



# Middle Fork Elk Habitat Improvement Plan

February 23, 2010

## AGENDA

Description of the problem and need  
Introduction to the CCC Flats property  
Management constraints  
Outline for the scientific management plan  
Community participation  
Answers to Questions from the February 18 Meeting  
Review of New Questions

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## PROBLEM AND NEED

It is known that elk prefer good quality habitat to poor habitat. Current habitat conditions in areas surrounding the valley are poorer than habitat conditions in the valley. There is a need to cause elk to prefer areas away from settled areas in the valley for both safety and economic reasons.

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## CONTACTS AND PROJECT STAKEHOLDERS

Alan Mainwaring, wildlife biologist, Department of Natural Resources  
Karen Robertson, Land Use License point of contact, Department of Natural Resources  
Harold Erland, lead researcher for the Upper Snoqualmie Valley Elk Management Group  
Sonny Paz, wildlife biologist, U. S. Forest Service  
Russell Link, wildlife biologist, Department of Fish and Wildlife  
David Vales, wildlife biologist, Muckleshoot Indian Tribe  
Ray Fryberg, wildlife biologist, Tulalip Tribes

Needed: Project coordinator to organize volunteers and work with project stakeholders.

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## TERMS USED

escape cover	Vegetation, debris, and irregularities of the land which provide concealment
habitat	Food, water, shelter, and space that an animal requires
homogeneous	Of the same or similar nature or kind
pellet groups	Incidents of fecal material groups most commonly used as a form of measurements relating to deer and elk densities
PCT	Precommercial thinning
porosity	In hydrology, the volume of water per volume of rocks
thermal cover	Vegetation, debris, and irregularities of the land which provide shelter from temperature extremes
transect	A line for ecological measurements

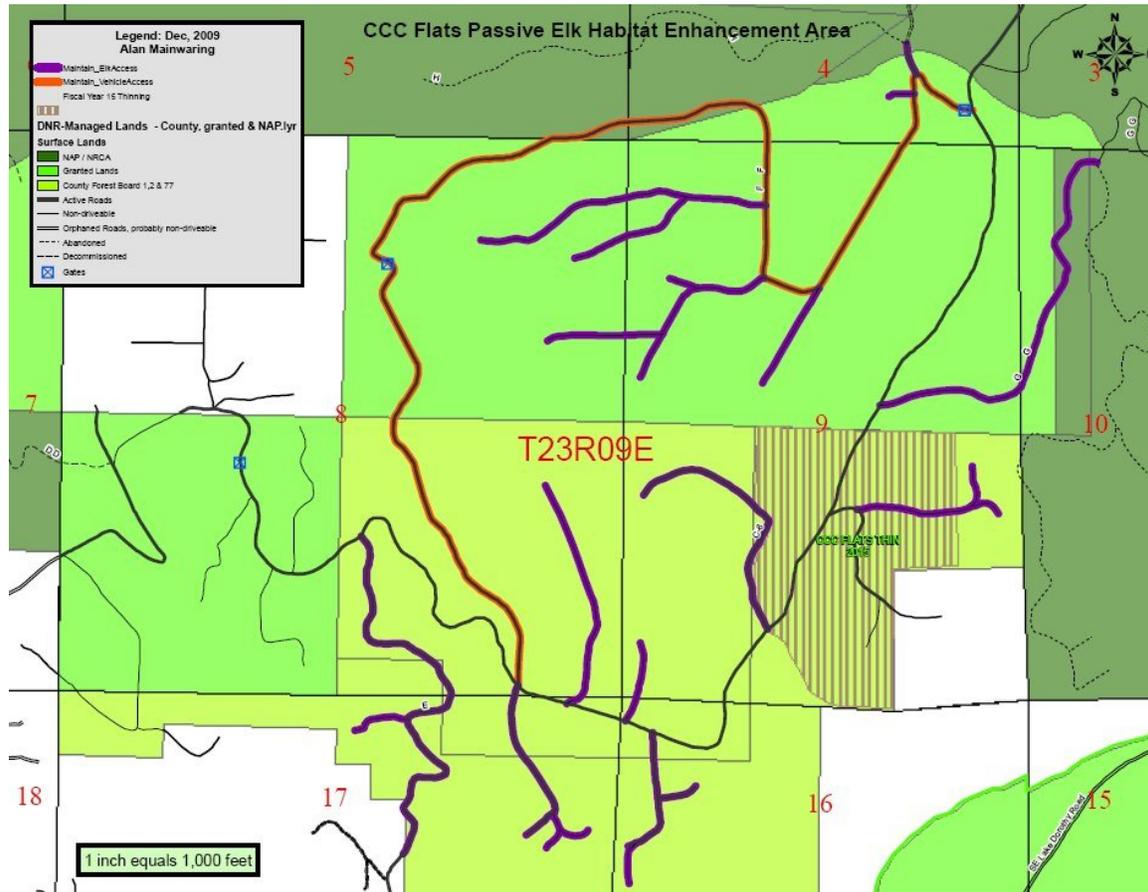
# SCIENTIFIC ELK HABITAT MANAGEMENT PLAN OUTLINE

Prepared by Harold Erland et al.

Procedure		Status
1.	Apply for DNR Land Use License.	Completed. DNR Land Use License application is approved.
2.	Site evaluation.	Completed. Alan Mainwaring, wildlife biologist for the DNR, and Harold Erland lead researcher for the USVEMG have evaluated the site.
3.	Prepare a plan of action.	In progress. As discussed on site Alan Mainwaring and Harold Erland identified the need to establish a baseline season to measure the effect of habitat improvements and a framework for a management plan.
4.	Capture "Before" pictures and pellet group transect counts.	In progress.
5.	Select test sites.	In progress. Prime candidate sites are: <ol style="list-style-type: none"> <li>a. Grassy trail on the second logging spur at the top of the hill on the left.</li> <li>b. Near the fork in the road.</li> </ol>
6.	Prepare test sites.	Spring 2010 Need to clear, dispose of debris and plant with DNR-approved certified mix.
7.	Evaluate plant growth and wildlife use weekly for nine months.	March – December 2010
8.	Record pellet group counts on the transects every three months.	June, September, December 2010
9.	If analysis determines that the test area is productive and used by wildlife (deer and elk), begin clearing remaining debris and encroaching alders.	January – March 2011 Debris disposed properly. One spur is prepared at a time. Small plots are cleared in the thinned areas so that they are ready to seed in the spring.
10.	Plant approved mix on logging spurs and cleared thinned areas.	February – March 2011
11.	Monitor as above in 7 and 8.	March – December 2011
12.	Write scientific report.	January 2012
13.	Repeat 9 through 12 for three years.	2012, 2013, 2014
14.	Write final report and reapply for DNR Land Use License.	December 2014

# CCC FLATS PROPERTY

## EXHIBIT A: PROJECT MAP AREA



## EXHIBIT C: OPERATIONAL REQUIREMENTS

- May remove vegetation encroaching on roads indicated on Exhibit A (project area map)
- May trim branches of trees adjacent to roadways
- May seed roads with an "elk" mix of native grasses and forbs with written approval from DNR
- May pile and remove slash associated with Department of Natural Resources pre-commercial thinning
- Must record volunteer hours dedicated to this project and distribute to DNR semi-annually
- Must notify DNR prior to an organized work party of greater than 3 people
- Must comply with all regulations of the Industrial Fire Precaution Level System  
[http://www.dnr.wa.gov/RecreationEducation/Topics/FireInformation/Pages/rp\\_fire\\_ifpl.aspx](http://www.dnr.wa.gov/RecreationEducation/Topics/FireInformation/Pages/rp_fire_ifpl.aspx)

### Can volunteers remove slash for personal use as firewood?

Alan Mainwaring, DNR: Our position is that yes, those participating in the habitat enhancement project may retain the pieces of thinning slash for firewood as long as the removal is helping to meet our habitat objectives of providing growing space for grasses, forbs and other browse species. Any mature timber, such as a tree blown down across the road, would need written permission from the unit manager prior to removal. I view removing the PCT slash as firewood for personal use as perhaps "incentivizing" the removal process. The more of it we remove, the more growing space for elk forage. Under no circumstances may the slash be "sold" as firewood.

DEPARTMENT OF NATURAL RESOURCES

## Pre-Approved Elk Mixes

Other mixes will be considered in consultation with the Department of Fish and Wildlife.

### Standard Mix: (RECOMMENDED)

Annual Ryegrass 25%

Perennial Ryegrass 10%

Latar Orchardgrass 25%

Mt. Barker Subterranean Clover 25%

White Dutch Clover 15%

Seed at 15 to 20 lbs per acre, fertilize with Phosphorus and micronutrients as advised by a local soil specialist.

### Pasture Seed Mix for Elk For medium to well drained soils: (by weight)

20% Orchardgrass

15% Meadow Bromegrass

5% Creeping Red Fescue

20% Able or AC Caribou Alfalfa

15% Rangelander or Spredor 2 Alfalfa

10% Sainfoin

10% Red Clover

5% Puna Chicory

Seed at 15 to 20 lbs per acre, fertilize with Phosphorus and micronutrients as advised by a local soil specialist.

### For wet or poorly drained soils: (by weight)

20% Orchardgrass

40% Bellevue or Palaton Reed Canary grass

15% Alsike Clover or Magnum 3 Alfalfa

20% Red Clover

5% Sainfoin

Seed at 10 to 15 lbs per acre, fertilize as above.

Fertilizer required would be 10 lbs. per acre nitrogen, 85 lbs. per acre phosphorus, no potash, 5 lbs per acre copper sulfate.

## COMMENTS

Russell Link, DFW: In talking with others about Western Washington seed mixes for elk, the "Standard Mix" you provided is likely a good starting point, if there is no need for further requirements.

Alan Mainwaring, DNR: For those whom have not heard, this Land Use License is for a project utilizing volunteer effort to keep the existing roads on the CCC Flats bench open to elk use on the interior of a large stand of timber and to vehicle travel on the periphery. Seeding the roads with an "elk" mix to encourage elk use is also open to discussion. The CCC Flats is an approximately 1,000 acre, 20 year old commercial timber plantation behind a gated road system with very limited vehicle admittance at the end of the Mt. Si road. DNR's existing plan is to let these roads grow over then reconstruct them with a commercial harvest several decades from now. This is a standard cost savings practice on non-mainline forest roads once initial plantation management has been accomplished. The local DNR managers have been consulted and are fine with keeping these roads open for elk travel corridors. As Harold describes in his message, DNR is working on obtaining permission allowing the elk group to cut the alder out of the right-of-way of the existing roads (rapidly growing in) and trim the branches on the conifer along the road edge. DNR would also allow the group to cut up and pile PCT slash to their hearts content. I am labeling this a "passive" elk habitat enhancement in that the project is designed to facilitate elk movement through the area with no direct impacts to the existing stand (project is on the retained Trust Lands in the Middle Fork Snoqualmie landscape). Benefits include but are not limited to: establishing a partnership with elk group and DNR, maintain access to plantation at no cost to the trusts, improve access for boot hunters to hunt bear (damage to Douglas-fir is extensive), provide an improved travel corridor for elk to access the upper Middle Fork drainage, improve elk access to thermal and escape cover and to foraging and calving areas. Hope this plan works out, should be a pretty quick turnaround to see a volunteer effort turned into added porosity and improved habitat in a very dense homogeneous stand.

Harold Erland: [Clearing methods are limited]... we can not disturb the roots of the existing trees in this plantation.

## QUESTIONS ASKED AT THE MEETING ON FEBRUARY 18

1. Is or has the property been a sewer sludge dumping site?
2. What is the actual acreage of the most recent PCT?
3. Has this been done before? Where? (Tulalips, Muckleshoots, BPA). It was noted that the Tulalips had prepared a slide show of an elk habitat improvement project in 2009 which was presented to the elk group in September. We will bring the presentation to the second Middle Fork Elk Habitat Improvement Plan meeting on Tuesday 2/23.

Sonny Paz, USFS: The Forest Service has implemented some habitat improvements for big game. One example is the Upper Green River PCT west/south west of Stampede Pass. The Muckleshoot Tribe (Dave et al) provided a treatment design. I believe this work was completed last year. There hasn't been any monitoring to date that I'm aware of. If folks want to see this area I can provide maps. Access via Stampede Pass after snow melt/plowing.

David Vales, Muckleshoot Indian Tribe: Muckleshoot has conducted or been involved with a wide variety of habitat improvement projects such as:

- tilling & planting grass-forb "pastures" under BPA power lines
- Scotch broom pulling, cutting, spraying
- slash removal in thinned stands (we have a Bandit 150 chipper)
- fertilization experiment to improve digestible energy content of forages
- precommercial thinning using a unique gap, travel corridor, uneven spacing approach with slash lopping and burning (see Thinning Unit1)
- commented on a wide variety of restoration (precommercial) and ecological (commercial) thinning in the Cedar, especially in the context of slash treatment and "skips & gaps"
- We have been involved with huckleberry plant enhancement projects as well as USFS thinning projects and are trying to get some elk forage areas created in the White River (USFS lead on this)

Russell Link, DFW: Michael Sevigny, Wildlife Biologist with the Tulalips presented "Meadow Creation and Enhancement of Open Areas for Wildlife" at the Wildlife Society's conference last week. You might want to speak with him.

4. What is the width of the easement on the roadways for clearing? Estimate: 20 feet..
5. What is the DFW position on the slash affecting lower wildlife such as ground squirrels, rabbits, possums, etc.? Additional background to help frame the answer in this context: It was noted that the project area has extensive regions of slash and that it would be improbable that our group would be able to remove it all. Spur roads and PCT areas represent a fraction of the project area.  
Russell Link, DFW: At a population scale, there are no endangered, threatened or sensitive species that will likely be negatively affected at this level of habitat manipulation.  
David Vales, Muckleshoot Indian Tribe: You'll never get all the slash. Piling, lopping to enhance breakdown, are likely to accomplish more than removal. Be creative - e.g., consider focusing on travel corridors, utilize the existing roads - remove slash adjacent to improve where light is already coming in rather than worrying about slash deep in the heart of stands.
6. How available is approval for the removal of windfall timber for blocking a road (access)? Do we have leeway to cut the tree and move it to the side of the road? We discussed the possibility that a marketable tree has fallen across the road and blocks access for our equipment.

## 7. Where would the elk come from that would move into this area?

David Vales, Muckleshoot Indian Tribe: There is a little bit of "build it and they will come" among elk - but they really need something to attract them. Elk are homebodies and if what you create is not within any female home ranges, it will be difficult to see much use other than some wandering bulls.

Russell Link, DFW: I would refer to Andy Duff's landscape modeling effort, and local knowledge, to determine the above. Andy Duff is our DFW point-of-contact for information related to mapping and GIS related research.

## 8. What would be the price/vendor/suggested application rate for the seed mix? There was also inquiry (for planning purposes) about what time of year the seeding typically takes place.

Russell Link, DFW: The seed mix that DNR has proposed will cost around 3.00/lbs and I believe the application rate is 7-10 lbs/acre for new "pasture." I would experiment with a spring application and an early fall over seed application (germination and true leaf development before heavy frosts).

David Vales, Muckleshoot Indian Tribe: We have used several seed mixtures and have some prices and vendors we can pass on to you later.

## 9. What are the test sites, specific coordinates, elevation? There was some discussion that the description of the test site locations were somewhat vague in the plan outline. We have: "grassy trail on the second logging spur at the top of the hill on the left" for the first site and "near the fork in the road" for the second site.

David Willson: Cross-referencing the site with a topographical map the CCC Flats area averages an elevation of about 1600 feet. The high point along the perimeter road reaches 1720 feet the low point on "Spur 170" is about 1200 feet. If test site A is "Spur 120" the elevation is approximately 1620 feet.

## 10. What is the smallest acreage cleared to be effective? It is thought that a small clearing such as 1000 square feet might be too small to prove success or failure.

David Vales, Muckleshoot Indian Tribe: The Cedar created 0.04 ac gaps (WAY too small) and some larger gaps of 1/4-3/4 acre seen in the attached photo (right). Muckleshoot created 1 to 2 ac gaps in the attached design. Gap size depends on tree height and light - but account for height growth and crown growth into the gap.



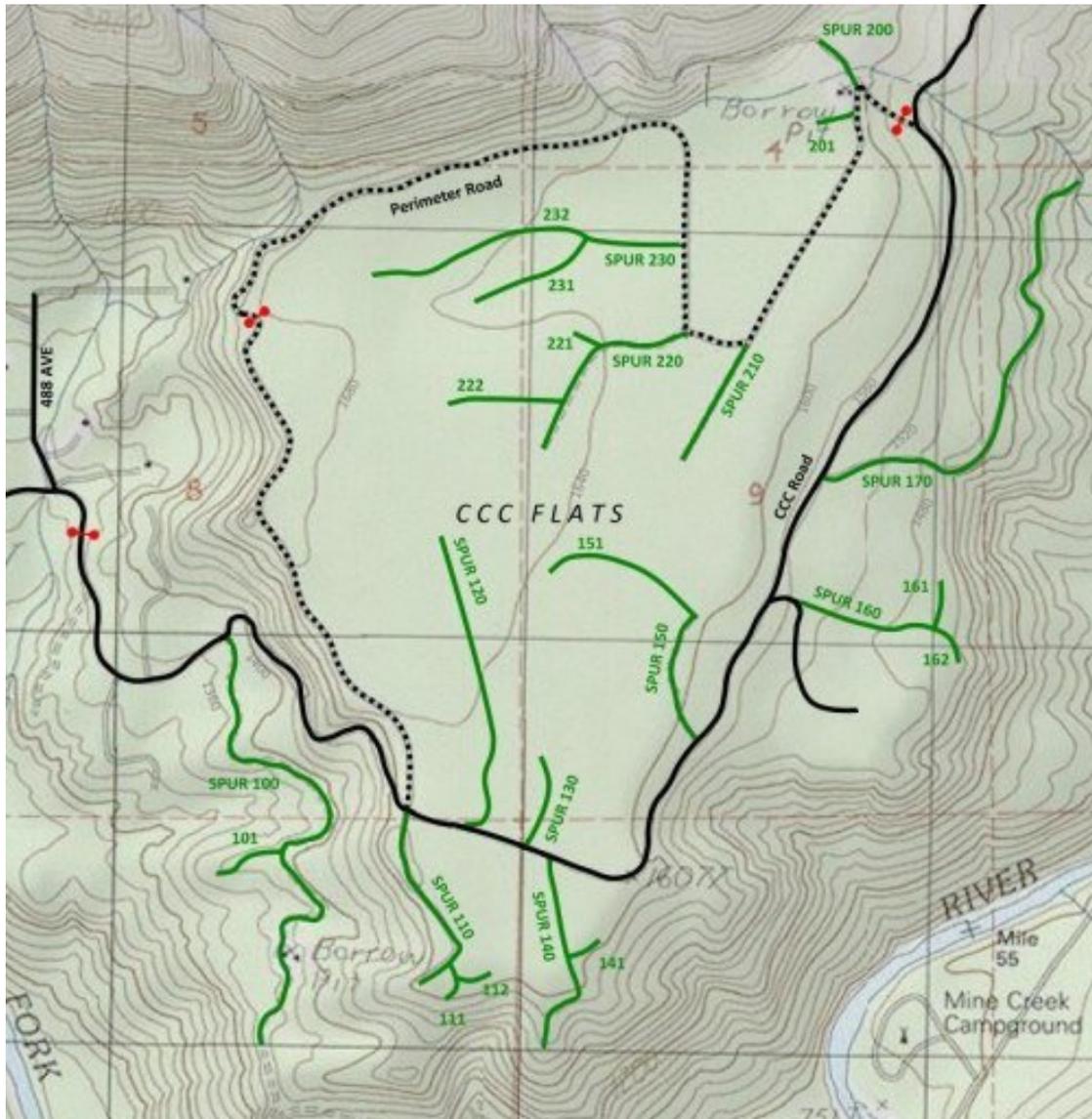
## 11. Do we have approval to create corridors between roads, between the marketable trees? It was discussed that by inspection bear damaged stands exist between spur roads in the project area. It is anticipated that additional clearing off of spur roads and conducted in a manner to protect marketable trees could further enhance elk travel in and throughout the project area.

## 12. Is there a place to wash machinery nearby to reduce the risk that noxious weeds, invasive plants are introduced to the area?

Sonny Paz, USFS: The Forest Service compound at North Bend has a "wash area" located next to our conference room building and behind the garage that house our engines. I will confer with our district ranger and facilities manager to its availability. If the use of the wash area is approved we will likely need a schedule of use, i.e. frequency, days of the week, etc.

## 13. When can a field trip be arranged to view the property and proposed test sites? It is noted that some participants have no availability on the weekends, some people are only available on the weekends.

14. Is there a naming convention for the spur roads already in place? Can the elk group apply labels to the roads where none are present? Names shown on the map attached below are temporary until the group establishes a naming convention.



#### OTHER NOTES FROM THE MEETING ON FEBRUARY 18

Noxious weeds removal can be a measurable indicator of success.

Grants may be available for removal of noxious weeds as a part of the habitat improvement plan.

Potential to exchange mulch or biomass to offset seed cost.

Opportunity to attract volunteers for participation from sources such as RMEF and the state MH program.

Requested a field trip date to view the property and proposed test sites.

We need a naming convention for the roadways for clarity in communication.

Tom Kemp and César Carrion Guidotti have volunteered to act as project coordinators for the elk habitat improvement project. Tom Kemp is arranging to delegate his responsibility as telemetry coordinator.

#### ATTENDING THE MEETING ON FEBRUARY 18

Bob Stokke, RMEF

Karen Wallace, Volunteer

Bill Carlson, Volunteer

Gary Fancher, USVEMG Secretary

Daniel Fredriksen, Volunteer

César Carrion Guidotti, Volunteer

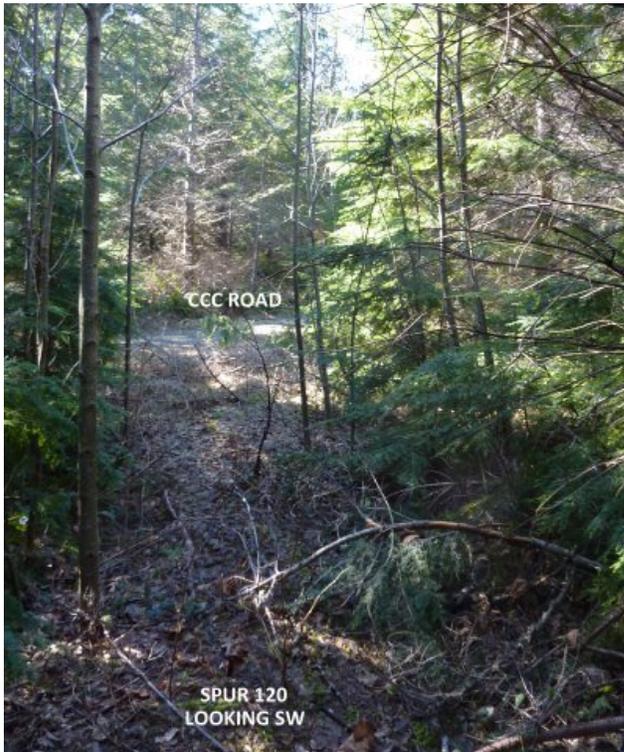
Tom Kemp, USVEMG Telemetry Coordinator

David Willson, USVEMG President

Kalli Willson, USVEMG Education & Outreach Committee Chair

# PICTURES FROM THE CCC FLATS PROJECT SITE

February 20, 2010



To the left:  
Entrance to "Spur 120"

Pictures below:  
Example of the grade of the slope at the southwest corner of the CCC Flats plateau, grasses starting to grow on "Spur 110"

Lowest pictures on the page:  
An example of the understory and entrance to "Spur 130"



