.0	-77.9	-57.3	1,000.0	0.0	0.0	715.7	284.3	0.0
10	12.2	1.3	0.3	0.0	-57.3	-43.6	1,000.0	0.0	0.0	715.7	239.5	44.8
Total	**-70.5**	**22.4**	**-4.5**	**0.0**		**-753.9**	**1,000.0**	**0.0**	**0.0**	**612.1**	**287.9**	**100.0**

Figure 20. One hundred year schedule for mixed conifer, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks is the starting stocks (+/- 10%) at 97 t/a. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.8	52.6	97.0	0.0	2.2	0.0	0.0	1.4	0.0
1	60.8	52.6	123.9	5.9	2.2	0.0	3.8	1.4	0.0
2	42.2	52.6	106.7	3.5	2.2	3.5	2.3	1.4	2.2
3	39.4	52.6	106.7	1.3	2.2	1.1	0.9	1.4	0.7
4	39.0	52.6	106.7	1.4	2.2	1.9	0.9	1.4	1.2
5	46.6	52.6	106.7	0.8	2.2	1.8	0.5	1.4	1.2
6	39.0	52.6	106.7	2.9	2.2	1.8	1.9	1.4	1.2
7	39.0	52.6	106.7	1.9	2.2	1.7	1.2	1.4	1.1
8	47.7	52.6	106.7	1.2	2.2	1.7	0.8	1.4	1.1
9	57.6	52.6	106.7	1.4	2.2	1.5	0.9	1.4	0.9
10	70.2	52.6	106.7	1.2	2.2	1.7	0.7	1.4	1.1

Schedule Info

Description:
MCHighStockingSite1EndFlatMaxTotal

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
97

Stand Name:
Mixed conifer, high stocking, even-aged

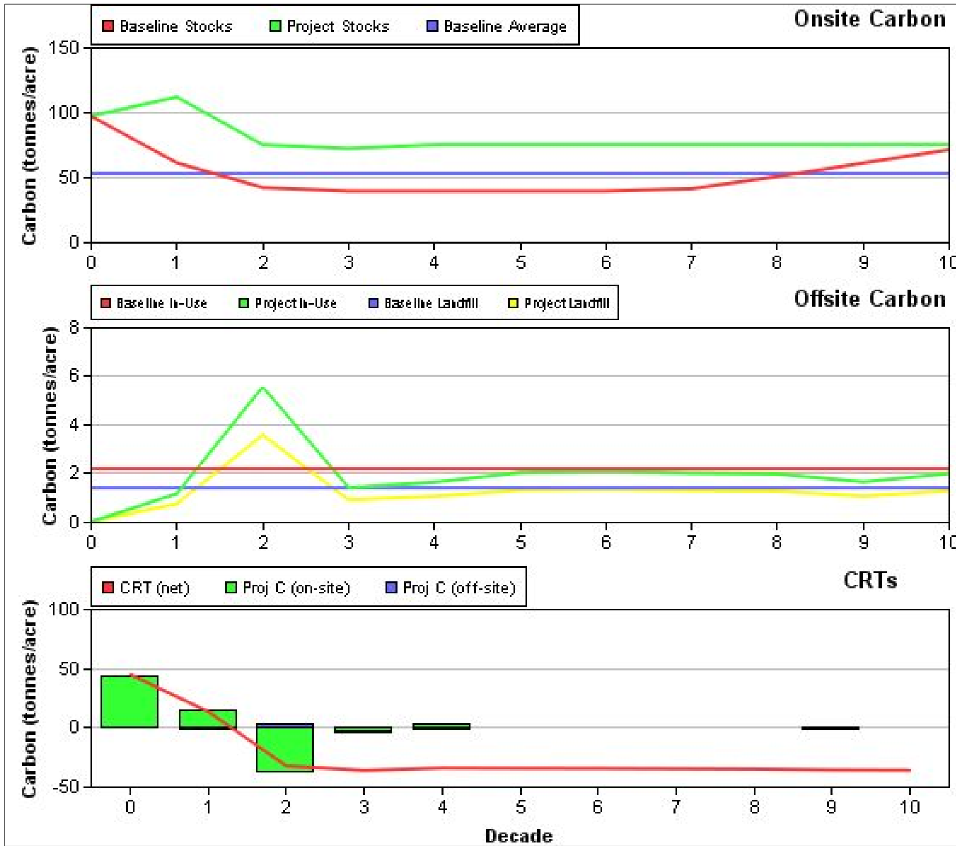
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	44.4	0.0	0.0	0.0	0.0	44.4
1	27.0	-2.2	0.4	-1.4	0.0	23.9
2	-17.2	1.3	0.3	0.0	0.0	-15.7
3	0.0	-1.0	0.2	-0.7	-15.7	-17.2
4	0.0	-0.2	0.0	-0.1	-17.2	-17.5
5	0.0	-0.3	0.1	-0.2	-17.5	-18.0
6	0.0	-0.3	0.1	-0.2	-18.0	-18.4
7	0.0	-0.4	0.1	-0.3	-18.4	-19.0
8	0.0	-0.5	0.1	-0.3	-19.0	-19.7
9	0.0	-0.7	0.1	-0.4	-19.7	-20.7
10	0.0	-0.5	0.1	-0.3	-20.7	-21.4
Total	**54.1**	**-4.8**	**-1.5**	**-3.9**		**-99.2**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	0.0	1,000.0	0.0	1,000.0	0.0	0.0
2	564.2	0.0	435.8	767.3	0.0	232.7
3	435.8	564.2	0.0	476.8	523.2	0.0
4	836.6	0.0	163.4	476.8	457.5	65.7
5	599.2	400.8	0.0	542.5	391.5	66.0
6	687.8	0.0	312.2	608.5	321.1	70.4
7	475.6	435.8	88.6	678.9	249.3	71.8
8	564.2	435.8	0.0	750.7	172.6	76.6
9	400.8	599.2	0.0	635.0	300.9	64.2
10	400.8	599.2	0.0	658.9	272.9	68.2
Total	**496.5**	**403.5**	**100.0**	**659.5**	**268.9**	**71.6**

Figure 21. One hundred year schedule for mixed conifer, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks is the starting stocks (+/- 10%) at 97 t/a. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.8	52.6	97.0	0.0	2.2	0.0	0.0	1.4	0.0
1	60.8	52.6	111.6	5.9	2.2	1.2	3.8	1.4	0.7
2	41.7	52.6	74.8	3.6	2.2	5.5	2.3	1.4	3.6
3	39.0	52.6	71.9	1.3	2.2	1.4	0.9	1.4	0.9
4	39.0	52.6	74.8	1.4	2.2	1.6	0.9	1.4	1.0
5	39.0	52.6	74.8	1.7	2.2	2.0	1.1	1.4	1.3
6	39.0	52.6	74.8	2.0	2.2	2.1	1.3	1.4	1.3
7	40.9	52.6	74.8	1.8	2.2	2.0	1.2	1.4	1.3
8	50.3	52.6	74.8	1.3	2.2	2.0	0.8	1.4	1.3
9	60.7	52.6	74.8	1.4	2.2	1.6	0.9	1.4	1.0
10	70.9	52.6	74.8	1.4	2.2	2.0	0.9	1.4	1.3

Schedule Info

Description:
MCHighStockingSite1End68MaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

Proj. Target C (t/a):
68

Stand Name:
Mixed conifer, high stocking, even-aged

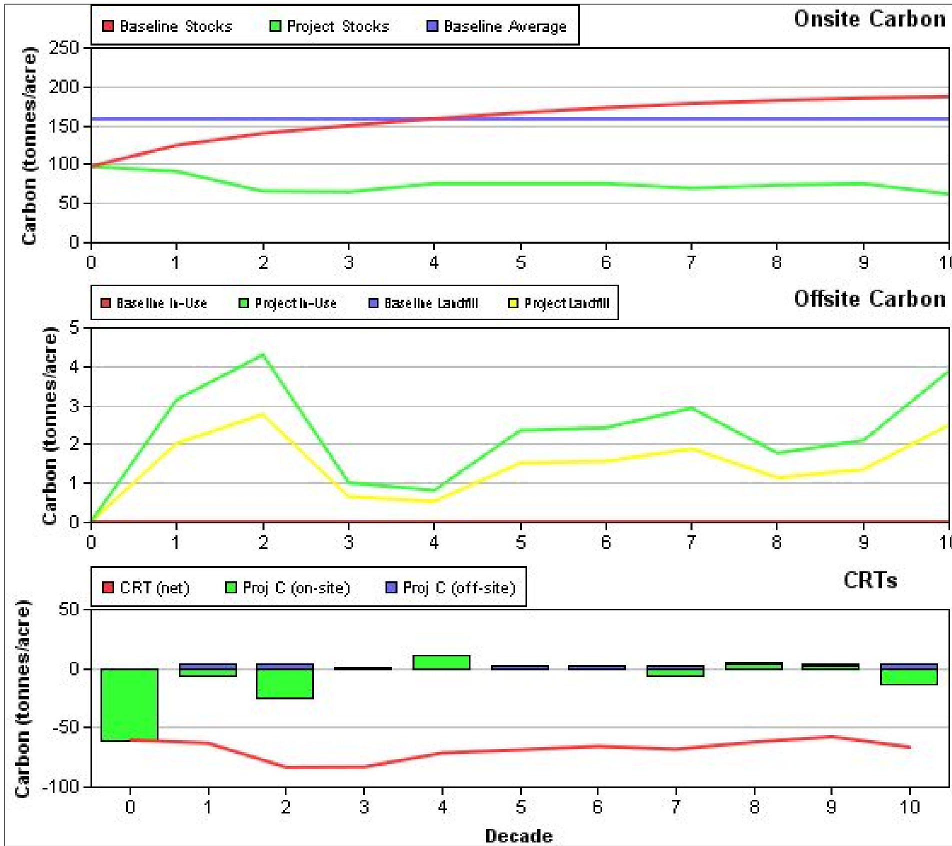
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	44.4	0.0	0.0	0.0	0.0	44.4
1	14.6	-1.0	0.2	-0.7	0.0	13.1
2	-36.8	3.4	0.7	0.0	0.0	-32.7
3	-2.9	-0.8	0.2	-0.5	-32.7	-36.7
4	2.9	-0.5	0.1	-0.4	-36.7	-34.6
5	0.0	-0.1	0.0	-0.1	-34.6	-34.8
6	0.0	-0.1	0.0	-0.1	-34.8	-35.0
7	0.0	-0.2	0.0	-0.1	-35.0	-35.2
8	0.0	-0.2	0.0	-0.1	-35.2	-35.5
9	0.0	-0.5	0.1	-0.3	-35.5	-36.3
10	0.0	-0.2	0.0	-0.1	-36.3	-36.5
Total	**22.2**	**-0.3**	**-1.4**	**-2.4**		**-259.9**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	0.0	1,000.0	0.0	804.9	195.1	0.0
2	557.9	0.0	442.1	627.8	0.0	372.2
3	442.1	557.9	0.0	372.2	627.8	0.0
4	841.4	0.0	158.6	567.4	377.2	55.4
5	600.7	290.5	108.9	427.7	509.4	62.9
6	788.8	0.0	211.2	685.7	221.8	92.5
7	478.7	442.1	79.2	583.1	339.5	77.4
8	557.9	442.1	0.0	855.6	45.2	99.2
9	399.3	600.7	0.0	387.5	543.6	68.9
10	290.5	709.5	0.0	456.4	372.2	171.4
Total	**495.7**	**404.3**	**100.0**	**576.8**	**323.2**	**100.0**

Figure 22. One hundred year schedule for mixed conifer, high starting stocks, site I carbon project with baseline and project activity estimates. End of project target carbon stocks is between the starting stocks and common practice (68 t/a). On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.9	157.8	96.9	0.0	0.0	0.0	0.0	0.0	0.0
1	124.1	157.8	90.4	0.0	0.0	3.1	0.0	0.0	2.0
2	139.2	157.8	65.0	0.0	0.0	4.3	0.0	0.0	2.8
3	149.3	157.8	64.0	0.0	0.0	1.0	0.0	0.0	0.6
4	158.0	157.8	74.8	0.0	0.0	0.8	0.0	0.0	0.5
5	165.9	157.8	74.8	0.0	0.0	2.3	0.0	0.0	1.5
6	172.3	157.8	74.8	0.0	0.0	2.4	0.0	0.0	1.6
7	177.5	157.8	68.8	0.0	0.0	2.9	0.0	0.0	1.9
8	181.7	157.8	72.7	0.0	0.0	1.8	0.0	0.0	1.1
9	184.6	157.8	74.8	0.0	0.0	2.1	0.0	0.0	1.3
10	186.6	157.8	61.2	0.0	0.0	3.9	0.0	0.0	2.5

Schedule Info

Description:
MCHighStockingSite 1End68MaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

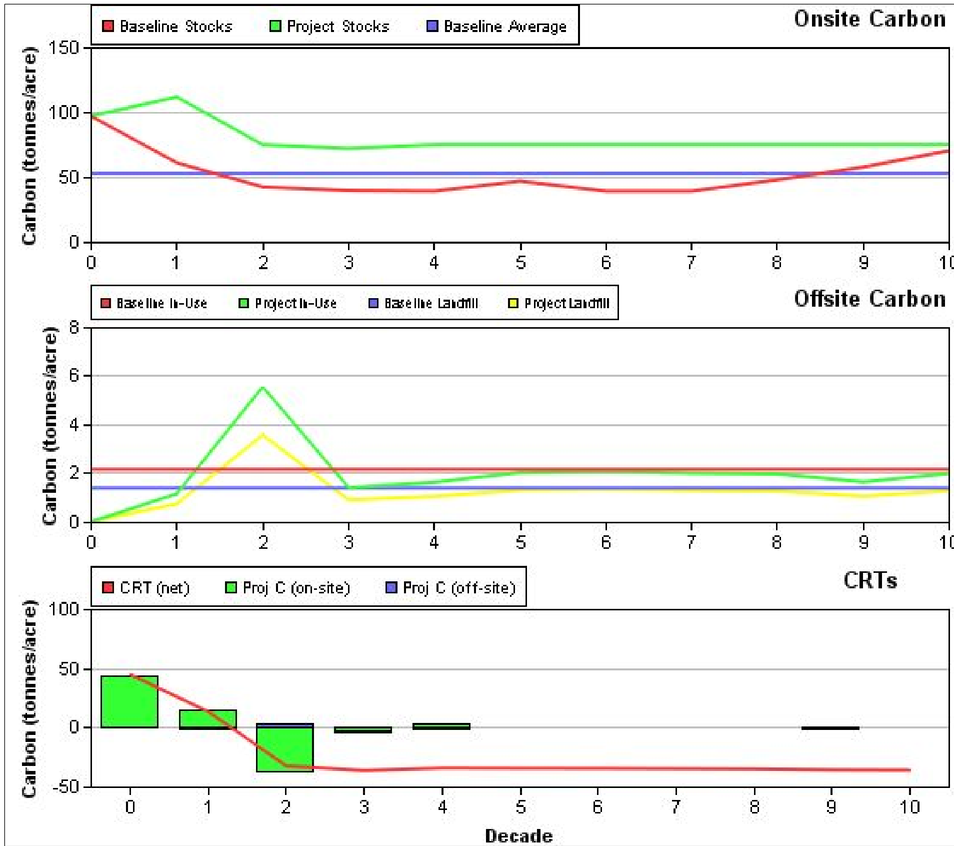
Proj. Target C (t/a):
68

Stand Name:
Mixed conifer, high stocking, even-aged

CRTs (C tonnes/acre) / Silviculture (acres)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial	-60.9	0.0	0.0	0.0	0.0	-60.9						
1	-6.5	3.1	0.6	0.0	-60.9	-63.6	1,000.0	0.0	0.0	468.2	531.8	0.0
2	-25.4	4.3	0.9	0.0	-63.6	-83.9	1,000.0	0.0	0.0	468.2	0.0	531.8
3	-0.9	1.0	0.2	0.0	-83.9	-83.7	1,000.0	0.0	0.0	531.8	468.2	0.0
4	10.8	0.8	0.2	0.0	-83.7	-71.9	1,000.0	0.0	0.0	531.8	468.2	0.0
5	0.0	2.3	0.5	0.0	-71.9	-69.1	1,000.0	0.0	0.0	531.8	371.0	97.1
6	0.0	2.4	0.5	0.0	-69.1	-66.2	1,000.0	0.0	0.0	629.0	264.8	106.2
7	-6.0	2.9	0.6	0.0	-66.2	-68.7	1,000.0	0.0	0.0	203.3	722.3	74.3
8	3.9	1.8	0.4	0.0	-68.7	-62.7	1,000.0	0.0	0.0	277.7	722.3	0.0
9	2.1	2.1	0.4	0.0	-62.7	-58.1	1,000.0	0.0	0.0	277.7	679.6	42.7
10	-13.6	3.9	0.8	0.0	-58.1	-67.0	1,000.0	0.0	0.0	320.4	531.8	147.8
Total	**-96.6**	**24.6**	**-4.9**	**0.0**		**-755.9**	**1,000.0**	**0.0**	**0.0**	**424.0**	**476.0**	**100.0**

Figure 23. One hundred year schedule for mixed conifer, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the starting stocks and common practice (68 t/a). Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	96.8	52.6	97.0	0.0	2.2	0.0	0.0	1.4	0.0
1	60.8	52.6	111.6	5.9	2.2	1.2	3.8	1.4	0.7
2	42.2	52.6	74.8	3.5	2.2	5.5	2.3	1.4	3.6
3	39.4	52.6	71.9	1.3	2.2	1.4	0.9	1.4	0.9
4	39.0	52.6	74.8	1.4	2.2	1.6	0.9	1.4	1.0
5	46.6	52.6	74.8	0.8	2.2	2.0	0.5	1.4	1.3
6	39.0	52.6	74.8	2.9	2.2	2.1	1.9	1.4	1.3
7	39.0	52.6	74.8	1.9	2.2	2.0	1.2	1.4	1.3
8	47.7	52.6	74.8	1.2	2.2	2.0	0.8	1.4	1.3
9	57.6	52.6	74.8	1.4	2.2	1.6	0.9	1.4	1.0
10	70.2	52.6	74.8	1.2	2.2	2.0	0.7	1.4	1.3

Schedule Info

Description:
MCHighStockingSite1End68MaxTotal

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
39

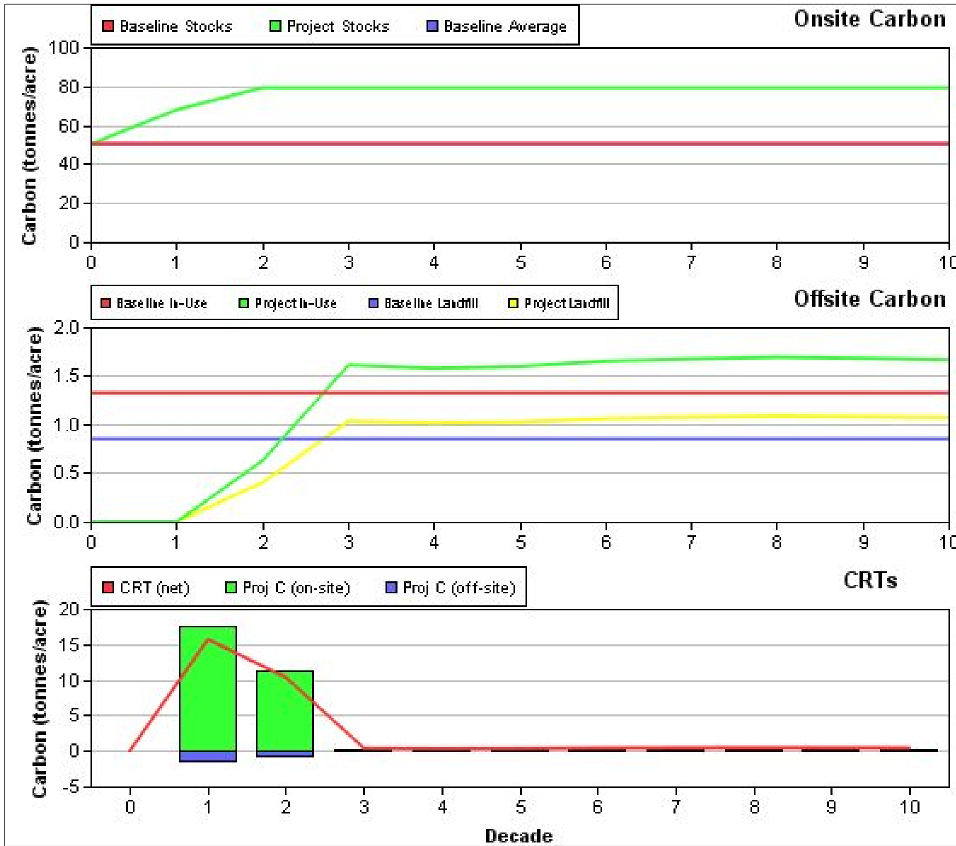
Proj. Target C (t/a):
68

Stand Name:
Mixed conifer, high stocking, even-aged

CRTs (C tonnes/acre) / **Silviculture (acres)**

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial	44.4	0.0	0.0	0.0	0.0	44.4						
1	14.6	-1.0	0.2	-0.6	0.0	13.1	0.0	1,000.0	0.0	804.9	195.1	0.0
2	-36.8	3.4	0.7	0.0	0.0	-32.7	564.2	0.0	435.8	627.8	0.0	372.2
3	-2.9	-0.8	0.2	-0.5	-32.7	-36.7	435.8	564.2	0.0	372.2	627.8	0.0
4	2.9	-0.5	0.1	-0.3	-36.7	-34.6	836.6	0.0	163.4	567.4	377.2	55.4
5	0.0	-0.1	0.0	-0.1	-34.6	-34.8	599.2	400.8	0.0	427.7	509.4	62.9
6	0.0	-0.1	0.0	0.0	-34.8	-34.9	687.8	0.0	312.2	685.7	221.8	92.5
7	0.0	-0.2	0.0	-0.1	-34.9	-35.1	475.6	435.8	88.6	583.1	339.5	77.4
8	0.0	-0.2	0.0	-0.1	-35.1	-35.4	564.2	435.8	0.0	855.6	45.2	99.2
9	0.0	-0.5	0.1	-0.3	-35.4	-36.1	400.8	599.2	0.0	387.5	543.6	68.9
10	0.0	-0.2	0.0	-0.1	-36.1	-36.4	400.8	599.2	0.0	456.4	372.2	171.4
Total	**22.2**	**-0.1**	**-1.4**	**-2.3**		**-258.9**	**496.5**	**403.5**	**100.0**	**576.8**	**323.2**	**100.0**

Figure 24. One hundred year schedule for mixed conifer, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks is between the starting stocks and common practice (68 t/a). On and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	50.3	50.3	0.0	1.3	0.0	0.0	0.8	0.0
1	50.3	50.3	67.9	1.3	1.3	0.0	0.8	0.8	0.0
2	50.3	50.3	79.2	1.3	1.3	0.6	0.9	0.8	0.4
3	50.3	50.3	79.2	1.4	1.3	1.6	0.9	0.8	1.0
4	50.3	50.3	79.2	1.4	1.3	1.6	0.9	0.8	1.0
5	50.3	50.3	79.2	1.3	1.3	1.6	0.9	0.8	1.0
6	50.3	50.3	79.2	1.3	1.3	1.7	0.9	0.8	1.1
7	50.3	50.3	79.2	1.4	1.3	1.7	0.9	0.8	1.1
8	50.3	50.3	79.2	1.3	1.3	1.7	0.8	0.8	1.1
9	50.3	50.3	79.2	1.3	1.3	1.7	0.8	0.8	1.1
10	50.3	50.3	79.2	1.3	1.3	1.7	0.8	0.8	1.1

Schedule Info

Description: RWDFLowStocking Site3End100%Max OnSite

Objective Function: Max Onsite CRTs

Constraints: C>=Start C

Common Prac. (t/a): 72

Proj. Target C (t/a): 72

Stand Name: Redwood/Douglas-fir, low stocking, even-aged

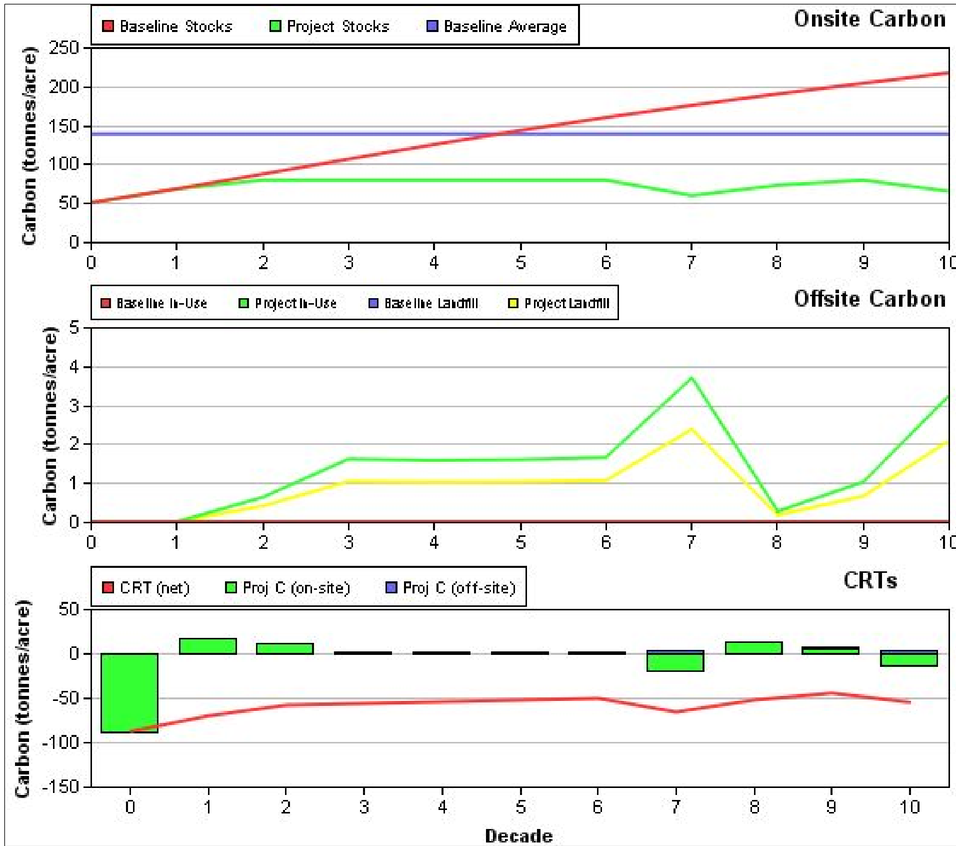
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	0.0	0.0	0.0	0.0	0.0	0.0
1	17.6	-1.3	0.3	-0.8	0.0	15.7
2	11.3	-0.7	0.1	-0.4	0.0	10.3
3	0.0	0.3	0.1	0.0	0.0	0.3
4	0.0	0.3	0.1	0.0	0.0	0.3
5	0.0	0.3	0.1	0.0	0.0	0.3
6	0.0	0.3	0.1	0.0	0.0	0.4
7	0.0	0.4	0.1	0.0	0.0	0.4
8	0.0	0.4	0.1	0.0	0.0	0.4
9	0.0	0.4	0.1	0.0	0.0	0.4
10	0.0	0.3	0.1	0.0	0.0	0.4
Total	**28.9**	**0.5**	**-0.9**	**-1.3**		**29.1**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
117.6	709.6	172.8	1,000.0	0.0	0.0
282.2	614.8	103.0	910.8	0.0	89.2
375.8	507.5	116.6	825.8	0.0	174.2
481.0	391.4	127.6	862.9	0.0	137.1
355.7	546.2	98.0	476.6	436.7	86.7
358.9	539.9	101.2	563.3	358.0	78.8
352.9	594.4	52.7	642.0	271.6	86.3
282.4	640.0	77.7	728.4	178.3	93.4
265.3	662.6	72.1	732.6	174.3	93.1
226.8	708.9	64.3	651.5	263.3	85.1
309.9	**591.5**	**98.6**	**739.4**	**168.2**	**92.4**

Figure 25. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 72 tonnes per acre. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	50.3	138.6	50.3	0.0	0.0	0.0	0.0	0.0	0.0
1	67.9	138.6	67.9	0.0	0.0	0.0	0.0	0.0	0.0
2	86.9	138.6	79.2	0.0	0.0	0.6	0.0	0.0	0.4
3	106.2	138.6	79.2	0.0	0.0	1.6	0.0	0.0	1.0
4	125.0	138.6	79.2	0.0	0.0	1.6	0.0	0.0	1.0
5	142.9	138.6	79.2	0.0	0.0	1.6	0.0	0.0	1.0
6	159.7	138.6	79.2	0.0	0.0	1.7	0.0	0.0	1.1
7	175.3	138.6	59.4	0.0	0.0	3.7	0.0	0.0	2.4
8	189.8	138.6	72.6	0.0	0.0	0.3	0.0	0.0	0.2
9	203.7	138.6	79.2	0.0	0.0	1.0	0.0	0.0	0.7
10	217.0	138.6	64.8	0.0	0.0	3.2	0.0	0.0	2.1

Schedule Info

Description:
RWDFLowStocking Site3End100%MaxInUse

Objective Function:
Max InUse CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
72

Proj. Target C (t/a):
72

Stand Name:
Redwood/Douglas-fir, low stocking, even-aged

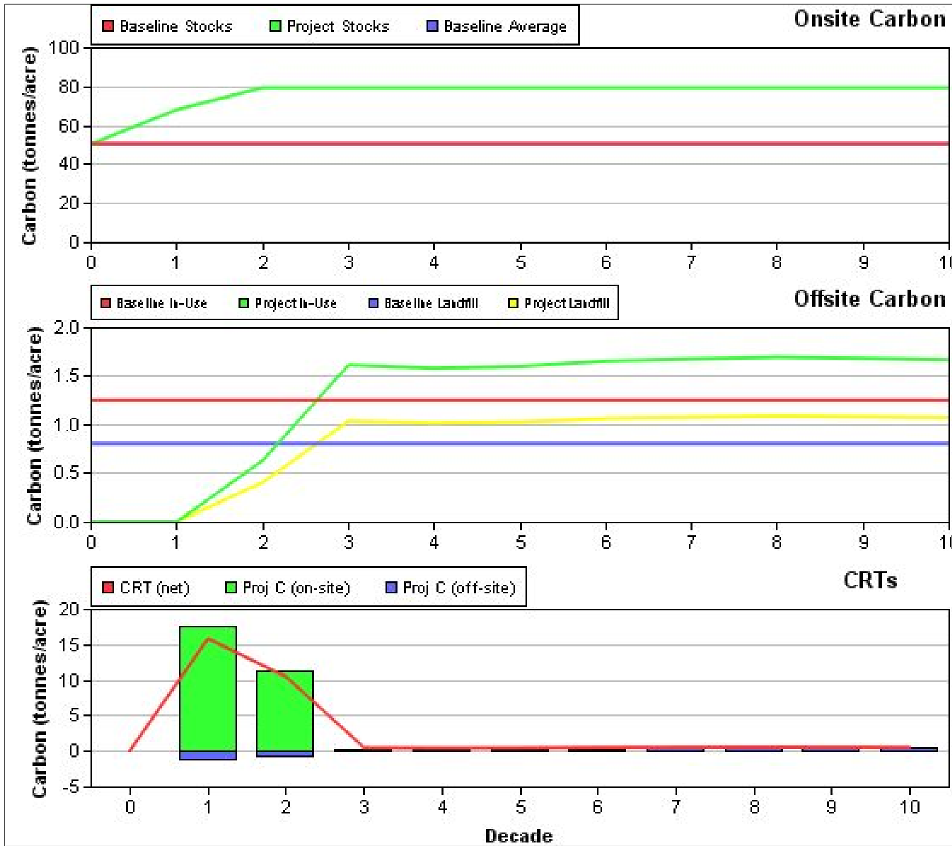
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-88.3	0.0	0.0	0.0	0.0	-88.3
1	17.6	0.0	0.0	0.0	-88.3	-70.7
2	11.3	0.6	0.1	0.0	-70.7	-58.6
3	0.0	1.6	0.3	0.0	-58.6	-56.7
4	0.0	1.6	0.3	0.0	-56.7	-54.8
5	0.0	1.6	0.3	0.0	-54.8	-52.9
6	0.0	1.7	0.3	0.0	-52.9	-50.9
7	-19.8	3.7	0.7	0.0	-50.9	-66.3
8	13.2	0.3	0.1	0.0	-66.3	-52.8
9	6.6	1.0	0.2	0.0	-52.8	-44.9
10	-14.4	3.2	0.6	0.0	-44.9	-55.5
Total	**-73.8**	**15.3**	**-3.1**	**0.0**		**-652.5**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	1,000.0	0.0	0.0	1,000.0	0.0	0.0
2	1,000.0	0.0	0.0	910.8	0.0	89.2
3	1,000.0	0.0	0.0	825.8	0.0	174.2
4	1,000.0	0.0	0.0	862.9	0.0	137.1
5	1,000.0	0.0	0.0	400.5	518.4	81.1
6	1,000.0	0.0	0.0	481.6	447.6	70.8
7	1,000.0	0.0	0.0	552.4	226.7	220.9
8	1,000.0	0.0	0.0	773.3	226.7	0.0
9	1,000.0	0.0	0.0	684.1	269.6	46.3
10	1,000.0	0.0	0.0	556.3	263.3	180.4
Total	**1,000.0**	**0.0**	**0.0**	**704.8**	**195.2**	**100.0**

Figure 26. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 72 tonnes per acre. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	50.3	50.3	0.0	1.2	0.0	0.0	0.8	0.0
1	50.3	50.3	67.9	1.3	1.2	0.0	0.8	0.8	0.0
2	50.3	50.3	79.2	1.3	1.2	0.6	0.9	0.8	0.4
3	50.3	50.3	79.2	1.4	1.2	1.6	0.9	0.8	1.0
4	50.3	50.3	79.2	1.4	1.2	1.6	0.9	0.8	1.0
5	50.3	50.3	79.2	1.3	1.2	1.6	0.8	0.8	1.0
6	50.3	50.3	79.2	1.3	1.2	1.7	0.8	0.8	1.1
7	50.3	50.3	79.2	1.2	1.2	1.7	0.7	0.8	1.1
8	50.3	50.3	79.2	1.2	1.2	1.7	0.7	0.8	1.1
9	50.3	50.3	79.2	1.1	1.2	1.7	0.7	0.8	1.1
10	50.3	50.3	79.2	1.2	1.2	1.7	0.7	0.8	1.1

Schedule Info

Description: RWDFLowStocking Site3End100%Max Total

Objective Function: Max Total CRTs

Constraints: C>=Start C

Common Prac. (t/a): 72

Proj. Target C (t/a): 72

Stand Name: Redwood/Douglas-fir, low stocking, even-aged

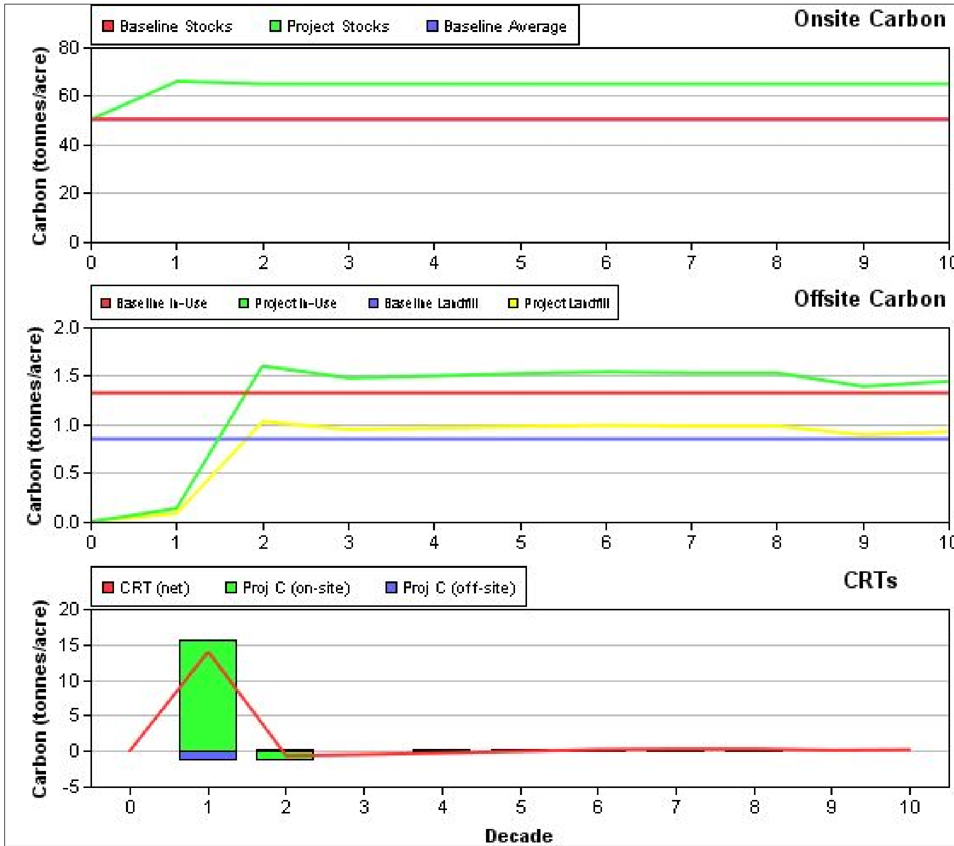
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	0.0	0.0	0.0	0.0	0.0	0.0
1	17.6	-1.2	0.2	-0.8	0.0	15.8
2	11.3	-0.6	0.1	-0.4	0.0	10.4
3	0.0	0.4	0.1	0.0	0.0	0.4
4	0.0	0.3	0.1	0.0	0.0	0.4
5	0.0	0.3	0.1	0.0	0.0	0.4
6	0.0	0.4	0.1	0.0	0.0	0.5
7	0.0	0.4	0.1	0.0	0.0	0.5
8	0.0	0.4	0.1	0.0	0.0	0.5
9	0.0	0.4	0.1	0.0	0.0	0.5
10	0.0	0.4	0.1	0.0	0.0	0.5
Total	**28.9**	**1.3**	**-1.0**	**-1.2**		**30.0**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	843.6	156.4	1,000.0	0.0	0.0
156.4	767.8	75.8	910.8	0.0	89.2
232.2	677.4	90.3	825.8	0.0	174.2
322.6	574.8	102.7	862.9	0.0	137.1
268.8	645.5	85.7	476.6	436.7	86.7
278.7	637.7	83.6	563.3	358.0	78.8
272.0	650.9	77.1	642.0	271.6	86.3
246.4	682.0	71.6	728.4	178.3	93.4
232.2	700.3	67.4	732.6	174.3	93.1
216.1	720.2	63.7	651.5	263.3	85.1
222.6	**690.0**	**87.4**	**739.4**	**168.2**	**92.4**

Figure 27. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount of 72 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	50.3	50.3	0.0	1.3	0.0	0.0	0.9	0.0
1	50.3	50.3	66.0	1.3	1.3	0.1	0.8	0.9	0.1
2	50.3	50.3	64.9	1.3	1.3	1.6	0.9	0.9	1.0
3	50.3	50.3	64.9	1.4	1.3	1.5	0.9	0.9	0.9
4	50.3	50.3	64.9	1.4	1.3	1.5	0.9	0.9	1.0
5	50.3	50.3	64.9	1.3	1.3	1.5	0.9	0.9	1.0
6	50.3	50.3	64.9	1.3	1.3	1.5	0.9	0.9	1.0
7	50.3	50.3	64.9	1.4	1.3	1.5	0.9	0.9	1.0
8	50.3	50.3	64.9	1.3	1.3	1.5	0.8	0.9	1.0
9	50.3	50.3	64.9	1.3	1.3	1.4	0.8	0.9	0.9
10	50.3	50.3	64.9	1.3	1.3	1.4	0.8	0.9	0.9

Schedule Info

Description:
RWDFLowStocking Site3End50%MaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
72

Proj. Target C (t/a):
59

Stand Name:
Redwood/Douglas-fir, low stocking, even-aged

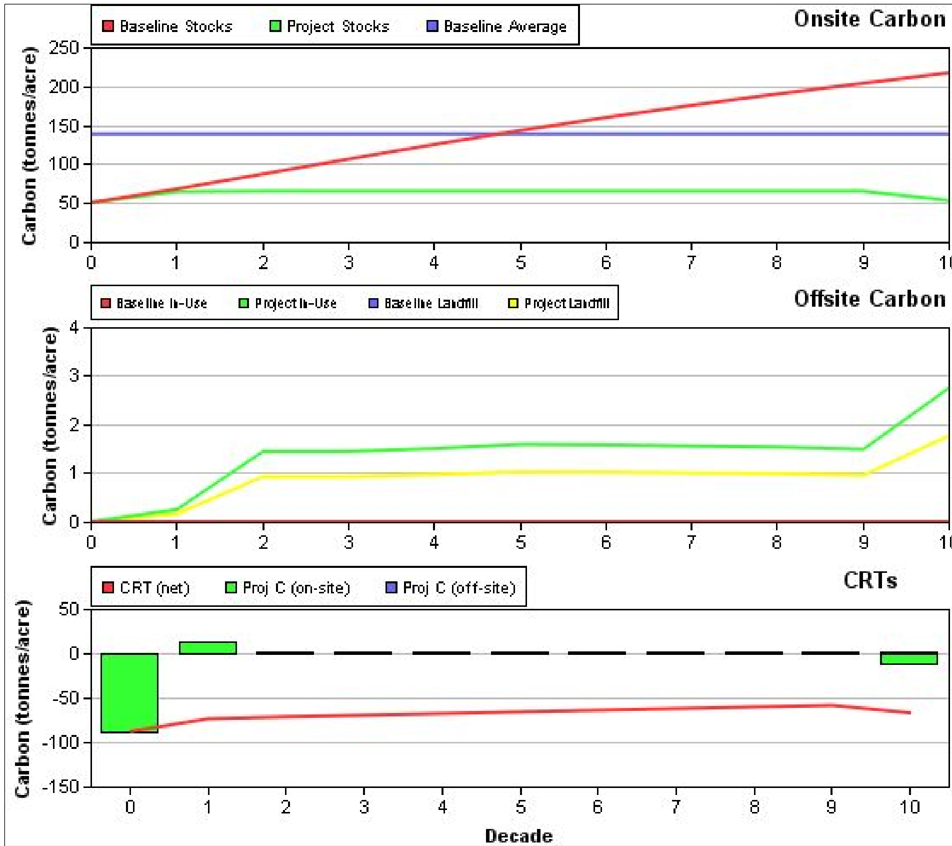
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	0.0	0.0	0.0	0.0	0.0	0.0
1	15.6	-1.2	0.2	-0.8	0.0	13.9
2	-1.1	0.3	0.1	0.0	0.0	-0.7
3	0.0	0.2	0.0	0.0	-0.7	-0.5
4	0.0	0.2	0.0	0.0	-0.5	-0.3
5	0.0	0.2	0.0	0.0	-0.3	-0.1
6	0.0	0.2	0.0	0.0	-0.1	0.2
7	0.0	0.2	0.0	0.0	0.0	0.2
8	0.0	0.2	0.0	0.0	0.0	0.2
9	0.0	0.1	0.0	0.0	0.0	0.1
10	0.0	0.1	0.0	0.0	0.0	0.1
Total	**14.6**	**0.4**	**-0.6**	**-0.8**		**13.2**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
118.7	708.4	172.9	764.8	235.2	0.0
283.4	613.3	103.3	575.0	235.2	189.9
376.9	506.4	116.7	633.7	235.2	131.1
481.2	391.7	127.1	656.4	235.2	108.4
355.9	546.4	97.7	429.3	494.3	76.3
358.5	540.3	101.2	505.7	421.3	73.1
352.7	594.7	52.7	578.7	341.8	79.4
283.2	639.0	77.8	658.2	255.9	85.9
267.0	660.7	72.4	554.2	324.2	121.5
228.4	706.8	64.8	544.7	320.9	134.4
310.6	**590.8**	**98.6**	**590.1**	**309.9**	**100.0**

Figure 28. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (59 tonnes per acre). On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	50.3	138.6	50.3	0.0	0.0	0.0	0.0	0.0	0.0
1	67.9	138.6	64.3	0.0	0.0	0.3	0.0	0.0	0.2
2	86.9	138.6	64.9	0.0	0.0	1.4	0.0	0.0	0.9
3	106.2	138.6	64.9	0.0	0.0	1.4	0.0	0.0	0.9
4	125.0	138.6	64.9	0.0	0.0	1.5	0.0	0.0	1.0
5	142.9	138.6	64.9	0.0	0.0	1.6	0.0	0.0	1.0
6	159.7	138.6	64.9	0.0	0.0	1.6	0.0	0.0	1.0
7	175.3	138.6	64.9	0.0	0.0	1.6	0.0	0.0	1.0
8	189.8	138.6	64.9	0.0	0.0	1.5	0.0	0.0	1.0
9	203.7	138.6	64.9	0.0	0.0	1.5	0.0	0.0	1.0
10	217.0	138.6	53.1	0.0	0.0	2.7	0.0	0.0	1.8

Schedule Info

Description:
RWDFLowStocking Site3End50%MaxIn Use
Objective Function:
Max InUse CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
72
Proj. Target C (t/a):
59

Stand Name:
Redwood/Douglas-fir, low stocking, even-aged

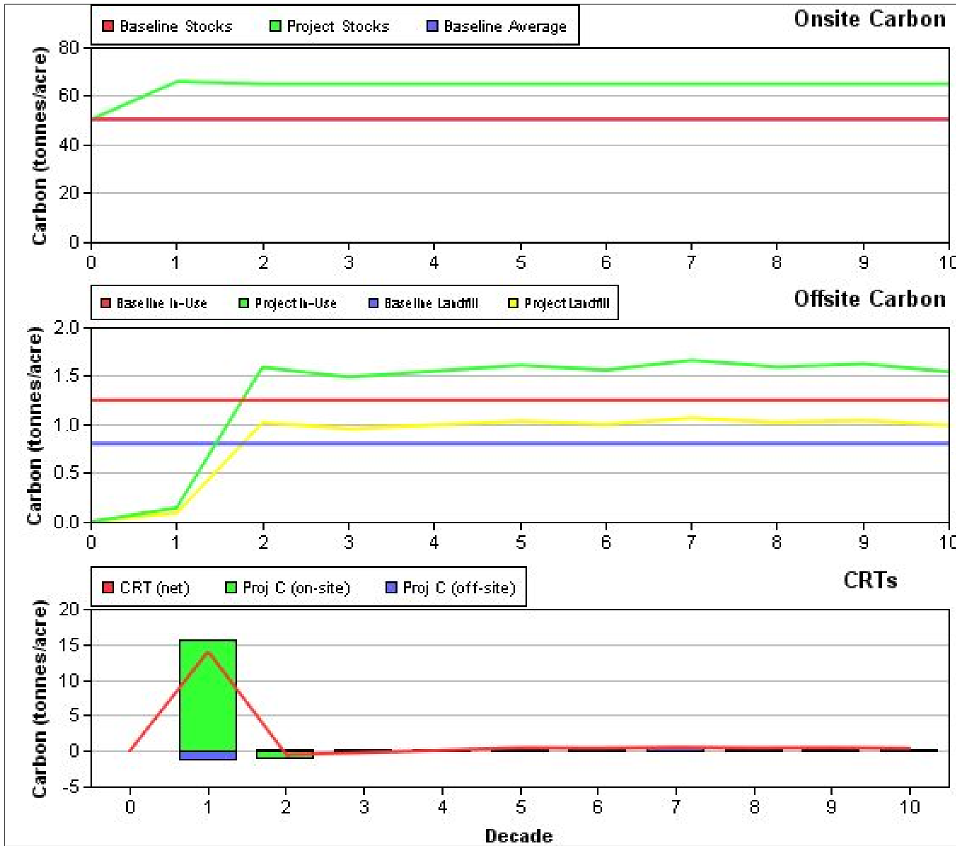
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-88.3	0.0	0.0	0.0	0.0	-88.3
1	14.0	0.3	0.1	0.0	-88.3	-74.0
2	0.6	1.4	0.3	0.0	-74.0	-71.7
3	0.0	1.4	0.3	0.0	-71.7	-69.9
4	0.0	1.5	0.3	0.0	-69.9	-68.1
5	0.0	1.6	0.3	0.0	-68.1	-66.2
6	0.0	1.6	0.3	0.0	-66.2	-64.3
7	0.0	1.6	0.3	0.0	-64.3	-62.5
8	0.0	1.5	0.3	0.0	-62.5	-60.6
9	0.0	1.5	0.3	0.0	-60.6	-58.8
10	-11.8	2.7	0.5	0.0	-58.8	-67.3
Total	**-85.5**	**15.1**	**-3.0**	**0.0**		**-751.9**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	1,000.0	0.0	0.0	568.2	431.8	0.0
2	1,000.0	0.0	0.0	568.2	244.5	187.3
3	1,000.0	0.0	0.0	755.5	38.0	206.5
4	1,000.0	0.0	0.0	855.0	0.0	145.0
5	1,000.0	0.0	0.0	538.8	370.4	90.8
6	1,000.0	0.0	0.0	442.3	491.0	66.7
7	1,000.0	0.0	0.0	302.5	644.7	52.8
8	1,000.0	0.0	0.0	317.3	629.6	53.1
9	1,000.0	0.0	0.0	370.4	573.4	56.2
10	1,000.0	0.0	0.0	426.6	431.8	141.6
Total	**1,000.0**	**0.0**	**0.0**	**514.5**	**385.5**	**100.0**

Figure 29. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (59 tonnes per acre). Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	50.3	50.3	50.3	0.0	1.2	0.0	0.0	0.8	0.0
1	50.3	50.3	65.9	1.3	1.2	0.1	0.8	0.8	0.1
2	50.3	50.3	64.9	1.3	1.2	1.6	0.9	0.8	1.0
3	50.3	50.3	64.9	1.4	1.2	1.5	0.9	0.8	1.0
4	50.3	50.3	64.9	1.4	1.2	1.5	0.9	0.8	1.0
5	50.3	50.3	64.9	1.3	1.2	1.6	0.8	0.8	1.0
6	50.3	50.3	64.9	1.3	1.2	1.6	0.8	0.8	1.0
7	50.3	50.3	64.9	1.2	1.2	1.7	0.7	0.8	1.1
8	50.3	50.3	64.9	1.2	1.2	1.6	0.7	0.8	1.0
9	50.3	50.3	64.9	1.1	1.2	1.6	0.7	0.8	1.0
10	50.3	50.3	64.9	1.2	1.2	1.5	0.7	0.8	1.0

Schedule Info

Description: RWDFLowStocking Site3End50%MaxTotal
Objective Function: Max Total CRTs
Constraints: C>=Start C

Common Prac. (t/a): 72
Proj. Target C (t/a): 59

Stand Name: Redwood/Douglas-fir, low stocking, even-aged

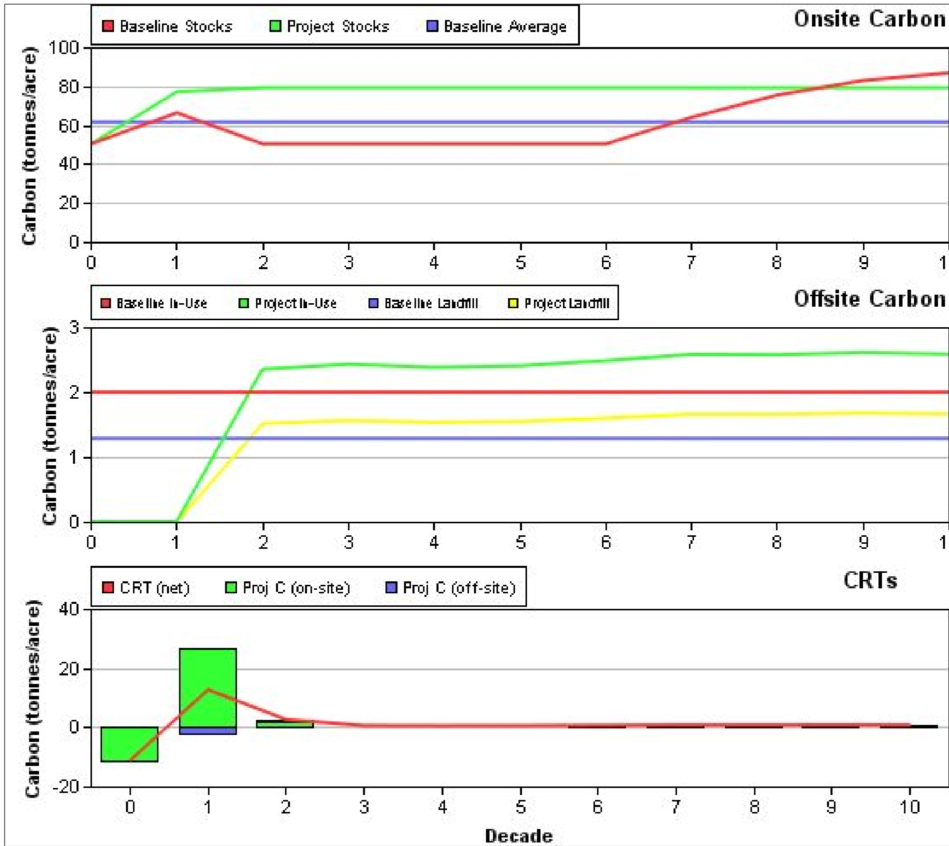
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	0.0	0.0	0.0	0.0	0.0	0.0
1	15.6	-1.1	0.2	-0.7	0.0	14.0
2	-1.0	0.3	0.1	0.0	0.0	-0.6
3	0.0	0.2	0.0	0.0	-0.6	-0.3
4	0.0	0.3	0.1	0.0	-0.3	0.1
5	0.0	0.4	0.1	0.0	0.0	0.4
6	0.0	0.3	0.1	0.0	0.0	0.4
7	0.0	0.4	0.1	0.0	0.0	0.5
8	0.0	0.3	0.1	0.0	0.0	0.4
9	0.0	0.4	0.1	0.0	0.0	0.4
10	0.0	0.3	0.1	0.0	0.0	0.4
Total	**14.6**	**1.9**	**-0.8**	**-0.7**		**15.7**

Silviculture (acres)

Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
0.0	843.6	156.4	754.1	245.9	0.0
156.4	767.8	75.8	746.2	0.0	253.8
232.2	677.4	90.3	839.2	0.0	160.8
322.6	574.8	102.7	865.3	0.0	134.7
268.8	645.5	85.7	549.2	357.8	93.0
278.7	637.7	83.6	396.3	541.6	62.1
272.0	650.9	77.1	458.4	471.4	70.2
246.4	682.0	71.6	528.6	397.0	74.4
232.2	700.3	67.4	595.1	325.1	79.8
216.1	720.2	63.7	514.1	414.6	71.3
222.6	**690.0**	**87.4**	**624.7**	**275.3**	**100.0**

Figure 30. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (59 tonnes per acre). Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	61.6	50.3	0.0	2.0	0.0	0.0	1.3	0.0
1	66.3	61.6	77.1	0.8	2.0	0.0	0.5	1.3	0.0
2	50.3	61.6	79.2	3.7	2.0	2.4	2.4	1.3	1.5
3	50.3	61.6	79.2	2.1	2.0	2.4	1.4	1.3	1.6
4	50.3	61.6	79.2	2.4	2.0	2.4	1.5	1.3	1.5
5	50.3	61.6	79.2	2.5	2.0	2.4	1.6	1.3	1.5
6	50.3	61.6	79.2	2.6	2.0	2.5	1.6	1.3	1.6
7	64.0	61.6	79.2	1.1	2.0	2.6	0.7	1.3	1.7
8	75.4	61.6	79.2	1.4	2.0	2.6	0.9	1.3	1.7
9	82.9	61.6	79.2	1.6	2.0	2.6	1.0	1.3	1.7
10	86.7	61.6	79.2	1.8	2.0	2.6	1.2	1.3	1.7

Schedule Info

Description: RWDFLowStocking Site1End100%Max OnSite
Objective Function: Max Onsite CRTs
Constraints: C>=Start C
Common Prac. (t/a): 72
Proj. Target C (t/a): 72
Stand Name: Redwood/Douglas-fir, low stocking, even-aged

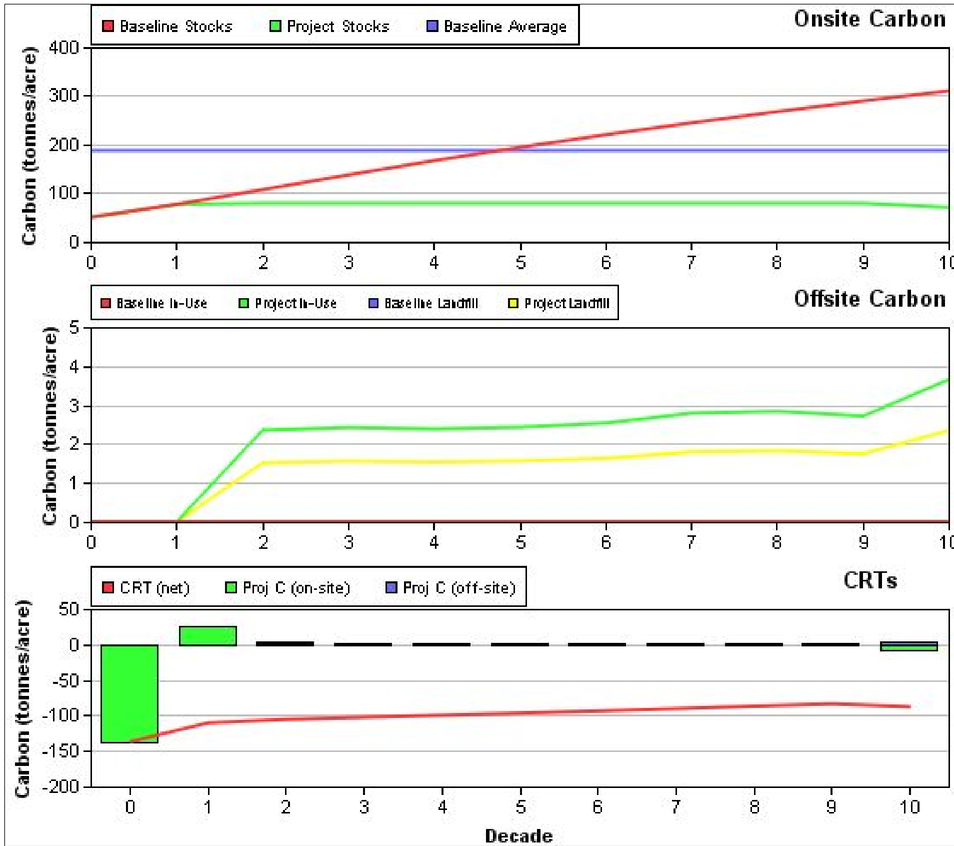
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-11.2	0.0	0.0	0.0	0.0	-11.2
1	26.8	-2.0	0.4	-1.3	-11.2	12.6
2	2.1	0.4	0.1	0.0	0.0	2.6
3	0.0	0.4	0.1	0.0	0.0	0.5
4	0.0	0.4	0.1	0.0	0.0	0.5
5	0.0	0.4	0.1	0.0	0.0	0.5
6	0.0	0.5	0.1	0.0	0.0	0.6
7	0.0	0.6	0.1	0.0	0.0	0.7
8	0.0	0.6	0.1	0.0	0.0	0.7
9	0.0	0.6	0.1	0.0	0.0	0.7
10	0.0	0.6	0.1	0.0	0.0	0.7
Total	**17.6**	**2.4**	**-1.3**	**-1.3**		**8.8**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
860.0	0.0	140.0	1,000.0	0.0	0.0
140.0	549.4	310.5	239.9	605.4	154.7
450.6	433.8	115.7	363.3	512.6	124.1
426.2	415.8	158.0	487.4	371.1	141.5
273.7	569.7	156.7	295.4	574.6	130.0
314.7	566.2	119.1	332.7	583.5	83.8
275.8	724.2	0.0	274.9	627.3	97.7
119.1	880.9	0.0	253.2	661.7	85.1
0.0	1,000.0	0.0	263.1	685.2	51.7
0.0	1,000.0	0.0	243.5	672.2	84.3
286.0	**614.0**	**100.0**	**375.3**	**529.4**	**95.3**

Figure 31. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are the common practice amount (72 tonnes per acre). On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	187.7	50.3	0.0	0.0	0.0	0.0	0.0	0.0
1	77.1	187.7	77.1	0.0	0.0	0.0	0.0	0.0	0.0
2	107.1	187.7	79.2	0.0	0.0	2.4	0.0	0.0	1.5
3	137.5	187.7	79.2	0.0	0.0	2.4	0.0	0.0	1.6
4	166.7	187.7	79.2	0.0	0.0	2.4	0.0	0.0	1.5
5	194.1	187.7	79.2	0.0	0.0	2.4	0.0	0.0	1.6
6	220.0	187.7	79.2	0.0	0.0	2.5	0.0	0.0	1.6
7	244.5	187.7	79.2	0.0	0.0	2.8	0.0	0.0	1.8
8	267.5	187.7	79.2	0.0	0.0	2.8	0.0	0.0	1.8
9	289.4	187.7	79.2	0.0	0.0	2.7	0.0	0.0	1.7
10	310.2	187.7	70.8	0.0	0.0	3.7	0.0	0.0	2.3

Schedule Info

Description: RWDFLowStocking Site1End100%MaxInUse

Objective Function: Max InUse CRTs

Constraints: C>=Start C

Common Prac. (t/a): 72

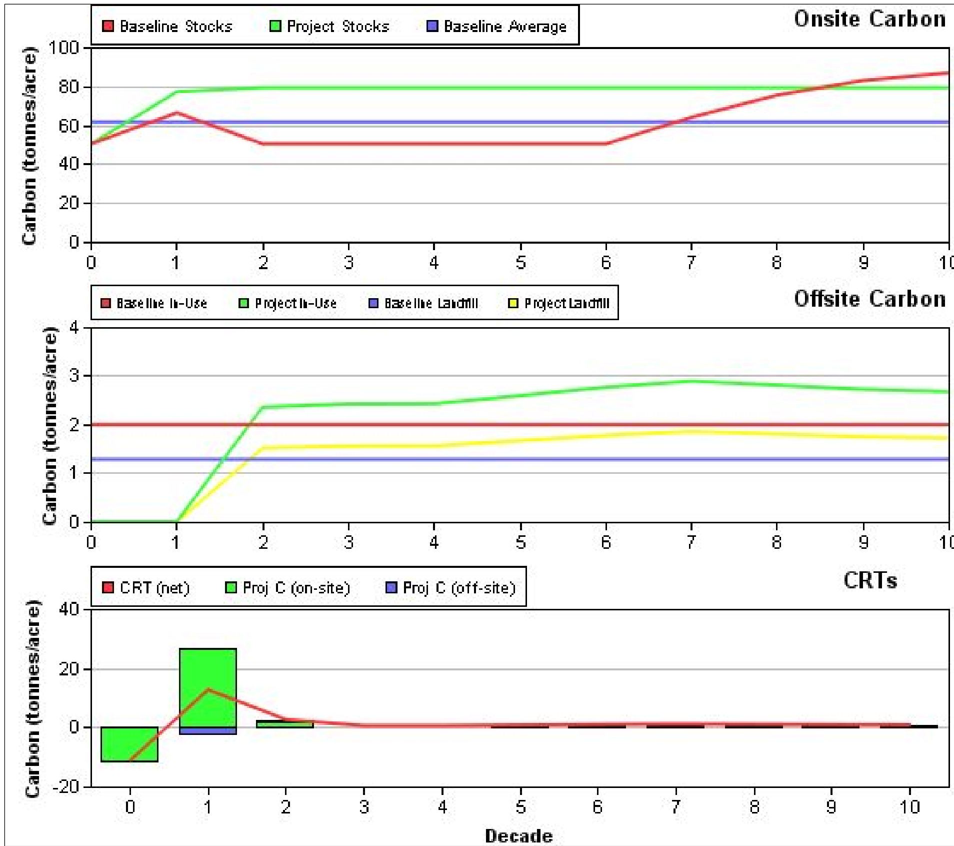
Proj. Target C (t/a): 72

Stand Name: Redwood/Douglas-fir, low stocking, even-aged

CRTs (C tonnes/acre) **Silviculture (acres)**

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Ne	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-137.4	0.0	0.0	0.0	0.0	-137						
1	26.8	0.0	0.0	0.0	-137.4	-110	1,000.0	0.0	0.0	1,000.0	0.0	0.0
2	2.1	2.4	0.5	0.0	-110.6	-105	1,000.0	0.0	0.0	251.0	592.0	157.1
3	0.0	2.4	0.5	0.0	-105.7	-102	1,000.0	0.0	0.0	408.0	450.8	141.2
4	0.0	2.4	0.5	0.0	-102.7	-99	1,000.0	0.0	0.0	549.2	297.1	153.6
5	0.0	2.4	0.5	0.0	-99.9	-97	1,000.0	0.0	0.0	294.8	533.4	171.8
6	0.0	2.5	0.5	0.0	-97.0	-93	1,000.0	0.0	0.0	325.4	549.2	125.3
7	0.0	2.8	0.6	0.0	-93.9	-90	1,000.0	0.0	0.0	297.1	635.2	67.7
8	0.0	2.8	0.6	0.0	-90.6	-87	1,000.0	0.0	0.0	193.0	746.6	60.4
9	0.0	2.7	0.5	0.0	-87.2	-83	1,000.0	0.0	0.0	128.0	825.2	46.8
10	-8.4	3.7	0.7	0.0	-83.9	-87	1,000.0	0.0	0.0	174.8	749.0	76.1
Total	**-116.9**	**24.1**	**-4.8**	**0.0**		**-1,09**	**1,000.0**	**0.0**	**0.0**	**362.1**	**537.9**	**100.0**

Figure 32. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (59 tonnes per acre). Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	61.6	50.3	0.0	2.0	0.0	0.0	1.3	0.0
1	66.3	61.6	77.1	0.8	2.0	0.0	0.5	1.3	0.0
2	50.3	61.6	79.2	3.7	2.0	2.4	2.4	1.3	1.5
3	50.3	61.6	79.2	2.1	2.0	2.4	1.4	1.3	1.6
4	50.3	61.6	79.2	2.4	2.0	2.4	1.5	1.3	1.6
5	50.3	61.6	79.2	2.5	2.0	2.6	1.6	1.3	1.7
6	50.3	61.6	79.2	2.6	2.0	2.8	1.6	1.3	1.8
7	64.0	61.6	79.2	1.1	2.0	2.9	0.7	1.3	1.9
8	75.4	61.6	79.2	1.4	2.0	2.8	0.9	1.3	1.8
9	82.9	61.6	79.2	1.6	2.0	2.7	1.0	1.3	1.7
10	86.7	61.6	79.2	1.8	2.0	2.7	1.2	1.3	1.7

Schedule Info

Description: RWDFLowStocking Site1End100%Max Total

Objective Function: Max Total CRTs

Constraints: C>=Start C

Common Prac. (t/a): 72

Proj. Target C (t/a): 72

Stand Name: Redwood/Douglas-fir, low stocking, even-aged

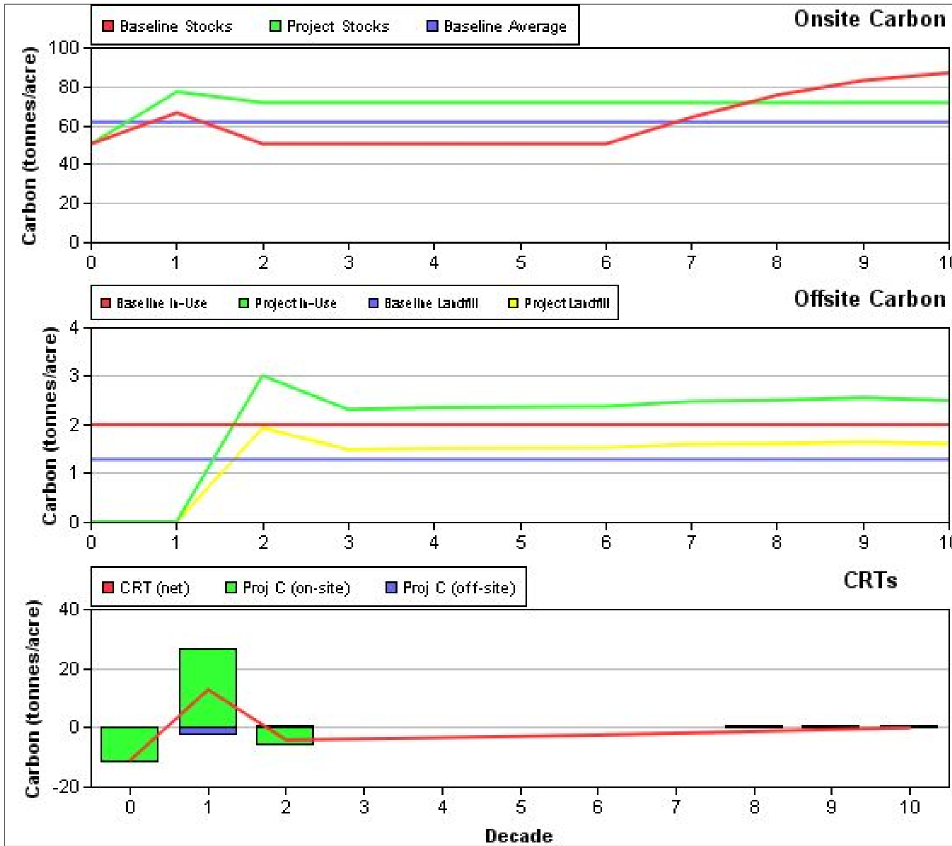
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-11.2	0.0	0.0	0.0	0.0	-11.2
1	26.8	-2.0	0.4	-1.3	-11.2	12.6
2	2.1	0.4	0.1	0.0	0.0	2.6
3	0.0	0.4	0.1	0.0	0.0	0.5
4	0.0	0.4	0.1	0.0	0.0	0.5
5	0.0	0.6	0.1	0.0	0.0	0.7
6	0.0	0.8	0.2	0.0	0.0	0.9
7	0.0	0.9	0.2	0.0	0.0	1.1
8	0.0	0.8	0.2	0.0	0.0	1.0
9	0.0	0.7	0.1	0.0	0.0	0.9
10	0.0	0.7	0.1	0.0	0.0	0.8
Total	**17.6**	**3.7**	**-1.5**	**-1.3**		**10.3**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
860.0	0.0	140.0	1,000.0	0.0	0.0
140.0	549.4	310.5	368.6	449.3	182.1
450.6	433.8	115.7	550.7	276.9	172.4
426.2	415.8	158.0	723.1	87.0	189.9
273.7	569.7	156.7	362.3	483.1	154.6
314.7	566.2	119.1	344.5	579.6	75.9
275.8	724.2	0.0	230.5	700.5	69.0
119.1	880.9	0.0	212.6	733.4	54.1
0.0	1,000.0	0.0	266.6	684.1	49.3
0.0	1,000.0	0.0	315.9	631.4	52.7
286.0	**614.0**	**100.0**	**437.5**	**462.5**	**100.0**

Figure 33. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (59 tonnes per acre). On and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	61.6	50.3	0.0	2.0	0.0	0.0	1.3	0.0
1	66.3	61.6	77.1	0.8	2.0	0.0	0.5	1.3	0.0
2	50.3	61.6	71.5	3.7	2.0	3.0	2.4	1.3	1.9
3	50.3	61.6	71.5	2.1	2.0	2.3	1.4	1.3	1.5
4	50.3	61.6	71.5	2.4	2.0	2.3	1.5	1.3	1.5
5	50.3	61.6	71.5	2.5	2.0	2.4	1.6	1.3	1.5
6	50.3	61.6	71.5	2.6	2.0	2.4	1.6	1.3	1.5
7	64.0	61.6	71.5	1.1	2.0	2.5	0.7	1.3	1.6
8	75.4	61.6	71.5	1.4	2.0	2.5	0.9	1.3	1.6
9	82.9	61.6	71.5	1.6	2.0	2.6	1.0	1.3	1.6
10	86.7	61.6	71.5	1.8	2.0	2.5	1.2	1.3	1.6

Schedule Info

Description:
RWDFLowStocking Site1End50%MaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
72

Proj. Target C (t/a):
65

Stand Name:
Redwood/Douglas-fir, low stocking, even-aged

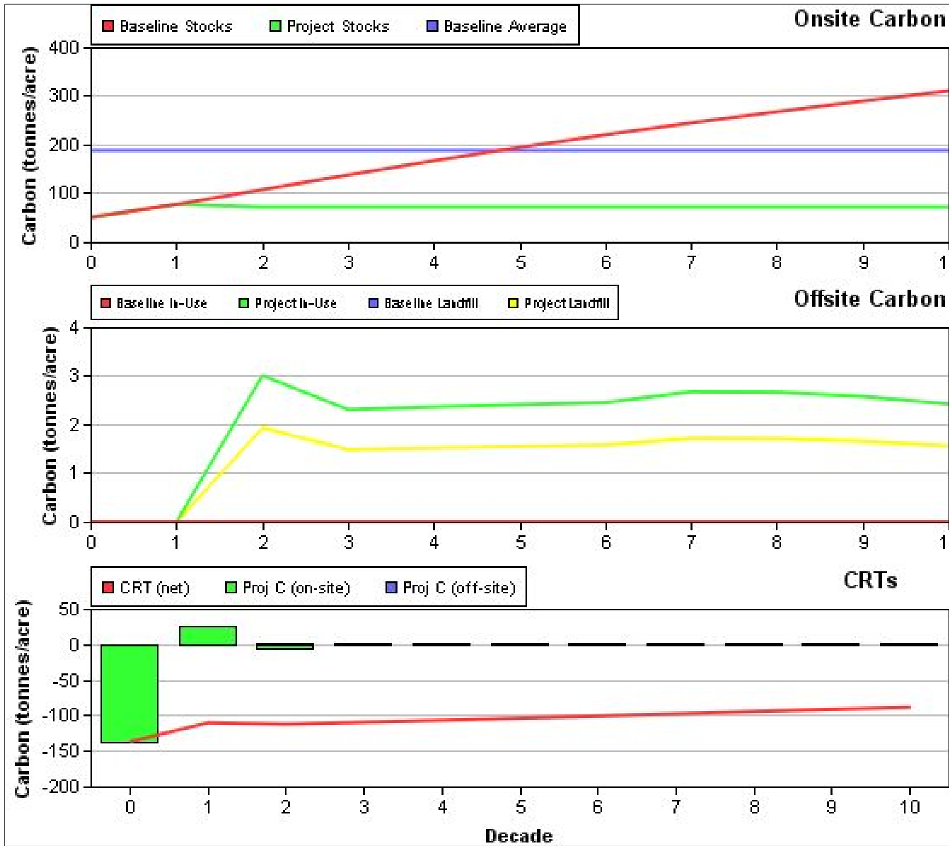
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	-11.2	0.0	0.0	0.0	0.0	-11.2
1	26.8	-2.0	0.4	-1.3	-11.2	12.6
2	-5.6	1.0	0.2	0.0	0.0	-4.4
3	0.0	0.3	0.1	0.0	-4.4	-4.0
4	0.0	0.4	0.1	0.0	-4.0	-3.6
5	0.0	0.4	0.1	0.0	-3.6	-3.1
6	0.0	0.4	0.1	0.0	-3.1	-2.7
7	0.0	0.5	0.1	0.0	-2.7	-2.1
8	0.0	0.5	0.1	0.0	-2.1	-1.5
9	0.0	0.6	0.1	0.0	-1.5	-0.8
10	0.0	0.5	0.1	0.0	-0.8	-0.2
Total	**9.9**	**2.4**	**-1.3**	**-1.3**		**-21.1**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
860.0	0.0	140.0	1,000.0	0.0	0.0
140.0	549.4	310.5	100.2	687.5	212.2
450.6	433.8	115.7	305.7	590.8	103.5
426.2	415.8	158.0	409.2	467.0	123.8
273.7	569.7	156.7	235.0	630.5	134.5
314.7	566.2	119.1	272.8	631.3	95.9
275.8	724.2	0.0	244.9	657.3	97.8
119.1	880.9	0.0	211.1	696.0	92.9
0.0	1,000.0	0.0	209.8	742.6	47.5
0.0	1,000.0	0.0	171.2	748.7	80.1
286.0	**614.0**	**100.0**	**316.0**	**585.2**	**98.8**

Figure 34. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site1 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (65 tonnes per acre). On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	187.7	50.3	0.0	0.0	0.0	0.0	0.0	0.0
1	77.1	187.7	77.1	0.0	0.0	0.0	0.0	0.0	0.0
2	107.1	187.7	71.5	0.0	0.0	3.0	0.0	0.0	1.9
3	137.5	187.7	71.5	0.0	0.0	2.3	0.0	0.0	1.5
4	166.7	187.7	71.5	0.0	0.0	2.4	0.0	0.0	1.5
5	194.1	187.7	71.5	0.0	0.0	2.4	0.0	0.0	1.5
6	220.0	187.7	71.5	0.0	0.0	2.5	0.0	0.0	1.6
7	244.5	187.7	71.5	0.0	0.0	2.7	0.0	0.0	1.7
8	267.5	187.7	71.5	0.0	0.0	2.7	0.0	0.0	1.7
9	289.4	187.7	71.5	0.0	0.0	2.6	0.0	0.0	1.7
10	310.2	187.7	71.5	0.0	0.0	2.4	0.0	0.0	1.6

Schedule Info

Description:
RWDFLowStocking Site1End50%MaxIn Use

Objective Function:
Max InUse CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
72

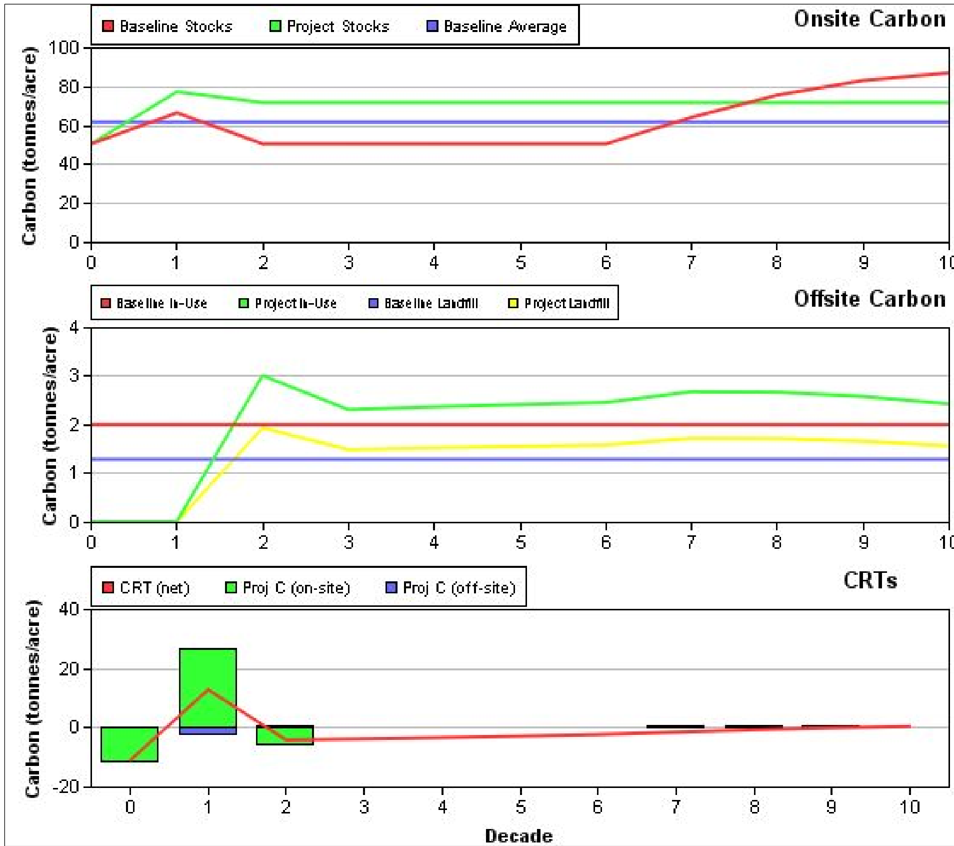
Proj. Target C (t/a):
65

Stand Name:
Redwood/Douglas-fir, low stocking, even-aged

CRTs (C tonnes/acre) **Silviculture (acres)**

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Ne	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-137.4	0.0	0.0	0.0	0.0	-137						
1	26.8	0.0	0.0	0.0	-137.4	-11(	1,000.0	0.0	0.0	1,000.0	0.0	0.0
2	-5.6	3.0	0.6	0.0	-110.6	-11	1,000.0	0.0	0.0	142.3	636.5	221.2
3	0.0	2.3	0.5	0.0	-112.6	-10	1,000.0	0.0	0.0	363.5	518.7	117.8
4	0.0	2.4	0.5	0.0	-109.8	-10	1,000.0	0.0	0.0	481.3	380.0	138.7
5	0.0	2.4	0.5	0.0	-107.0	-10	1,000.0	0.0	0.0	256.4	584.4	159.2
6	0.0	2.5	0.5	0.0	-104.1	-101	1,000.0	0.0	0.0	297.8	589.1	113.0
7	0.0	2.7	0.5	0.0	-101.1	-97	1,000.0	0.0	0.0	272.2	664.9	62.8
8	0.0	2.7	0.5	0.0	-97.9	-94	1,000.0	0.0	0.0	175.9	750.3	73.8
9	0.0	2.6	0.5	0.0	-94.7	-91	1,000.0	0.0	0.0	136.6	819.3	44.1
10	0.0	2.4	0.5	0.0	-91.7	-88	1,000.0	0.0	0.0	180.7	749.8	69.4
Total	**-116.2**	**22.9**	**-4.6**	**0.0**		**-1,15**	**1,000.0**	**0.0**	**0.0**	**330.7**	**569.3**	**100.0**

Figure 35. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site1 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (65 tonnes per acre). Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	61.6	50.3	0.0	2.0	0.0	0.0	1.3	0.0
1	66.3	61.6	77.1	0.8	2.0	0.0	0.5	1.3	0.0
2	50.3	61.6	71.5	3.7	2.0	3.0	2.4	1.3	1.9
3	50.3	61.6	71.5	2.1	2.0	2.3	1.4	1.3	1.5
4	50.3	61.6	71.5	2.4	2.0	2.4	1.5	1.3	1.5
5	50.3	61.6	71.5	2.5	2.0	2.4	1.6	1.3	1.5
6	50.3	61.6	71.5	2.6	2.0	2.5	1.6	1.3	1.6
7	64.0	61.6	71.5	1.1	2.0	2.7	0.7	1.3	1.7
8	75.4	61.6	71.5	1.4	2.0	2.7	0.9	1.3	1.7
9	82.9	61.6	71.5	1.6	2.0	2.6	1.0	1.3	1.7
10	86.7	61.6	71.5	1.8	2.0	2.4	1.2	1.3	1.6

Schedule Info

Description:
RWDFLowStocking Site1End50%MaxTotal

Objective Function:
Max Total CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
72

Proj. Target C (t/a):
65

Stand Name:
Redwood/Douglas-fir, low stocking, even-aged

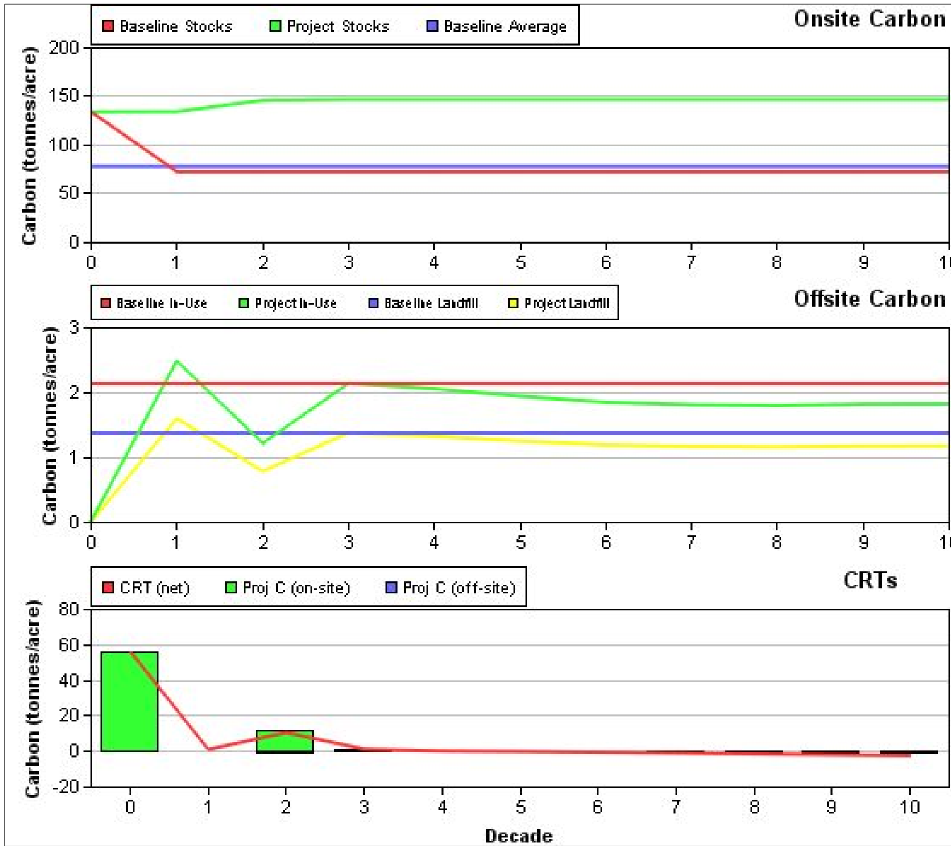
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-11.2	0.0	0.0	0.0	0.0	-11.2
1	26.8	-2.0	0.4	-1.3	-11.2	12.6
2	-5.6	1.0	0.2	0.0	0.0	-4.4
3	0.0	0.3	0.1	0.0	-4.4	-4.0
4	0.0	0.4	0.1	0.0	-4.0	-3.6
5	0.0	0.4	0.1	0.0	-3.6	-3.1
6	0.0	0.5	0.1	0.0	-3.1	-2.5
7	0.0	0.7	0.1	0.0	-2.5	-1.7
8	0.0	0.7	0.1	0.0	-1.7	-0.9
9	0.0	0.6	0.1	0.0	-0.9	-0.2
10	0.0	0.4	0.1	0.0	-0.2	0.3
Total	**9.9**	**2.9**	**-1.4**	**-1.3**		**-18.6**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
860.0	0.0	140.0	1,000.0	0.0	0.0
140.0	549.4	310.5	142.3	636.5	221.2
450.6	433.8	115.7	363.5	518.7	117.8
426.2	415.8	158.0	481.3	380.0	138.7
273.7	569.7	156.7	256.4	584.4	159.2
314.7	566.2	119.1	297.8	589.1	113.0
275.8	724.2	0.0	272.2	664.9	62.8
119.1	880.9	0.0	175.9	750.3	73.8
0.0	1,000.0	0.0	136.6	819.3	44.1
0.0	1,000.0	0.0	180.7	749.8	69.4
286.0	**614.0**	**100.0**	**330.7**	**569.3**	**100.0**

Figure 36. One hundred year schedule for redwood/Douglas-fir, low starting stocks, site1 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice amount (65 tonnes per acre). On and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	2.1	0.0	0.0	1.4	0.0
1	72.0	77.6	133.8	8.1	2.1	2.5	5.2	1.4	1.6
2	72.0	77.6	145.4	1.5	2.1	1.2	1.0	1.4	0.8
3	72.0	77.6	146.3	1.6	2.1	2.1	1.0	1.4	1.4
4	72.0	77.6	146.3	1.5	2.1	2.1	1.0	1.4	1.3
5	72.0	77.6	146.3	1.5	2.1	1.9	0.9	1.4	1.2
6	72.0	77.6	146.3	1.5	2.1	1.8	0.9	1.4	1.2
7	72.0	77.6	146.3	1.4	2.1	1.8	0.9	1.4	1.2
8	72.0	77.6	146.3	1.4	2.1	1.8	0.9	1.4	1.1
9	72.0	77.6	146.3	1.4	2.1	1.8	0.9	1.4	1.2
10	72.0	77.6	146.3	1.4	2.1	1.8	0.9	1.4	1.2

Schedule Info

Description:
RWDFHighStocking Site3EndFlatMaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

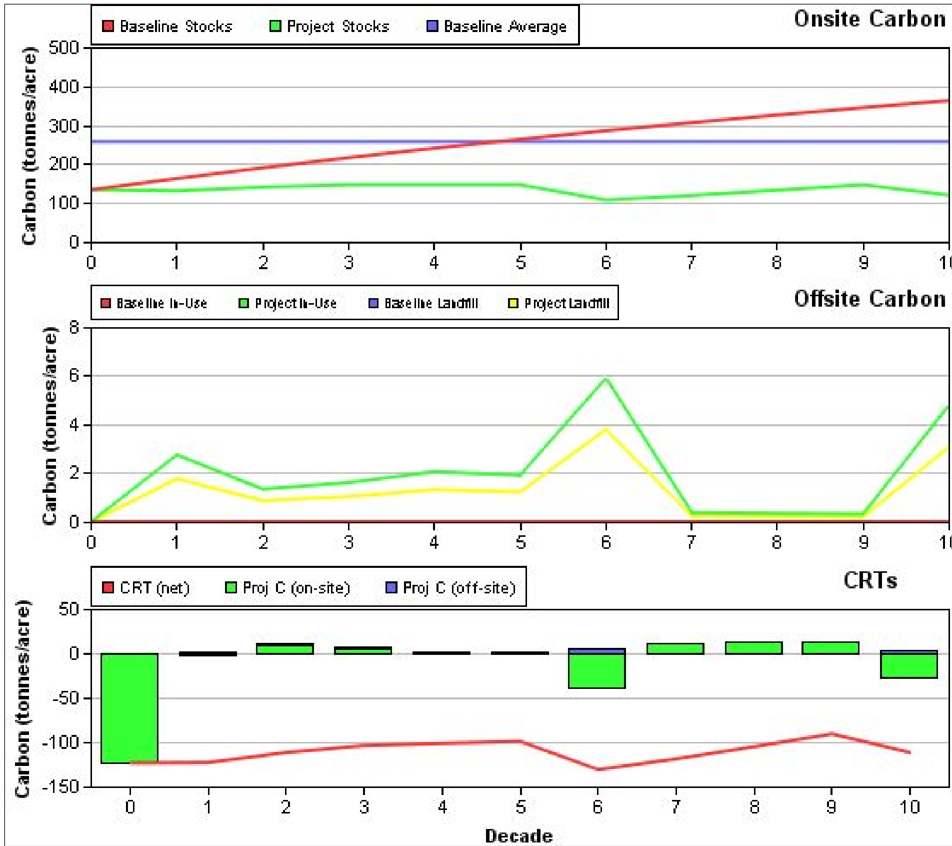
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	0.3	0.3	0.1	0.0	0.0	0.7
2	11.5	-0.9	0.2	-0.6	0.0	10.2
3	0.9	0.0	0.0	0.0	0.0	0.9
4	0.0	-0.1	0.0	-0.1	0.0	-0.1
5	0.0	-0.2	0.0	-0.1	-0.1	-0.4
6	0.0	-0.3	0.1	-0.2	-0.4	-0.8
7	0.0	-0.3	0.1	-0.2	-0.8	-1.3
8	0.0	-0.3	0.1	-0.2	-1.3	-1.8
9	0.0	-0.3	0.1	-0.2	-1.8	-2.2
10	0.0	-0.3	0.1	-0.2	-2.2	-2.7
Total	**68.7**	**-2.4**	**-0.6**	**-1.8**		**58.5**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
31.2	776.6	192.2	305.5	694.5	0.0
223.4	713.5	63.1	305.5	694.5	0.0
286.5	639.6	73.9	305.5	619.5	75.0
360.4	558.2	81.4	380.5	541.3	78.2
346.6	577.0	76.5	458.7	462.8	78.5
384.8	535.1	80.1	537.2	381.4	81.4
420.7	496.9	82.5	618.6	294.8	86.6
358.5	567.4	74.1	705.2	202.1	92.7
362.2	564.7	73.1	797.9	101.9	100.2
357.6	569.3	73.1	823.2	75.0	101.9
313.2	**599.8**	**87.0**	**523.8**	**406.8**	**69.4**

Figure 37. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the starting stocks (+/- 10%) at 133 tonnes per acre. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	257.3	133.5	0.0	0.0	0.0	0.0	0.0	0.0
1	162.5	257.3	130.7	0.0	0.0	2.7	0.0	0.0	1.8
2	190.0	257.3	140.5	0.0	0.0	1.3	0.0	0.0	0.9
3	215.9	257.3	146.3	0.0	0.0	1.6	0.0	0.0	1.0
4	240.4	257.3	146.3	0.0	0.0	2.1	0.0	0.0	1.3
5	263.4	257.3	146.3	0.0	0.0	1.9	0.0	0.0	1.2
6	285.2	257.3	107.4	0.0	0.0	5.9	0.0	0.0	3.8
7	306.0	257.3	119.0	0.0	0.0	0.4	0.0	0.0	0.2
8	325.8	257.3	132.4	0.0	0.0	0.3	0.0	0.0	0.2
9	344.7	257.3	146.3	0.0	0.0	0.3	0.0	0.0	0.2
10	362.7	257.3	119.7	0.0	0.0	4.8	0.0	0.0	3.1

Schedule Info

Description:
RWDFHighStocking Site3EndFlatMaxInU se

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

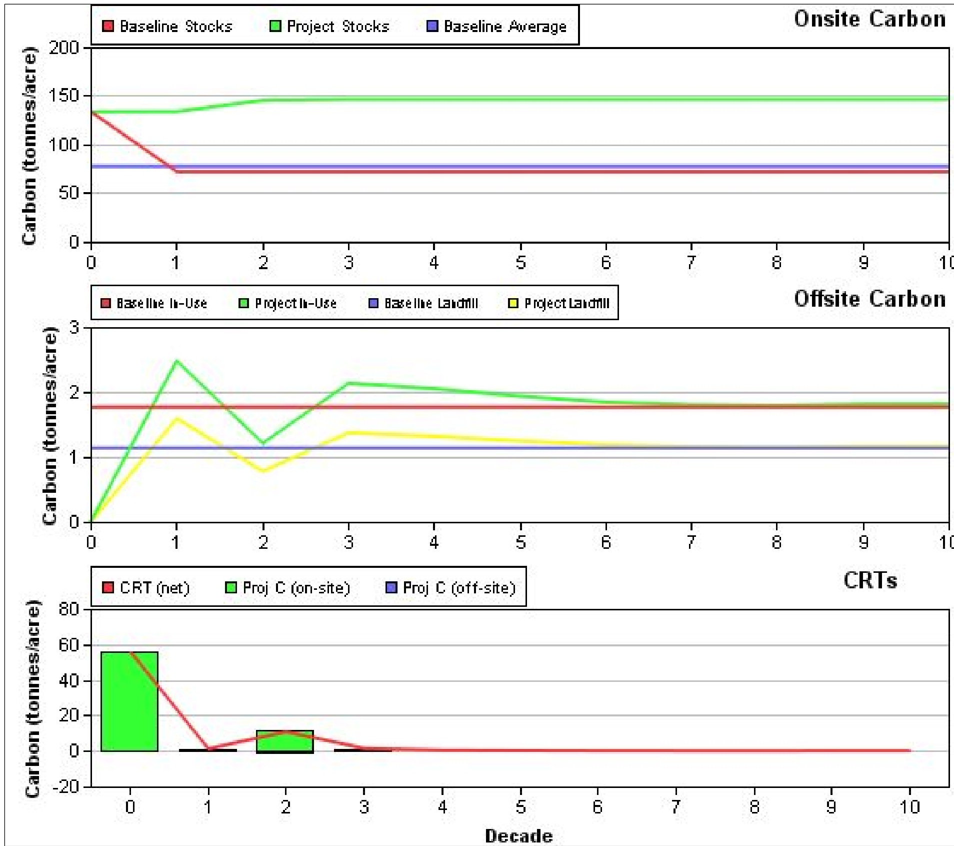
Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

CRTs (C tonnes/acre) **Silviculture (acres)**

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Ne	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-123.8	0.0	0.0	0.0	0.0	-123						
1	-2.8	2.7	0.5	0.0	-123.8	-123	1,000.0	0.0	0.0	229.3	770.7	0.0
2	9.8	1.3	0.3	0.0	-123.3	-111	1,000.0	0.0	0.0	229.3	770.7	0.0
3	5.8	1.6	0.3	0.0	-111.9	-104	1,000.0	0.0	0.0	229.3	746.5	24.2
4	0.0	2.1	0.4	0.0	-104.1	-101	1,000.0	0.0	0.0	253.5	683.0	63.4
5	0.0	1.9	0.4	0.0	-101.7	-99	1,000.0	0.0	0.0	317.0	621.6	61.5
6	-38.9	5.9	1.2	0.0	-99.4	-131	1,000.0	0.0	0.0	378.4	277.8	343.8
7	11.6	0.4	0.1	0.0	-131.2	-119	1,000.0	0.0	0.0	722.2	277.8	0.0
8	13.4	0.3	0.1	0.0	-119.2	-105	1,000.0	0.0	0.0	722.2	277.8	0.0
9	13.9	0.3	0.1	0.0	-105.4	-91	1,000.0	0.0	0.0	722.2	277.8	0.0
10	-26.6	4.8	1.0	0.0	-91.1	-111	1,000.0	0.0	0.0	698.0	24.2	277.8
Total	**-137.6**	**21.4**	**-4.3**	**0.0**		**-1,22**	**1,000.0**	**0.0**	**0.0**	**450.1**	**472.8**	**77.1**

Figure 38. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the starting stocks (+/- 10%) at 133 tonnes per acre. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	1.8	0.0	0.0	1.1	0.0
1	72.0	77.6	133.8	8.2	1.8	2.5	5.2	1.1	1.6
2	72.0	77.6	145.4	1.4	1.8	1.2	0.9	1.1	0.8
3	72.0	77.6	146.3	1.4	1.8	2.1	0.9	1.1	1.4
4	72.0	77.6	146.3	1.3	1.8	2.1	0.8	1.1	1.3
5	72.0	77.6	146.3	1.2	1.8	1.9	0.7	1.1	1.2
6	72.0	77.6	146.3	1.0	1.8	1.8	0.7	1.1	1.2
7	72.0	77.6	146.3	0.9	1.8	1.8	0.6	1.1	1.2
8	72.0	77.6	146.3	0.9	1.8	1.8	0.5	1.1	1.1
9	72.0	77.6	146.3	0.8	1.8	1.8	0.5	1.1	1.2
10	72.0	77.6	146.3	0.8	1.8	1.8	0.5	1.1	1.2

Schedule Info

Description:
RWDFHighStocking
Site3EndFlatMaxTot
al
Objective Function:
Max Total CRTs
Constraints:
BL C>=Common P

Common Prac. (t/a):
72
Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

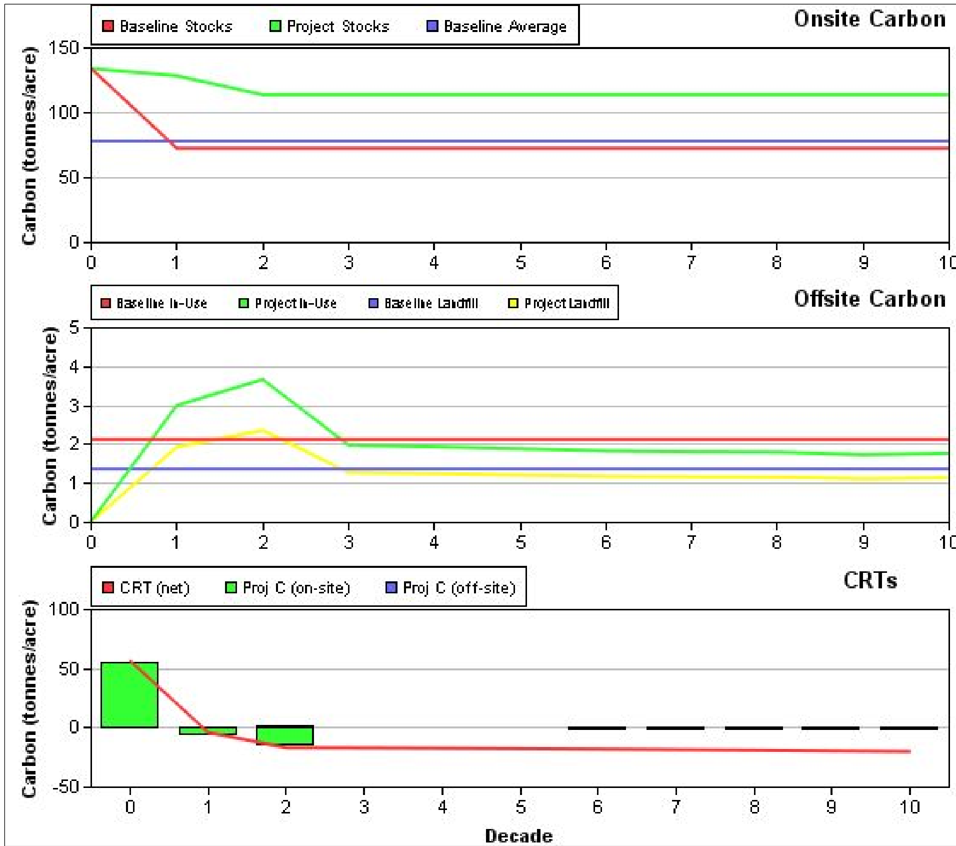
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	0.3	0.7	0.1	0.0	0.0	1.2
2	11.5	-0.6	0.1	-0.4	0.0	10.7
3	0.9	0.4	0.1	0.0	0.0	1.4
4	0.0	0.3	0.1	0.0	0.0	0.3
5	0.0	0.2	0.0	0.0	0.0	0.2
6	0.0	0.1	0.0	0.0	0.0	0.1
7	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.1
10	0.0	0.0	0.0	0.0	0.0	0.1
Total	**68.7**	**1.2**	**-0.5**	**-0.4**		**70.0**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	1,000.0	0.0	305.5	694.5	0.0
0.0	975.3	24.7	305.5	694.5	0.0
24.7	951.9	23.4	305.5	619.5	75.0
48.1	930.0	21.9	380.5	541.3	78.2
70.0	908.7	21.2	458.7	462.8	78.5
91.3	888.1	20.6	537.2	381.4	81.4
111.9	867.5	20.6	618.6	294.8	86.6
132.5	845.6	22.0	705.2	202.1	92.7
129.7	834.9	35.3	797.9	101.9	100.2
141.6	819.6	38.8	823.2	75.0	101.9
75.0	**902.2**	**22.9**	**523.8**	**406.8**	**69.4**

Figure 39. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site3 carbon project with baseline and project activity estimates. End of project target carbon stocks are the starting stocks (+/- 10%) at 133 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	2.1	0.0	0.0	1.4	0.0
1	72.0	77.6	127.9	8.1	2.1	3.0	5.2	1.4	1.9
2	72.0	77.6	113.3	1.5	2.1	3.7	1.0	1.4	2.3
3	72.0	77.6	113.3	1.6	2.1	2.0	1.0	1.4	1.3
4	72.0	77.6	113.3	1.5	2.1	1.9	1.0	1.4	1.2
5	72.0	77.6	113.3	1.5	2.1	1.9	0.9	1.4	1.2
6	72.0	77.6	113.3	1.4	2.1	1.8	0.9	1.4	1.2
7	72.0	77.6	113.3	1.4	2.1	1.8	0.9	1.4	1.2
8	72.0	77.6	113.3	1.3	2.1	1.8	0.9	1.4	1.1
9	72.0	77.6	113.3	1.4	2.1	1.7	0.9	1.4	1.1
10	72.0	77.6	113.3	1.4	2.1	1.8	0.9	1.4	1.1

Schedule Info

Description:
RWDFHighStocking Site3End103MaxOnSite

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

Proj. Target C (t/a):
103

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

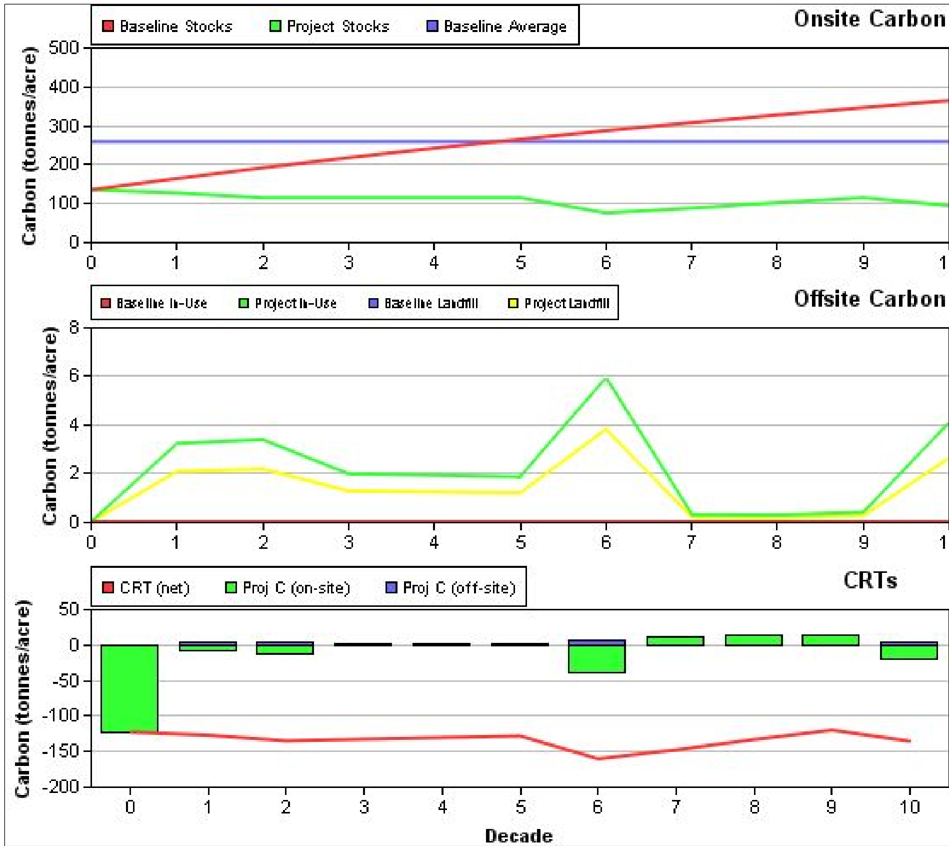
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	-5.6	0.9	0.2	0.0	0.0	-4.5
2	-14.6	1.5	0.3	0.0	-4.5	-17.3
3	0.0	-0.1	0.0	-0.1	-17.3	-17.5
4	0.0	-0.2	0.0	-0.1	-17.5	-17.8
5	0.0	-0.2	0.0	-0.2	-17.8	-18.1
6	0.0	-0.3	0.1	-0.2	-18.1	-18.6
7	0.0	-0.3	0.1	-0.2	-18.6	-19.0
8	0.0	-0.3	0.1	-0.2	-19.0	-19.5
9	0.0	-0.4	0.1	-0.3	-19.5	-20.1
10	0.0	-0.4	0.1	-0.2	-20.1	-20.6
Total	**35.7**	**0.2**	**-0.9**	**-1.4**		**-117.1**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
30.4	791.3	178.4	162.5	837.5	0.0
208.7	728.7	62.6	162.5	655.5	182.0
271.3	656.1	72.6	344.5	588.1	67.3
343.9	576.5	79.6	411.9	515.4	72.7
333.9	590.7	75.4	484.6	438.4	77.0
369.6	551.7	78.6	561.6	356.3	82.1
403.2	515.7	81.0	643.7	268.1	88.2
347.2	579.4	73.4	731.9	173.4	94.7
351.0	576.6	72.4	644.6	269.0	86.4
346.8	580.8	72.4	663.7	249.3	87.0
300.6	**614.8**	**84.6**	**481.1**	**435.1**	**83.7**

Figure 40. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice (72 t/a) at 103 tonnes per acre. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	257.3	133.5	0.0	0.0	0.0	0.0	0.0	0.0
1	162.5	257.3	125.3	0.0	0.0	3.2	0.0	0.0	2.1
2	190.0	257.3	113.3	0.0	0.0	3.4	0.0	0.0	2.2
3	215.9	257.3	113.3	0.0	0.0	2.0	0.0	0.0	1.3
4	240.4	257.3	113.3	0.0	0.0	1.9	0.0	0.0	1.2
5	263.4	257.3	113.3	0.0	0.0	1.8	0.0	0.0	1.2
6	285.2	257.3	74.0	0.0	0.0	5.9	0.0	0.0	3.8
7	306.0	257.3	86.3	0.0	0.0	0.3	0.0	0.0	0.2
8	325.8	257.3	100.5	0.0	0.0	0.3	0.0	0.0	0.2
9	344.7	257.3	113.3	0.0	0.0	0.4	0.0	0.0	0.2
10	362.7	257.3	92.7	0.0	0.0	4.1	0.0	0.0	2.6

Schedule Info

Description:
RWDFHighStocking Site3End103MaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

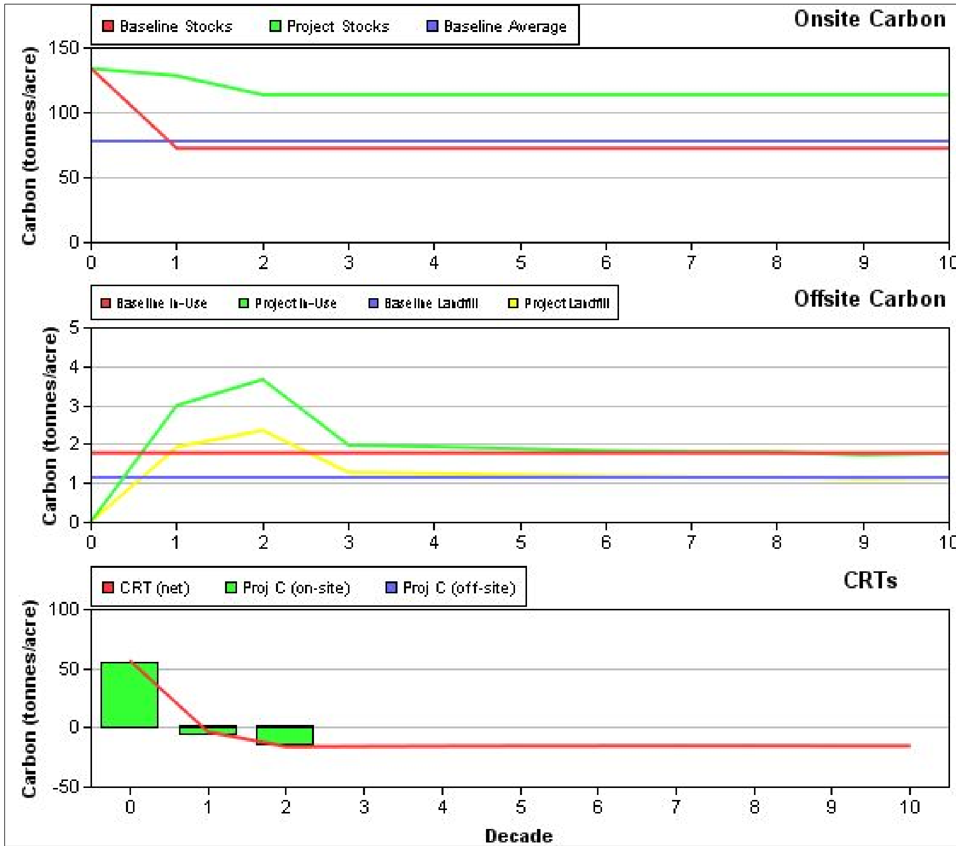
Proj. Target C (t/a):
103

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

CRTs (C tonnes/acre) / Silviculture (acres)

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Ne	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-123.8	0.0	0.0	0.0	0.0	-123						
1	-8.2	3.2	0.6	0.0	-123.8	-128	1,000.0	0.0	0.0	99.6	900.4	0.0
2	-12.0	3.4	0.7	0.0	-128.1	-136	1,000.0	0.0	0.0	99.6	750.6	149.8
3	0.0	2.0	0.4	0.0	-136.1	-133	1,000.0	0.0	0.0	249.4	695.6	55.0
4	0.0	1.9	0.4	0.0	-133.7	-131	1,000.0	0.0	0.0	304.4	636.6	59.0
5	0.0	1.8	0.4	0.0	-131.4	-129	1,000.0	0.0	0.0	363.4	574.5	62.1
6	-39.3	5.9	1.2	0.0	-129.2	-161	1,000.0	0.0	0.0	425.5	225.1	349.4
7	12.3	0.3	0.1	0.0	-161.4	-148	1,000.0	0.0	0.0	774.9	225.1	0.0
8	14.2	0.3	0.1	0.0	-148.7	-134	1,000.0	0.0	0.0	774.9	225.1	0.0
9	12.8	0.4	0.1	0.0	-134.2	-120	1,000.0	0.0	0.0	625.1	374.9	0.0
10	-20.6	4.1	0.8	0.0	-120.9	-136	1,000.0	0.0	0.0	570.1	204.8	225.1
Total	**-164.6**	**23.3**	**-4.7**	**0.0**		**-1,48**	**1,000.0**	**0.0**	**0.0**	**428.7**	**481.2**	**90.0**

Figure 41. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice (72 t/a) at 103 tonnes per acre. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	1.8	0.0	0.0	1.1	0.0
1	72.0	77.6	127.9	8.2	1.8	3.0	5.2	1.1	1.9
2	72.0	77.6	113.3	1.4	1.8	3.7	0.9	1.1	2.3
3	72.0	77.6	113.3	1.4	1.8	2.0	0.9	1.1	1.3
4	72.0	77.6	113.3	1.3	1.8	1.9	0.8	1.1	1.2
5	72.0	77.6	113.3	1.2	1.8	1.9	0.7	1.1	1.2
6	72.0	77.6	113.3	1.0	1.8	1.8	0.7	1.1	1.2
7	72.0	77.6	113.3	0.9	1.8	1.8	0.6	1.1	1.2
8	72.0	77.6	113.3	0.9	1.8	1.8	0.5	1.1	1.1
9	72.0	77.6	113.3	0.8	1.8	1.7	0.5	1.1	1.1
10	72.0	77.6	113.3	0.8	1.8	1.8	0.5	1.1	1.1

Schedule Info

Description:
RWDFHighStocking Site3End103MaxTotal

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

Proj. Target C (t/a):
103

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

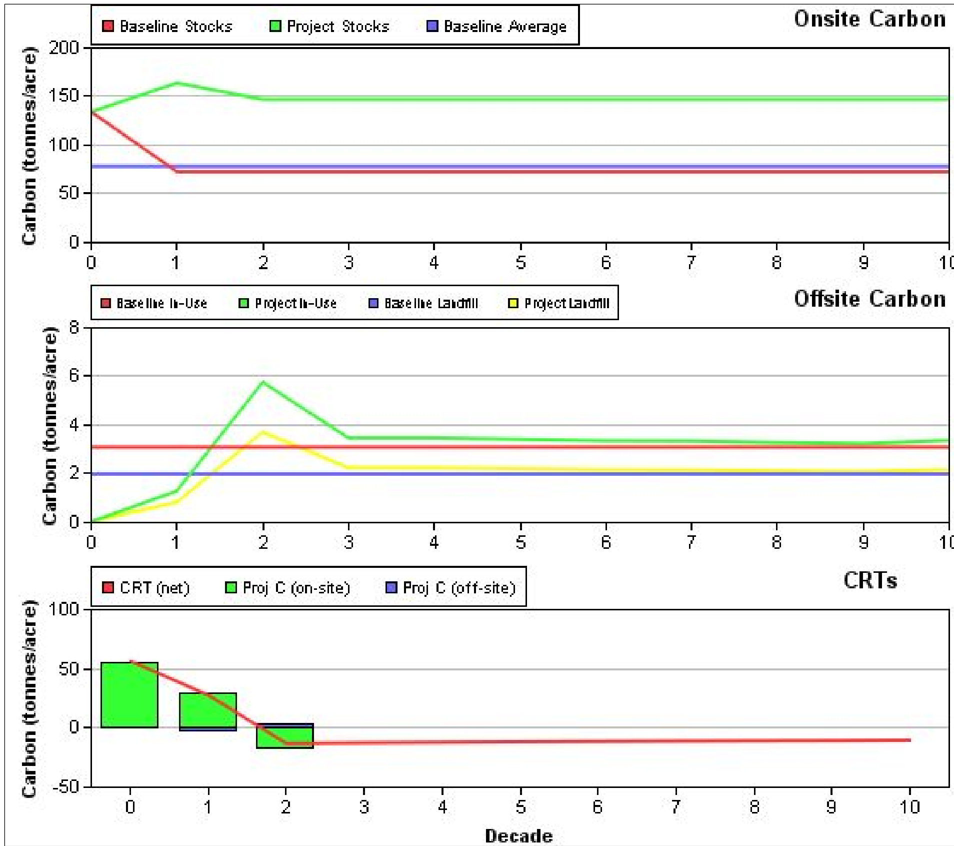
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	-5.6	1.2	0.2	0.0	0.0	-4.1
2	-14.6	1.9	0.4	0.0	-4.1	-16.5
3	0.0	0.2	0.0	0.0	-16.5	-16.3
4	0.0	0.2	0.0	0.0	-16.3	-16.1
5	0.0	0.1	0.0	0.0	-16.1	-15.9
6	0.0	0.0	0.0	0.0	-15.9	-15.9
7	0.0	0.0	0.0	0.0	-15.9	-15.9
8	0.0	0.0	0.0	0.0	-15.9	-15.8
9	0.0	-0.1	0.0	0.0	-15.8	-15.9
10	0.0	0.0	0.0	0.0	-15.9	-15.9
Total	**35.7**	**3.6**	**-0.7**	**0.0**		**-92.3**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	1,000.0	0.0	162.5	837.5	0.0
0.0	975.3	24.7	162.5	655.5	182.0
24.7	951.9	23.4	344.5	588.1	67.3
48.1	930.0	21.9	411.9	515.4	72.7
70.0	908.7	21.2	484.6	438.4	77.0
91.3	888.1	20.6	561.6	356.3	82.1
111.9	867.5	20.6	643.7	268.1	88.2
132.5	845.6	22.0	731.9	173.4	94.7
129.7	834.9	35.3	644.6	269.0	86.4
141.6	819.6	38.8	663.7	249.3	87.0
75.0	**902.2**	**22.9**	**481.1**	**435.1**	**83.7**

Figure 42. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site3 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice (72 t/a) at 103 tonnes per acre. On and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	3.1	0.0	0.0	2.0	0.0
1	72.0	77.6	163.2	9.4	3.1	1.3	6.1	2.0	0.8
2	72.0	77.6	146.3	2.3	3.1	5.7	1.5	2.0	3.7
3	72.0	77.6	146.3	2.4	3.1	3.4	1.5	2.0	2.2
4	72.0	77.6	146.3	2.4	3.1	3.4	1.5	2.0	2.2
5	72.0	77.6	146.3	2.3	3.1	3.4	1.5	2.0	2.2
6	72.0	77.6	146.3	2.4	3.1	3.3	1.5	2.0	2.1
7	72.0	77.6	146.3	2.3	3.1	3.3	1.5	2.0	2.1
8	72.0	77.6	146.3	2.3	3.1	3.3	1.5	2.0	2.1
9	72.0	77.6	146.3	2.4	3.1	3.2	1.5	2.0	2.1
10	72.0	77.6	146.3	2.4	3.1	3.3	1.5	2.0	2.1

Schedule Info

Description:
RWDFHighStocking Site1EndFlatMaxOn Site
Objective Function:
Max Onsite CRTs
Constraints:
BL C>=Common P

Common Prac. (t/a):
72
Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

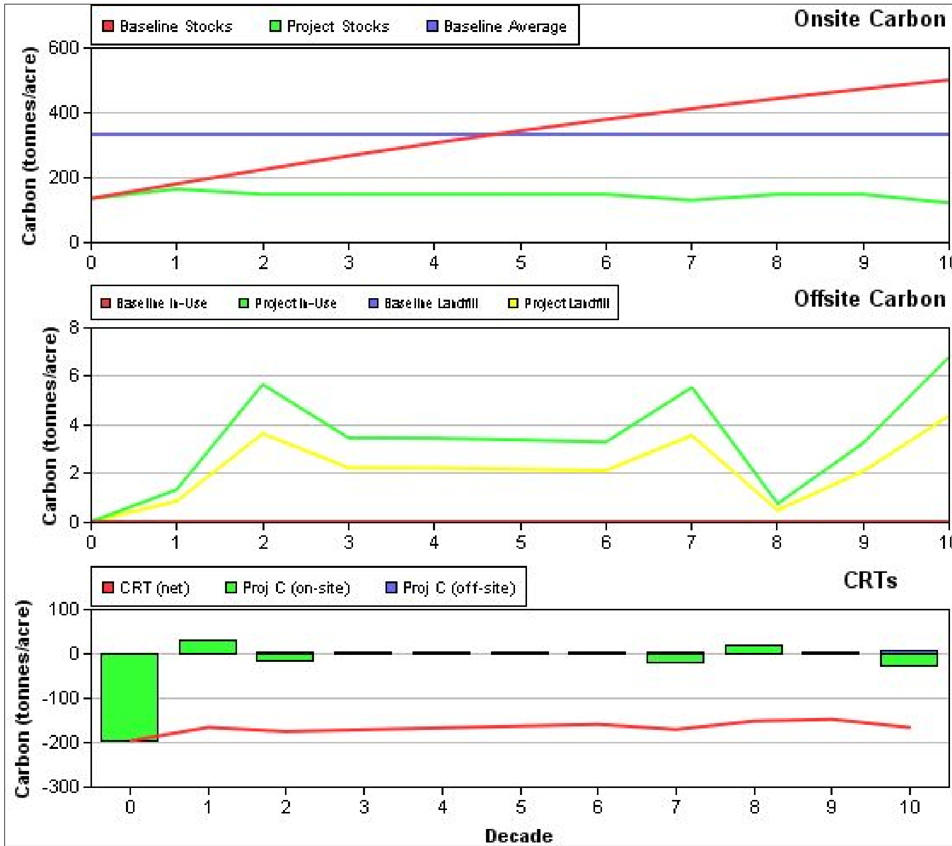
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	29.7	-1.8	0.4	-1.2	0.0	27.1
2	-16.9	2.7	0.5	0.0	0.0	-13.7
3	0.0	0.4	0.1	0.0	-13.7	-13.3
4	0.0	0.4	0.1	0.0	-13.3	-12.8
5	0.0	0.3	0.1	0.0	-12.8	-12.4
6	0.0	0.3	0.1	0.0	-12.4	-12.1
7	0.0	0.3	0.1	0.0	-12.1	-11.8
8	0.0	0.2	0.0	0.0	-11.8	-11.6
9	0.0	0.1	0.0	0.0	-11.6	-11.4
10	0.0	0.3	0.1	0.0	-11.4	-11.1
Total	**68.7**	**3.1**	**-1.3**	**-1.2**		**-27.3**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.7	808.5	190.8	116.9	883.1	0.0
191.5	724.3	84.2	116.9	696.1	187.0
275.7	619.7	104.6	303.9	619.3	76.8
197.7	689.8	112.5	380.7	538.6	80.7
233.3	679.1	87.6	461.4	455.1	83.5
216.3	691.8	91.9	544.9	366.7	88.4
194.8	720.4	84.8	633.3	272.7	94.0
191.9	729.3	78.8	540.3	365.0	94.7
186.2	736.3	77.5	558.2	353.9	87.9
179.0	745.9	75.1	565.4	344.5	90.1
186.7	**714.5**	**98.8**	**422.2**	**489.5**	**88.3**

Figure 43. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are at the starting stocks (+/- 10%) at 133 tonnes per acre. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	331.4	133.5	0.0	0.0	0.0	0.0	0.0	0.0
1	178.6	331.4	162.5	0.0	0.0	1.3	0.0	0.0	0.8
2	222.6	331.4	146.3	0.0	0.0	5.6	0.0	0.0	3.6
3	264.7	331.4	146.3	0.0	0.0	3.4	0.0	0.0	2.2
4	304.6	331.4	146.3	0.0	0.0	3.4	0.0	0.0	2.2
5	342.1	331.4	146.3	0.0	0.0	3.4	0.0	0.0	2.2
6	377.3	331.4	146.3	0.0	0.0	3.3	0.0	0.0	2.1
7	410.5	331.4	128.2	0.0	0.0	5.5	0.0	0.0	3.5
8	441.7	331.4	146.3	0.0	0.0	0.7	0.0	0.0	0.5
9	471.2	331.4	146.3	0.0	0.0	3.2	0.0	0.0	2.1
10	499.0	331.4	119.7	0.0	0.0	6.8	0.0	0.0	4.4

Schedule Info

Description:
RWDFHighStocking Site1EndFlatMaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

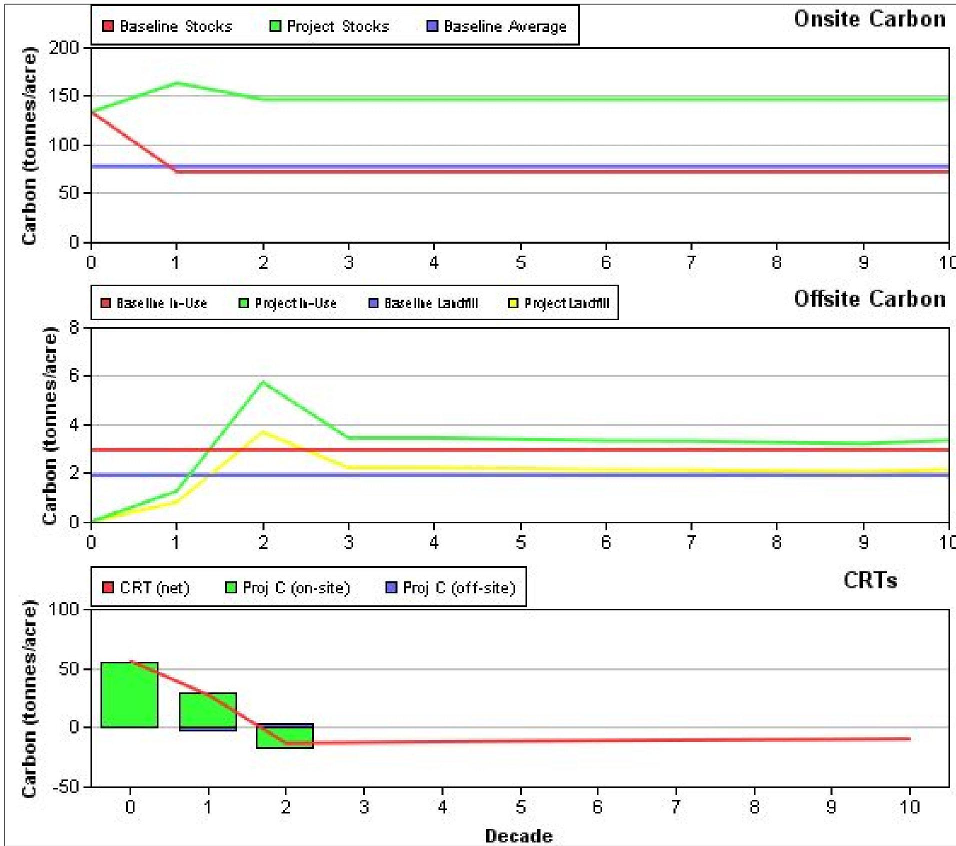
Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

CRTs (C tonnes/acre) / Silviculture (acres)

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Ne	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-197.9	0.0	0.0	0.0	0.0	-197						
1	29.0	1.3	0.3	0.0	-197.9	-167	1,000.0	0.0	0.0	74.3	925.7	0.0
2	-16.2	5.6	1.1	0.0	-167.3	-176	1,000.0	0.0	0.0	74.3	751.0	174.7
3	0.0	3.4	0.7	0.0	-176.8	-172	1,000.0	0.0	0.0	249.0	682.0	69.1
4	0.0	3.4	0.7	0.0	-172.6	-168	1,000.0	0.0	0.0	318.0	609.7	72.2
5	0.0	3.4	0.7	0.0	-168.5	-164	1,000.0	0.0	0.0	390.3	535.5	74.2
6	0.0	3.3	0.7	0.0	-164.5	-160	1,000.0	0.0	0.0	464.5	457.3	78.2
7	-18.1	5.5	1.1	0.0	-160.6	-172	1,000.0	0.0	0.0	542.7	286.6	170.7
8	18.1	0.7	0.1	0.0	-172.0	-153	1,000.0	0.0	0.0	538.7	461.3	0.0
9	0.0	3.2	0.6	0.0	-153.1	-149	1,000.0	0.0	0.0	469.7	448.9	81.4
10	-26.6	6.8	1.4	0.0	-149.2	-167	1,000.0	0.0	0.0	478.8	316.0	205.2
Total	**-211.7**	**36.7**	**-7.3**	**0.0**		**-1,85**	**1,000.0**	**0.0**	**0.0**	**360.0**	**547.4**	**92.6**

Figure 44. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are at the starting stocks (+/- 10%) at 133 tonnes per acre. Off-site in-use CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	3.0	0.0	0.0	1.9	0.0
1	72.0	77.6	163.2	9.4	3.0	1.3	6.1	1.9	0.8
2	72.0	77.6	146.3	2.3	3.0	5.7	1.5	1.9	3.7
3	72.0	77.6	146.3	2.3	3.0	3.4	1.5	1.9	2.2
4	72.0	77.6	146.3	2.3	3.0	3.4	1.5	1.9	2.2
5	72.0	77.6	146.3	2.2	3.0	3.4	1.4	1.9	2.2
6	72.0	77.6	146.3	2.2	3.0	3.3	1.4	1.9	2.1
7	72.0	77.6	146.3	2.2	3.0	3.3	1.4	1.9	2.1
8	72.0	77.6	146.3	2.2	3.0	3.3	1.4	1.9	2.1
9	72.0	77.6	146.3	2.2	3.0	3.2	1.4	1.9	2.1
10	72.0	77.6	146.3	2.3	3.0	3.3	1.4	1.9	2.1

Schedule Info

Description:
RWDFHighStocking Site1EndFlatMaxTot al

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

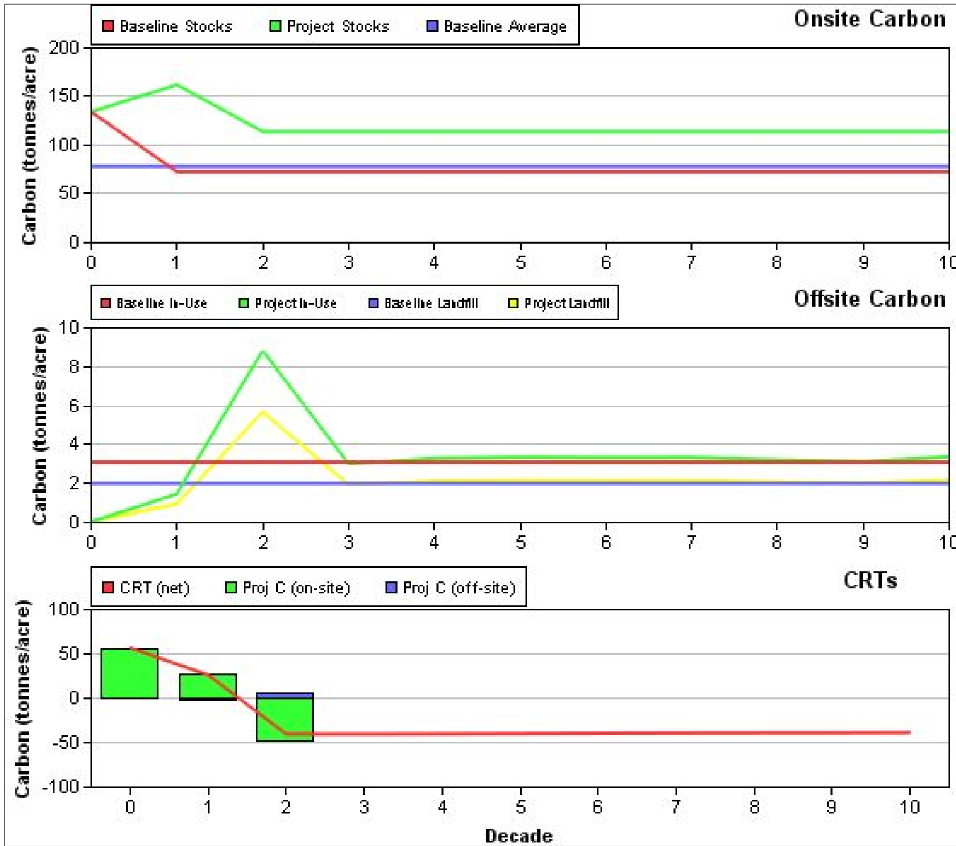
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	29.7	-1.7	0.3	-1.1	0.0	27.3
2	-16.9	2.8	0.6	0.0	0.0	-13.6
3	0.0	0.5	0.1	0.0	-13.6	-13.0
4	0.0	0.5	0.1	0.0	-13.0	-12.4
5	0.0	0.4	0.1	0.0	-12.4	-11.9
6	0.0	0.4	0.1	0.0	-11.9	-11.5
7	0.0	0.4	0.1	0.0	-11.5	-11.0
8	0.0	0.3	0.1	0.0	-11.0	-10.7
9	0.0	0.2	0.0	0.0	-10.7	-10.4
10	0.0	0.4	0.1	0.0	-10.4	-9.9
Total	**68.7**	**4.2**	**-1.5**	**-1.1**		**-21.4**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	858.7	141.3	116.9	883.1	0.0
141.3	773.8	84.9	116.9	696.1	187.0
226.2	681.9	91.9	303.9	619.3	76.8
176.8	720.2	103.0	380.7	538.6	80.7
194.9	719.3	85.8	461.4	455.1	83.5
188.8	725.0	86.3	544.9	366.7	88.4
172.1	745.2	82.7	633.3	272.7	94.0
169.0	754.4	76.6	540.3	365.0	94.7
159.3	766.7	74.0	558.2	353.9	87.9
150.5	778.8	70.7	565.4	344.5	90.1
157.9	**752.4**	**89.7**	**422.2**	**489.5**	**88.3**

Figure 45. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are at the starting stocks (+/- 10%) at 133 tonnes per acre. On and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	3.1	0.0	0.0	2.0	0.0
1	72.0	77.6	161.3	9.4	3.1	1.4	6.1	2.0	0.9
2	72.0	77.6	113.3	2.3	3.1	8.8	1.5	2.0	5.6
3	72.0	77.6	113.3	2.4	3.1	3.0	1.5	2.0	1.9
4	72.0	77.6	113.3	2.4	3.1	3.3	1.5	2.0	2.1
5	72.0	77.6	113.3	2.3	3.1	3.3	1.5	2.0	2.1
6	72.0	77.6	113.3	2.4	3.1	3.3	1.5	2.0	2.1
7	72.0	77.6	113.3	2.3	3.1	3.3	1.5	2.0	2.1
8	72.0	77.6	113.3	2.3	3.1	3.2	1.5	2.0	2.1
9	72.0	77.6	113.3	2.4	3.1	3.1	1.5	2.0	2.0
10	72.0	77.6	113.3	2.4	3.1	3.3	1.5	2.0	2.2

Schedule Info

Description:
RWDFHighStocking Site1End103MaxOn Site

Objective Function:
Max Onsite CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

Proj. Target C (t/a):
103

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

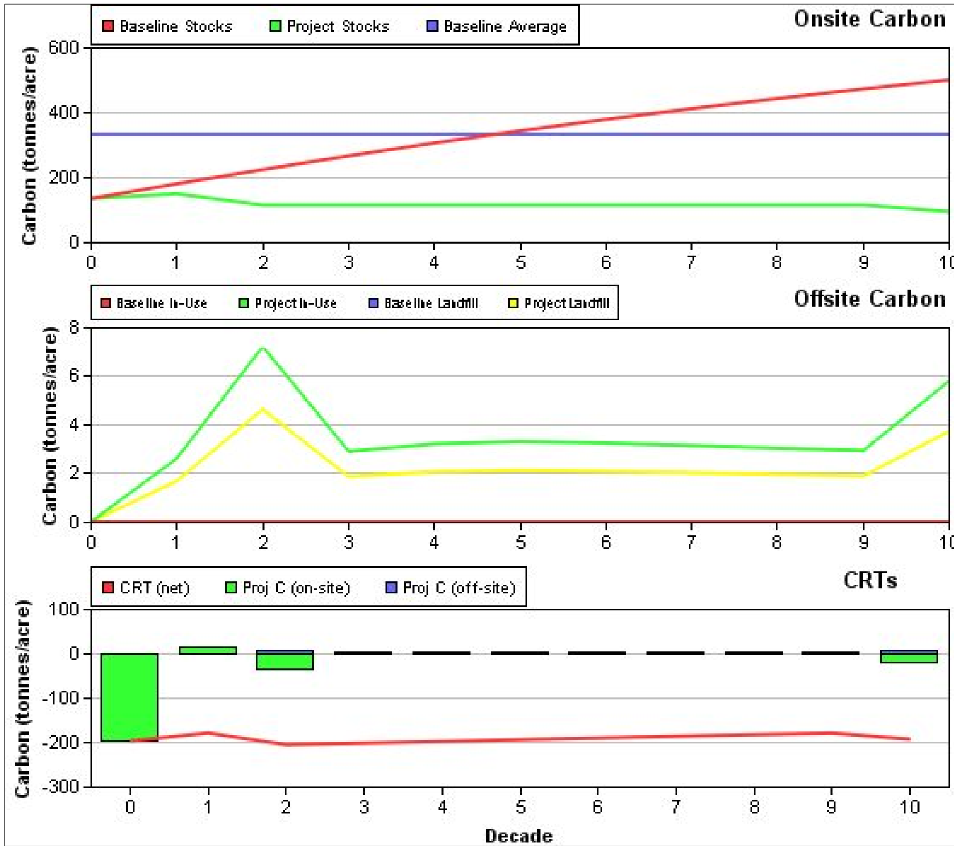
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	27.8	-1.6	0.3	-1.1	0.0	25.4
2	-48.0	5.7	1.1	0.0	0.0	-41.1
3	0.0	-0.1	0.0	-0.1	-41.1	-41.3
4	0.0	0.2	0.0	0.0	-41.3	-41.0
5	0.0	0.3	0.1	0.0	-41.0	-40.7
6	0.0	0.2	0.0	0.0	-40.7	-40.4
7	0.0	0.2	0.0	0.0	-40.4	-40.1
8	0.0	0.1	0.0	0.0	-40.1	-40.0
9	0.0	0.0	0.0	0.0	-40.0	-39.9
10	0.0	0.3	0.1	0.0	-39.9	-39.6
Total	**35.7**	**5.4**	**-1.8**	**-1.1**		**-282.8**

Silviculture (acres)

	Baseline			Project		
Decade	Grow	Thin	Clear	Grow	Thin	Clear
Initial						
1	0.7	808.6	190.6	3.9	996.1	0.0
2	191.4	724.4	84.3	3.9	650.7	345.5
3	275.6	619.8	104.6	349.3	591.6	59.0
4	197.8	689.8	112.4	408.4	515.7	75.9
5	233.2	679.2	87.6	484.3	432.4	83.3
6	216.3	691.9	91.9	567.6	342.6	89.8
7	194.8	720.3	84.9	657.4	246.5	96.1
8	192.0	729.2	78.9	408.0	500.1	91.9
9	186.3	736.2	77.5	440.8	483.8	75.3
10	178.9	746.0	75.1	440.3	480.4	79.3
Total	**186.7**	**714.5**	**98.8**	**376.4**	**524.0**	**99.6**

Figure 46. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice at 103 tonnes per acre. On-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	331.4	133.5	0.0	0.0	0.0	0.0	0.0	0.0
1	178.6	331.4	148.2	0.0	0.0	2.6	0.0	0.0	1.7
2	222.6	331.4	113.3	0.0	0.0	7.2	0.0	0.0	4.6
3	264.7	331.4	113.3	0.0	0.0	2.9	0.0	0.0	1.9
4	304.6	331.4	113.3	0.0	0.0	3.2	0.0	0.0	2.1
5	342.1	331.4	113.3	0.0	0.0	3.3	0.0	0.0	2.1
6	377.3	331.4	113.3	0.0	0.0	3.2	0.0	0.0	2.1
7	410.5	331.4	113.3	0.0	0.0	3.1	0.0	0.0	2.0
8	441.7	331.4	113.3	0.0	0.0	3.0	0.0	0.0	1.9
9	471.2	331.4	113.3	0.0	0.0	2.9	0.0	0.0	1.9
10	499.0	331.4	92.7	0.0	0.0	5.8	0.0	0.0	3.7

Schedule Info

Description:
RWDFHighStocking Site1End103MaxInUse

Objective Function:
Max InUse CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

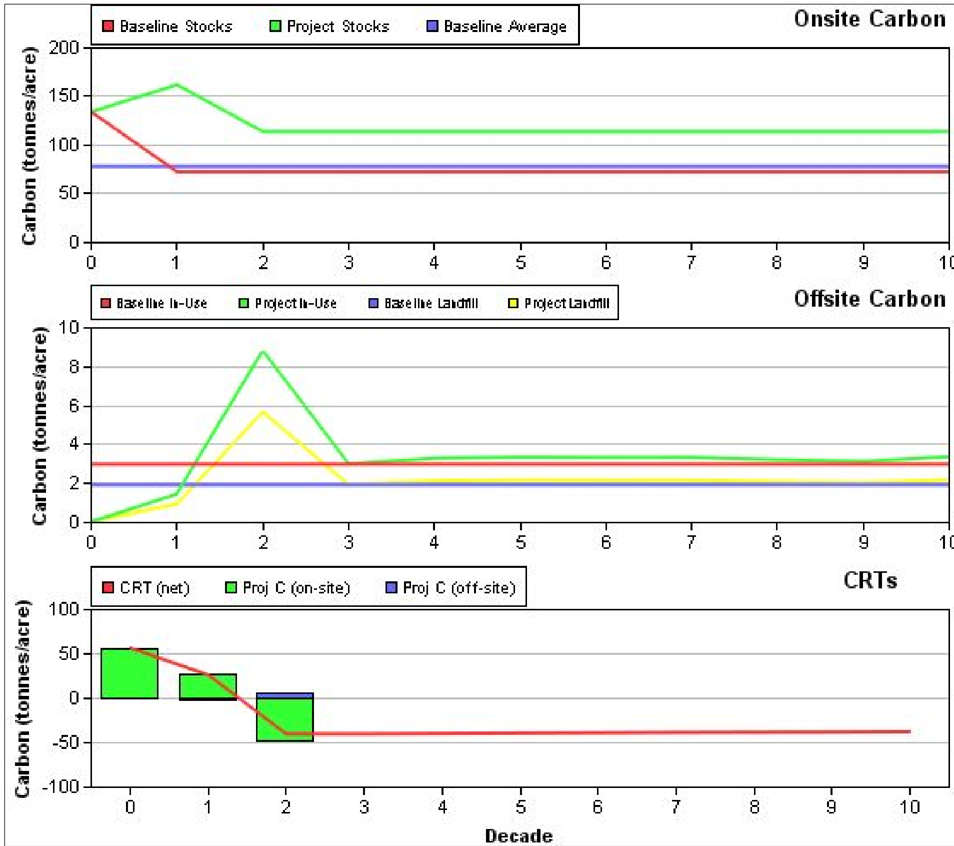
Proj. Target C (t/a):
103

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

CRTs (C tonnes/acre) **Silviculture (acres)**

	On-	Off-	IU	LF	Carry		Baseline			Project		
Decade	site	site	Leak	Effect	Over	Ne	Grow	Thin	Clear	Grow	Thin	Clear
Initial	-197.9	0.0	0.0	0.0	0.0	-197						
1	14.6	2.6	0.5	0.0	-197.9	-180	1,000.0	0.0	0.0	0.0	1,000.0	0.0
2	-34.9	7.2	1.4	0.0	-180.2	-206	1,000.0	0.0	0.0	0.0	705.3	294.7
3	0.0	2.9	0.6	0.0	-206.4	-202	1,000.0	0.0	0.0	294.7	600.7	104.6
4	0.0	3.2	0.6	0.0	-202.9	-199	1,000.0	0.0	0.0	399.3	529.1	71.6
5	0.0	3.3	0.7	0.0	-199.1	-195	1,000.0	0.0	0.0	406.7	512.6	80.7
6	0.0	3.2	0.6	0.0	-195.1	-191	1,000.0	0.0	0.0	382.8	537.9	79.4
7	0.0	3.1	0.6	0.0	-191.2	-187	1,000.0	0.0	0.0	462.1	465.1	72.8
8	0.0	3.0	0.6	0.0	-187.5	-183	1,000.0	0.0	0.0	304.5	624.1	71.5
9	0.0	2.9	0.6	0.0	-183.9	-180	1,000.0	0.0	0.0	375.9	562.5	61.5
10	-20.6	5.8	1.2	0.0	-180.4	-194	1,000.0	0.0	0.0	365.8	470.9	163.2
Total	**-238.7**	**37.3**	**-7.5**	**0.0**		**-2,11**	**1,000.0**	**0.0**	**0.0**	**299.2**	**600.8**	**100.0**

Figure 47. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice at 103 tonnes per acre. On and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

Decade	Baseline Onsite	Baseline Avg	Proj Onsite	Baseline IU	Baseline Avg(IU)	Proj IU	Baseline LF	Baseline Avg(LF)	Proj LF
Initial	133.5	77.6	133.5	0.0	3.0	0.0	0.0	1.9	0.0
1	72.0	77.6	161.3	9.4	3.0	1.4	6.1	1.9	0.9
2	72.0	77.6	113.3	2.3	3.0	8.8	1.5	1.9	5.6
3	72.0	77.6	113.3	2.3	3.0	3.0	1.5	1.9	1.9
4	72.0	77.6	113.3	2.3	3.0	3.3	1.5	1.9	2.1
5	72.0	77.6	113.3	2.2	3.0	3.3	1.4	1.9	2.1
6	72.0	77.6	113.3	2.2	3.0	3.3	1.4	1.9	2.1
7	72.0	77.6	113.3	2.2	3.0	3.3	1.4	1.9	2.1
8	72.0	77.6	113.3	2.2	3.0	3.2	1.4	1.9	2.1
9	72.0	77.6	113.3	2.2	3.0	3.1	1.4	1.9	2.0
10	72.0	77.6	113.3	2.3	3.0	3.3	1.4	1.9	2.2

Schedule Info

Description: RWDFHighStocking Site1End103MaxTotal

Objective Function: Max Total CRTs

Constraints: BL C>=Common P

Common Prac. (t/a): 72

Proj. Target C (t/a): 103

Stand Name: Redwood/Douglas-fir, high stocking, even-aged

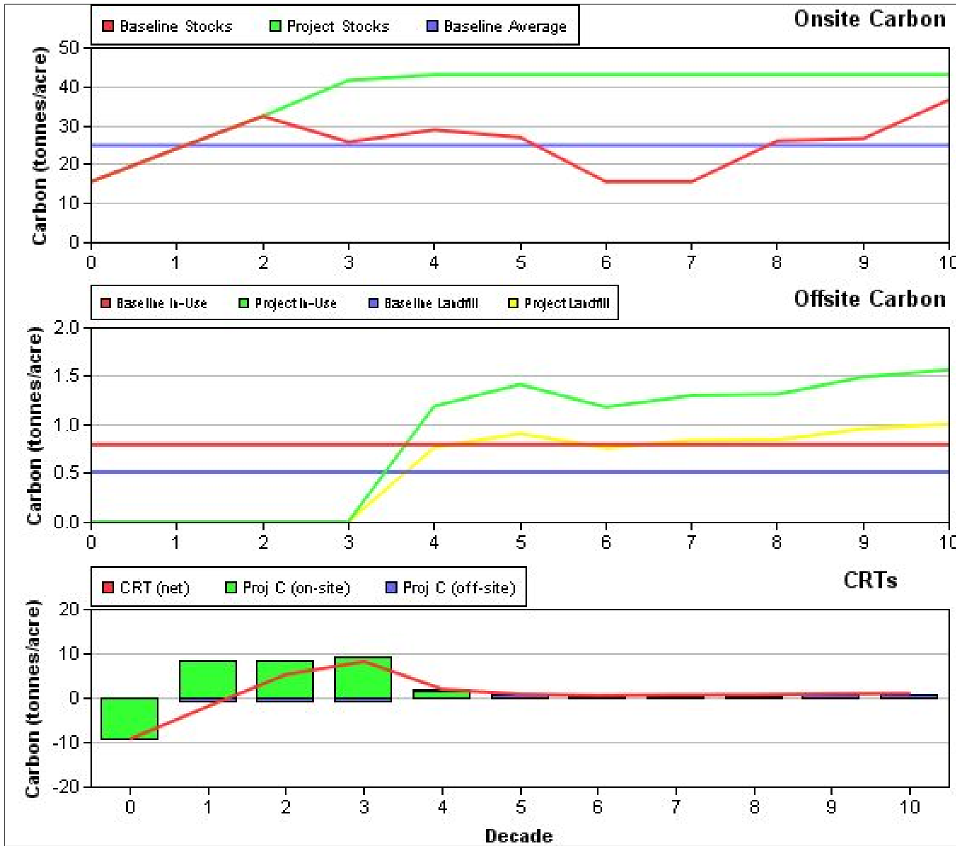
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	27.8	-1.5	0.3	-1.0	0.0	25.5
2	-48.0	5.8	1.2	0.0	0.0	-41.0
3	0.0	0.0	0.0	0.0	-41.0	-41.0
4	0.0	0.3	0.1	0.0	-41.0	-40.6
5	0.0	0.4	0.1	0.0	-40.6	-40.2
6	0.0	0.3	0.1	0.0	-40.2	-39.8
7	0.0	0.4	0.1	0.0	-39.8	-39.3
8	0.0	0.2	0.0	0.0	-39.3	-39.0
9	0.0	0.1	0.0	0.0	-39.0	-38.9
10	0.0	0.4	0.1	0.0	-38.9	-38.4
Total	**35.7**	**6.5**	**-1.9**	**-1.0**		**-276.6**

Silviculture (acres)

Decade	Baseline Grow	Baseline Thin	Baseline Clear	Project Grow	Project Thin	Project Clear
Initial						
1	0.0	858.7	141.3	3.9	996.1	0.0
2	141.3	773.8	84.9	3.9	650.7	345.5
3	226.2	681.9	91.9	349.3	591.6	59.0
4	176.8	720.2	103.0	408.4	515.7	75.9
5	194.9	719.3	85.8	484.3	432.4	83.3
6	188.8	725.0	86.3	567.6	342.6	89.8
7	172.1	745.2	82.7	657.4	246.5	96.1
8	169.0	754.4	76.6	408.0	500.1	91.9
9	159.3	766.7	74.0	440.8	483.8	75.3
10	150.5	778.8	70.7	440.3	480.4	79.3
Total	**157.9**	**752.4**	**89.7**	**376.4**	**524.0**	**99.6**

Figure 48. One hundred year schedule for redwood/Douglas-fir, high starting stocks, site 1 carbon project with baseline and project activity estimates. End of project target carbon stocks are between the starting stocks and common practice at 103 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	24.8	15.4	0.0	0.8	0.0	0.0	0.5	0.0
1	23.9	24.8	23.9	0.0	0.8	0.0	0.0	0.5	0.0
2	32.2	24.8	32.2	0.0	0.8	0.0	0.0	0.5	0.0
3	25.6	24.8	41.5	1.5	0.8	0.0	1.0	0.5	0.0
4	28.7	24.8	42.9	0.3	0.8	1.2	0.2	0.5	0.8
5	26.8	24.8	42.9	1.0	0.8	1.4	0.7	0.5	0.9
6	15.4	24.8	42.9	2.3	0.8	1.2	1.5	0.5	0.8
7	15.4	24.8	42.9	0.8	0.8	1.3	0.5	0.5	0.8
8	25.9	24.8	42.9	0.0	0.8	1.3	0.0	0.5	0.8
9	26.5	24.8	42.9	1.4	0.8	1.5	0.9	0.5	1.0
10	36.5	24.8	42.9	0.6	0.8	1.6	0.4	0.5	1.0

Schedule Info

Description:
MCtoPPLowStockingSite3to1End100%CPMaxTotal

Objective Function:
Max Total CRTs

Constraints:
C>=Start C

Common Prac. (t/a):
39

Proj. Target C (t/a):
39

Stand Name:
Mixed conifer, low stocking, even-aged

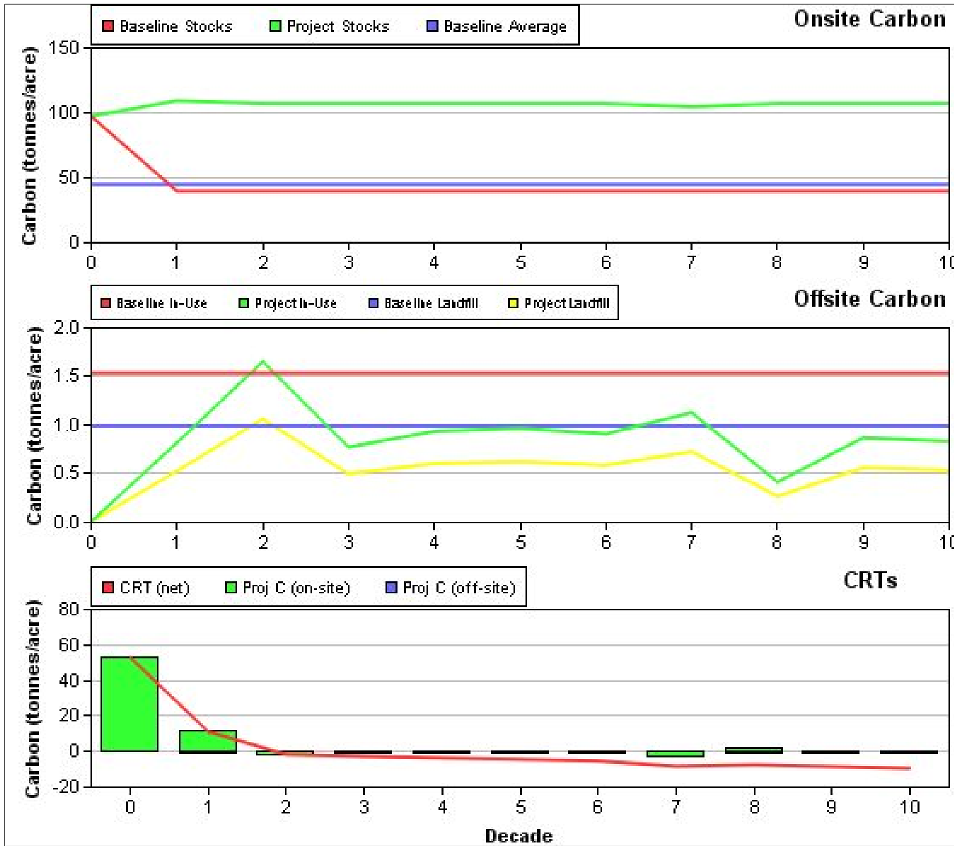
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	-9.4	0.0	0.0	0.0	0.0	-9.4
1	8.5	-0.8	0.2	-0.5	-9.4	-2.0
2	8.3	-0.8	0.2	-0.5	-2.0	5.2
3	9.2	-0.8	0.2	-0.5	0.0	8.1
4	1.4	0.4	0.1	0.0	0.0	1.9
5	0.0	0.6	0.1	0.0	0.0	0.7
6	0.0	0.4	0.1	0.0	0.0	0.5
7	0.0	0.5	0.1	0.0	0.0	0.6
8	0.0	0.5	0.1	0.0	0.0	0.6
9	0.0	0.7	0.1	0.0	0.0	0.8
10	0.0	0.8	0.2	0.0	0.0	0.9
Total	**18.1**	**1.5**	**-1.3**	**-1.5**		**8.0**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
617.8	0.0	382.2	1,000.0	0.0	0.0
382.2	617.8	0.0	814.2	19.5	166.3
382.2	617.8	0.0	843.9	0.0	156.1
382.2	158.2	459.7	846.2	0.0	153.8
841.8	0.0	158.2	855.3	0.0	144.7
1,000.0	0.0	0.0	663.1	242.9	94.0
617.8	382.2	0.0	601.0	322.5	76.6
617.8	382.2	0.0	677.5	185.8	136.6
684.2	**215.8**	**100.0**	**830.1**	**77.1**	**92.8**

Figure 49. One hundred year schedule for mixed conifer with opportunity to convert to highly productive ponderosa pine plantations, low starting stocks, carbon project with baseline and project activity estimates. End of project target carbon stocks are within 10% of common practice at 39 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.8	44.3	96.9	0.0	1.5	0.0	0.0	1.0	0.0
1	39.0	44.3	108.7	7.5	1.5	0.8	4.8	1.0	0.5
2	39.0	44.3	106.5	0.7	1.5	1.6	0.4	1.0	1.1
3	39.0	44.3	106.5	0.7	1.5	0.8	0.4	1.0	0.5
4	39.0	44.3	106.5	0.8	1.5	0.9	0.5	1.0	0.6
5	39.0	44.3	106.5	0.9	1.5	1.0	0.6	1.0	0.6
6	39.0	44.3	106.5	1.0	1.5	0.9	0.6	1.0	0.6
7	39.0	44.3	104.1	0.9	1.5	1.1	0.6	1.0	0.7
8	39.0	44.3	106.5	0.9	1.5	0.4	0.6	1.0	0.3
9	39.0	44.3	106.5	1.0	1.5	0.9	0.6	1.0	0.6
10	39.0	44.3	106.5	0.9	1.5	0.8	0.6	1.0	0.5

Schedule Info

Description:
MCtoPPHighStockingSite3to1EndFlatMaxTotal
Objective Function:
Max Total CRTs
Constraints:
BL C>=Common P

Common Prac. (t/a):
39
Proj. Target C (t/a):
96.8

Stand Name:
Mixed conifer, high stocking, even-aged

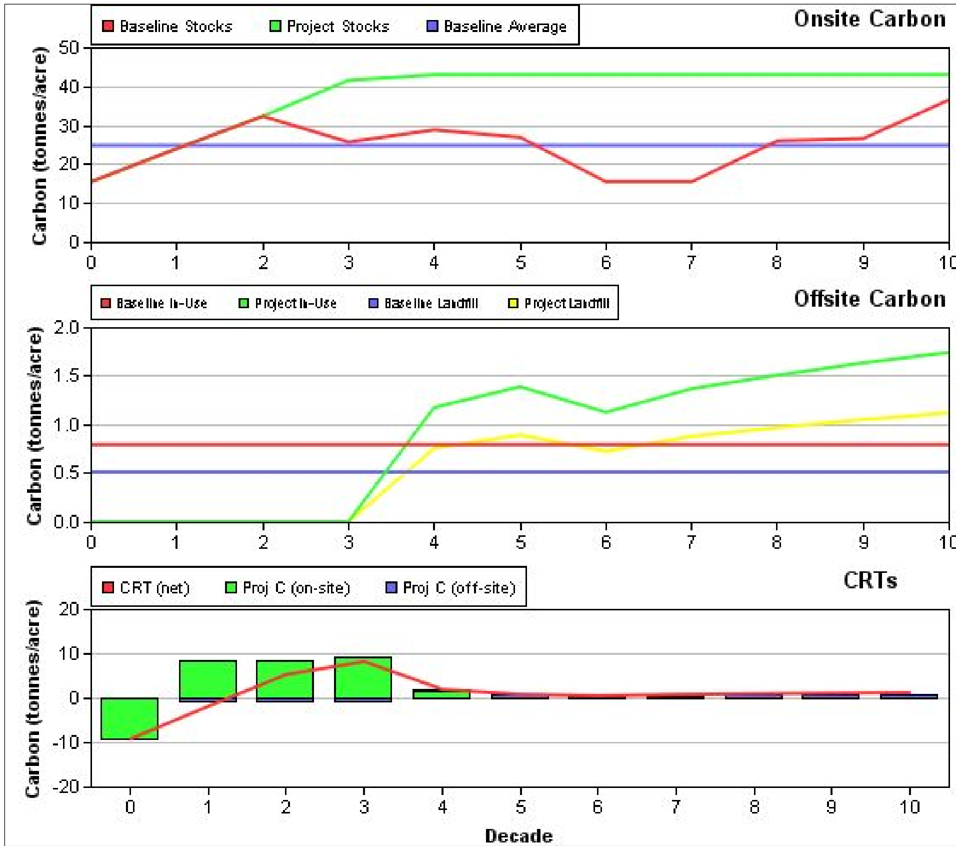
CRTs (C tonnes/acre)

	On-	Off-	IU	LF	Carry	
Decade	site	site	Leak	Effect	Over	Net
Initial	52.6	0.0	0.0	0.0	0.0	52.6
1	11.8	-0.7	0.1	-0.5	0.0	10.8
2	-2.2	0.1	0.0	0.0	0.0	-2.1
3	0.0	-0.8	0.2	-0.5	-2.1	-3.2
4	0.0	-0.6	0.1	-0.4	-3.2	-4.0
5	0.0	-0.6	0.1	-0.4	-4.0	-4.9
6	0.0	-0.6	0.1	-0.4	-4.9	-5.8
7	-2.4	-0.4	0.1	-0.3	-5.8	-8.8
8	2.4	-1.1	0.2	-0.7	-8.8	-8.0
9	0.0	-0.7	0.1	-0.4	-8.0	-8.9
10	0.0	-0.7	0.1	-0.5	-8.9	-9.9
Total	**62.2**	**-6.1**	**-1.3**	**-4.0**		**7.9**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	889.6	110.4	819.9	180.1	0.0
857.8	0.0	142.2	889.5	0.0	110.5
741.1	210.8	48.0	794.4	180.1	25.6
511.5	488.5	0.0	948.4	0.0	51.6
789.2	142.4	68.4	785.6	180.1	34.3
899.3	0.0	100.7	807.1	110.5	82.4
359.4	625.0	15.5	766.2	123.3	110.5
267.9	732.1	0.0	909.8	51.6	38.6
590.8	326.7	82.4	829.4	86.5	84.1
691.9	193.6	114.6	913.5	0.0	86.5
570.9	**360.9**	**68.2**	**846.4**	**91.2**	**62.4**

Figure 50. One hundred year schedule for mixed conifer with opportunity to convert to highly productive ponderosa pine plantations, high starting stocks, carbon project with baseline and project activity estimates. End of project target carbon stocks are within 10% of starting stocks at 96.8 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	15.4	24.8	15.4	0.0	0.8	0.0	0.0	0.5	0.0
1	23.9	24.8	23.9	0.0	0.8	0.0	0.0	0.5	0.0
2	32.2	24.8	32.2	0.0	0.8	0.0	0.0	0.5	0.0
3	25.6	24.8	41.5	1.5	0.8	0.0	1.0	0.5	0.0
4	28.7	24.8	42.9	0.3	0.8	1.2	0.2	0.5	0.8
5	26.8	24.8	42.9	1.0	0.8	1.4	0.7	0.5	0.9
6	15.4	24.8	42.9	2.3	0.8	1.1	1.5	0.5	0.7
7	15.4	24.8	42.9	0.8	0.8	1.4	0.5	0.5	0.9
8	25.9	24.8	42.9	0.0	0.8	1.5	0.0	0.5	1.0
9	26.5	24.8	42.9	1.4	0.8	1.6	0.9	0.5	1.0
10	36.5	24.8	42.9	0.6	0.8	1.7	0.4	0.5	1.1

Schedule Info

Description:
MCtoDFLowStockingSite3to1EndCPMaxTotal
Objective Function:
Max Total CRTs
Constraints:
C>=Start C

Common Prac. (t/a):
39
Proj. Target C (t/a):
39

Stand Name:
Mixed conifer, low stocking, even-aged

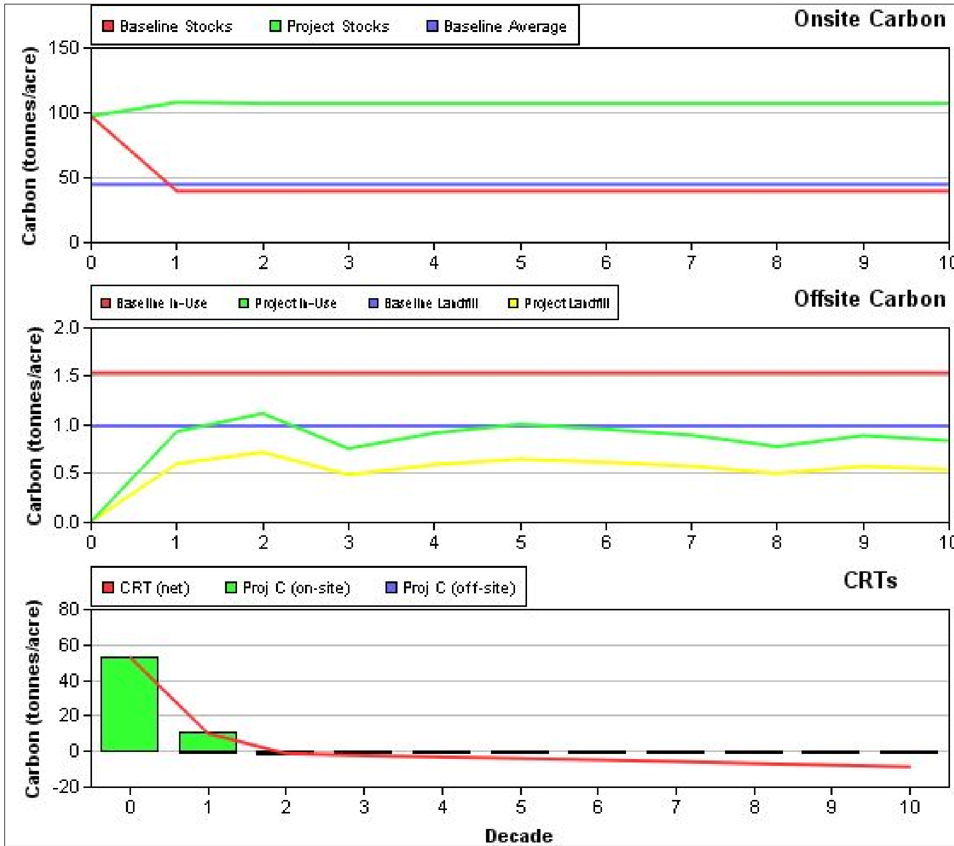
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	-9.4	0.0	0.0	0.0	0.0	-9.4
1	8.5	-0.8	0.2	-0.5	-9.4	-2.0
2	8.3	-0.8	0.2	-0.5	-2.0	5.2
3	9.2	-0.8	0.2	-0.5	0.0	8.1
4	1.4	0.4	0.1	0.0	0.0	1.9
5	0.0	0.6	0.1	0.0	0.0	0.7
6	0.0	0.3	0.1	0.0	0.0	0.4
7	0.0	0.6	0.1	0.0	0.0	0.7
8	0.0	0.7	0.1	0.0	0.0	0.9
9	0.0	0.8	0.2	0.0	0.0	1.0
10	0.0	0.9	0.2	0.0	0.0	1.1
Total	**18.1**	**2.0**	**-1.4**	**-1.5**		**8.6**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
1,000.0	0.0	0.0	1,000.0	0.0	0.0
1,000.0	0.0	0.0	1,000.0	0.0	0.0
617.8	0.0	382.2	1,000.0	0.0	0.0
382.2	617.8	0.0	833.7	0.0	166.3
382.2	617.8	0.0	848.3	0.0	151.7
382.2	158.2	459.7	853.0	0.0	147.0
841.8	0.0	158.2	847.6	0.0	152.4
1,000.0	0.0	0.0	711.2	159.0	129.8
617.8	382.2	0.0	674.7	229.0	96.4
617.8	382.2	0.0	619.3	318.0	62.6
684.2	**215.8**	**100.0**	**838.8**	**70.6**	**90.6**

Figure 51. One hundred year schedule for mixed conifer with opportunity to convert to highly productive Douglas-fir plantations, low starting stocks, carbon project with baseline and project activity estimates. End of project target carbon stocks are within 10% of common practice at 39 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	96.8	44.3	96.9	0.0	1.5	0.0	0.0	1.0	0.0
1	39.0	44.3	107.4	7.5	1.5	0.9	4.8	1.0	0.6
2	39.0	44.3	106.5	0.7	1.5	1.1	0.4	1.0	0.7
3	39.0	44.3	106.5	0.7	1.5	0.8	0.4	1.0	0.5
4	39.0	44.3	106.5	0.8	1.5	0.9	0.5	1.0	0.6
5	39.0	44.3	106.5	0.9	1.5	1.0	0.6	1.0	0.6
6	39.0	44.3	106.5	1.0	1.5	0.9	0.6	1.0	0.6
7	39.0	44.3	106.5	0.9	1.5	0.9	0.6	1.0	0.6
8	39.0	44.3	106.5	0.9	1.5	0.8	0.6	1.0	0.5
9	39.0	44.3	106.5	1.0	1.5	0.9	0.6	1.0	0.6
10	39.0	44.3	106.5	0.9	1.5	0.8	0.6	1.0	0.5

Schedule Info

Description:
MCtoDFHighStockingSite3to1EndFlatMaxTotal
Objective Function:
Max Total CRTs
Constraints:
BL C>=Common P

Common Prac. (t/a):
39
Proj. Target C (t/a):
96.8

Stand Name:
Mixed conifer, high stocking, even-aged

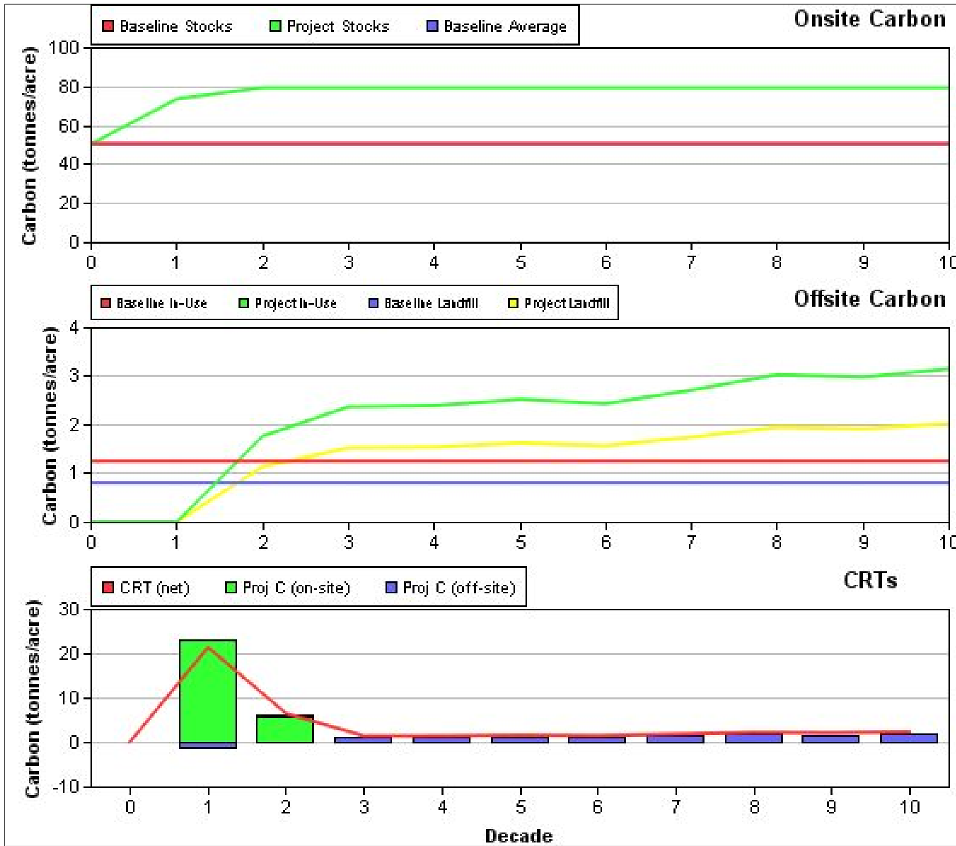
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	52.6	0.0	0.0	0.0	0.0	52.6
1	10.6	-0.6	0.1	-0.4	0.0	9.7
2	-0.9	-0.4	0.1	-0.3	0.0	-1.6
3	0.0	-0.8	0.2	-0.5	-1.6	-2.7
4	0.0	-0.6	0.1	-0.4	-2.7	-3.6
5	0.0	-0.5	0.1	-0.3	-3.6	-4.3
6	0.0	-0.6	0.1	-0.4	-4.3	-5.2
7	0.0	-0.6	0.1	-0.4	-5.2	-6.1
8	0.0	-0.8	0.2	-0.5	-6.1	-7.2
9	0.0	-0.6	0.1	-0.4	-7.2	-8.1
10	0.0	-0.7	0.1	-0.4	-8.1	-9.1
Total	**62.2**	**-6.3**	**-1.3**	**-4.0**		**14.5**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	889.6	110.4	794.3	205.7	0.0
857.8	0.0	142.2	883.0	0.0	117.0
741.1	210.8	48.0	810.0	163.4	26.6
511.5	488.5	0.0	949.4	0.0	50.6
789.2	142.4	68.4	798.8	163.4	37.8
899.3	0.0	100.7	834.3	74.7	91.0
359.4	625.0	15.5	784.0	141.3	74.7
267.9	732.1	0.0	845.6	92.9	61.5
590.8	326.7	82.4	831.8	88.2	80.0
691.9	193.6	114.6	911.8	0.0	88.2
570.9	**360.9**	**68.2**	**844.3**	**93.0**	**62.7**

Figure 52. One hundred year schedule for mixed conifer with opportunity to convert to highly productive Douglas-fir plantations, high starting stocks, carbon project with baseline and project activity estimates. End of project target carbon stocks are within 10% of starting stocks at 96.8 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	50.3	50.3	50.3	0.0	1.2	0.0	0.0	0.8	0.0
1	50.3	50.3	73.4	1.3	1.2	0.0	0.8	0.8	0.0
2	50.3	50.3	79.2	1.3	1.2	1.8	0.9	0.8	1.1
3	50.3	50.3	79.2	1.4	1.2	2.4	0.9	0.8	1.5
4	50.3	50.3	79.2	1.4	1.2	2.4	0.9	0.8	1.5
5	50.3	50.3	79.2	1.3	1.2	2.5	0.8	0.8	1.6
6	50.3	50.3	79.2	1.3	1.2	2.4	0.8	0.8	1.6
7	50.3	50.3	79.2	1.2	1.2	2.7	0.7	0.8	1.7
8	50.3	50.3	79.2	1.2	1.2	3.0	0.7	0.8	1.9
9	50.3	50.3	79.2	1.1	1.2	3.0	0.7	0.8	1.9
10	50.3	50.3	79.2	1.2	1.2	3.1	0.7	0.8	2.0

Schedule Info

Description: RWDFtoDFLowStockingSite3to1End100%CPMaxTotal
Objective Function: Max Total CRTs
Constraints: C>=Start C

Common Prac. (t/a): 72
Proj. Target C (t/a): 72

Stand Name: Redwood/Douglas-fir, low stocking, even-aged

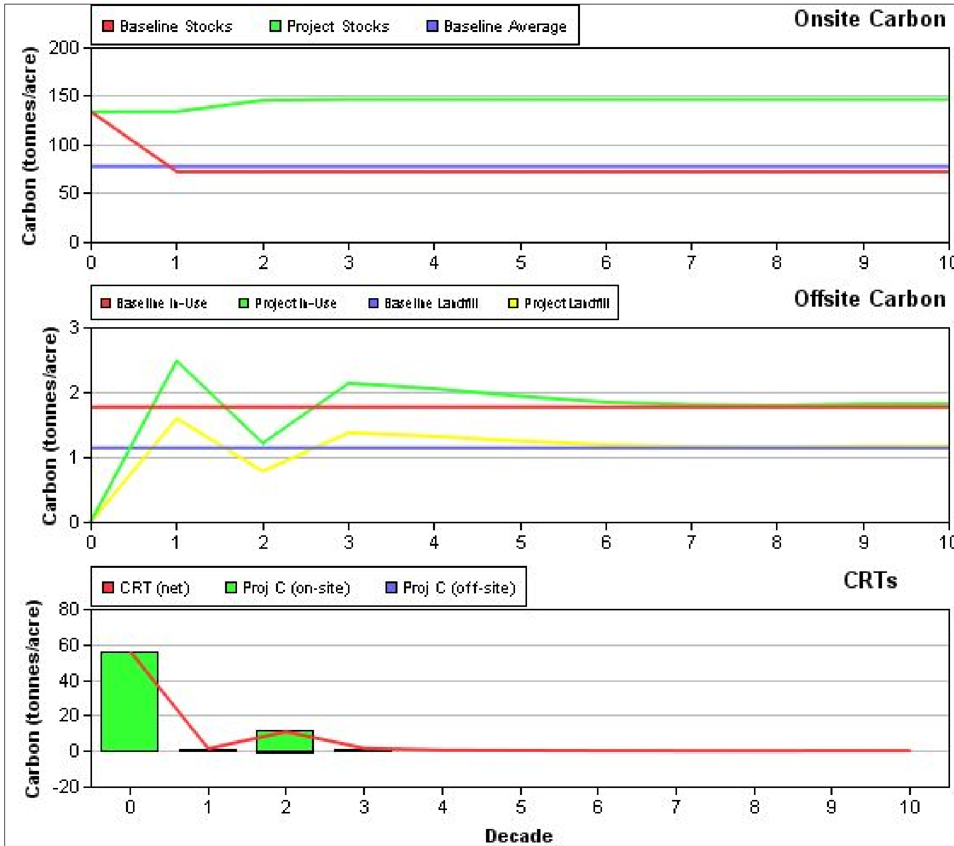
CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	0.0	0.0	0.0	0.0	0.0	0.0
1	23.1	-1.2	0.2	-0.8	0.0	21.3
2	5.8	0.5	0.1	0.0	0.0	6.4
3	0.0	1.1	0.2	0.0	0.0	1.3
4	0.0	1.1	0.2	0.0	0.0	1.4
5	0.0	1.3	0.3	0.0	0.0	1.5
6	0.0	1.2	0.2	0.0	0.0	1.4
7	0.0	1.5	0.3	0.0	0.0	1.7
8	0.0	1.8	0.4	0.0	0.0	2.1
9	0.0	1.7	0.3	0.0	0.0	2.1
10	0.0	1.9	0.4	0.0	0.0	2.3
Total	**28.9**	**10.8**	**-2.7**	**-0.8**		**41.6**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	843.6	156.4	1,000.0	0.0	0.0
156.4	767.8	75.8	399.7	490.8	109.5
232.2	677.4	90.3	509.2	334.2	156.7
322.6	574.8	102.7	556.4	270.6	173.1
268.8	645.5	85.7	398.3	440.6	161.1
278.7	637.7	83.6	386.4	506.7	107.0
272.0	650.9	77.1	332.2	556.0	111.8
246.4	682.0	71.6	444.0	408.6	147.4
232.2	700.3	67.4	541.6	279.9	178.5
216.1	720.2	63.7	572.7	206.5	220.8
222.6	**690.0**	**87.4**	**514.1**	**349.4**	**136.6**

Figure 53. One hundred year schedule for redwood/Douglas-fir with opportunity to convert to highly productive Douglas-fir plantations, low starting stocks, carbon project with baseline and project activity estimates. End of project target carbon stocks are within 10% of common practice at 72 tonnes per acre. Total on and off-site CRTs are maximized.



Carbon Yield (tonnes/acre)

	Baseline		Proj	Baseline		Proj	Baseline		Proj
Decade	Onsite	Avg	Onsite	IU	Avg(IU)	IU	LF	Avg(LF)	LF
Initial	133.5	77.6	133.5	0.0	1.8	0.0	0.0	1.1	0.0
1	72.0	77.6	133.8	8.2	1.8	2.5	5.2	1.1	1.6
2	72.0	77.6	145.4	1.4	1.8	1.2	0.9	1.1	0.8
3	72.0	77.6	146.3	1.4	1.8	2.1	0.9	1.1	1.4
4	72.0	77.6	146.3	1.3	1.8	2.1	0.8	1.1	1.3
5	72.0	77.6	146.3	1.2	1.8	1.9	0.7	1.1	1.2
6	72.0	77.6	146.3	1.0	1.8	1.8	0.7	1.1	1.2
7	72.0	77.6	146.3	0.9	1.8	1.8	0.6	1.1	1.2
8	72.0	77.6	146.3	0.9	1.8	1.8	0.5	1.1	1.1
9	72.0	77.6	146.3	0.8	1.8	1.8	0.5	1.1	1.2
10	72.0	77.6	146.3	0.8	1.8	1.8	0.5	1.1	1.2

Schedule Info

Description:
RWDFtoDFHighStockingSite3to1EndFlatMaxTotal

Objective Function:
Max Total CRTs

Constraints:
BL C>=Common P

Common Prac. (t/a):
72

Proj. Target C (t/a):
133

Stand Name:
Redwood/Douglas-fir, high stocking, even-aged

CRTs (C tonnes/acre)

Decade	On-site	Off-site	IU Leak	LF Effect	Carry Over	Net
Initial	55.9	0.0	0.0	0.0	0.0	55.9
1	0.3	0.7	0.1	0.0	0.0	1.2
2	11.5	-0.6	0.1	-0.4	0.0	10.7
3	0.9	0.4	0.1	0.0	0.0	1.4
4	0.0	0.3	0.1	0.0	0.0	0.3
5	0.0	0.2	0.0	0.0	0.0	0.2
6	0.0	0.1	0.0	0.0	0.0	0.1
7	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.1
10	0.0	0.0	0.0	0.0	0.0	0.1
Total	**68.7**	**1.2**	**-0.5**	**-0.4**		**70.0**

Silviculture (acres)

Baseline			Project		
Grow	Thin	Clear	Grow	Thin	Clear
0.0	1,000.0	0.0	305.5	694.5	0.0
0.0	975.3	24.7	305.5	694.5	0.0
24.7	951.9	23.4	305.5	619.5	75.0
48.1	930.0	21.9	380.5	541.3	78.2
70.0	908.7	21.2	458.7	462.8	78.5
91.3	888.1	20.6	537.2	381.4	81.4
111.9	867.5	20.6	618.6	294.8	86.6
132.5	845.6	22.0	705.2	202.1	92.7
129.7	834.9	35.3	797.9	101.9	100.2
141.6	819.6	38.8	823.2	75.0	101.9
75.0	**902.2**	**22.9**	**523.8**	**406.8**	**69.4**

Figure 54. One hundred year schedule for redwood/Douglas-fir with opportunity to convert to highly productive Douglas-fir plantations, high starting stocks, carbon project with baseline and project activity estimates. End of project target carbon stocks are within 10% of starting stocks at 133 tonnes per acre. Total on and off-site CRTs are maximized.