

# *Appendix A*

## *Site Cards*

<b>SITE #</b>	<b>Track Plate 1</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>June 3/02</b>	<b>ASPECT</b>	southeast
<b>MAPSHEET:</b>	92F.045		
<b>SITE SERIES</b>	CWHmm/03	<b>UTM:</b>	10.350522.5473664
<b>LOCATION:</b>	80 m downstream of ermine sighting, 1 km below Dickson Lake		
<b>HISTORY:</b>	Disturbed second growth		
<b>GENERAL DESCRIPTION:</b>	Well drained slope above Ash R. Hw and Fd young forest		
<b>PHYSICAL</b>			
Slope position/gradient/shape	Lower slope / 20% / concave		
Microtopography	micro		
<b>Soil</b>			
Soil depth/rooting depth	Na		
Soil texture/coarse fragments	Na		
Gleying/water table	None		
A horizon	Na		
Humus form/thickness	Mors / moders 6 cm		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Young Forest		
Canopy closure	75%		
A Layer (Trees)	The main canopy (A2) was comprised of Douglas-fir (Fd). Subcanopy (A3) species included Douglas-fir, western redcedar (Cwr) and western hemlock (Hw). Regenerating species included Cwr and Hw.		
<b>Understory</b>			
B Layer (Shrubs)	Poorly developed shrub layer with salal dominant. Also red huckleberry and dull Oregon grape.		
C Layer (Herbs)	Poorly developed herb layer with sword fern dominant. Trailing blackberry, bracken fern, broad-leaved starflower, maiden-hair fern and vanilla leaf.		
D Layer (Bryophytes/Seedlings, fungi)	Moderate moss coverage with lanky moss, step moss, Oregon-beaked moss, cat-tail moss, rough moss, coastal leafy moss		
<b>CWD/WILDLIFE TREES/WILDLIFE</b>			
<b>Coarse Woody Debris</b>	Old cut stumps and logs, decay class 4-5 rare. Small diameter self-thinnings, decay class 1-2 common.		
<b>Wildlife Trees (Snags)</b>	Small to medium diameter snags rare		
<b>Wildlife: Direct Contacts</b>	Douglas squirrel, Steller's jay		
<b>Wildlife: Sign</b>	Mice (track plate), deer pellets, bear scat, woodpecker foraging holes in snags common.		



View of Track Plate 1 forest cover

<b>SITE #</b>	<b>TRACK PLATE 2</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>Jun.3/02</b>	<b>ASPECT</b>	southwest <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHmm1/03	<b>UTM:</b>	10.350482.5475718
<b>LOCATION:</b>	Approximately 500 m upstream of Ash Pit bridge		
<b>HISTORY:</b>	disturbed	<b>Non-habitat features:</b>	
<b>GENERAL DESCRIPTION:</b>	Second growth coastal western hemlock dominated forest canopies with Douglas fir, western redcedar, some red alder in openings and along river. Shrub species: salal, red huckleberry, salmonberry. Herb cover of 30%, represented by bracken fern. Moss cover variable ranging from 25-50% represented by step moss ( <i>Hylocomium splendens</i> ) and Oregon beaked moss ( <i>Kindbergia oregana</i> ).		
<b>PHYSICAL</b>			
Slope position/gradient/aspect	Flat and gentle incline areas of 1-5% slope. West and south west facing slopes		
Microtopography	Slightly to moderately mounded		
Soil texture/coarse fragments	Sandy loam, loamy sand/ soils coarse (>35 - >70 %)		
Gleying/water table	n/a		
Organic horizon / thickness	Mors / 8 cm		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Pole sapling		
Canopy closure	80%		

A Layer (Trees)	The main canopy (A2) was comprised predominantly of Douglas-fir which was occasionally co-dominant with western hemlock. Subcanopy (A3) species included Douglas-fir and western hemlock with minor occurrences of red alder ( <i>Alnus rubra</i> ). Regenerating species included western hemlock and small amounts of western redcedar.
<b>Understory</b>	Shrub dominated
B Layer (Shrubs)	Shrub layers were dominated by salal and red huckleberry. Other common species included salmonberry, and Dull-Oregon grape ( <i>Mahonia nervosa</i> ) Trailing blackberry ( <i>Rubus ursinus</i> ) and twinflower ( <i>Linnaea borealis</i> ) were present but not common.
C Layer (Herbs)	Herb cover was generally low (<30%). The most common species was sword fern ( <i>Polystichum munitum</i> ).
D Layer (Bryophytes/Seedlings, fungi)	Moss coverage was moderate and included step moss, Oregon-beaked moss. Other species included traces of curly heron's-bill moss ( <i>Dicranum fuscescens</i> ), lanky moss ( <i>Rhytidiadelphus loreus</i> ). Western hemlock seedlings were noted on CWD.
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	CWD cover ranged from 5 to 15 % with a mix of medium diameter (<50 cm dia.), decay class IV-V CWD, and small to medium diameter (<20-50 cm dia.) decay class I-II CWD.
<b>Wildlife Trees (Snags)</b>	Small to medium diameter (<20 to 50 cm.) snags were common. Large snags were not present.
<b>Wildlife: Direct Contacts</b>	Ruffed grouse and brood, red-breasted sapsucker, winter wren, northern flicker, common raven
<b>Wildlife: Sign No Site Photo</b>	Boring: Red-breasted sapsucker Trails/tracks: Black-tailed deer Browse: None Feces: Black bear

<b>SITE #</b>	<b>TRACK PLATE 3</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>Jun.4/02</b>	<b>ASPECT</b>	south <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHmm1/ high bench	<b>UTM:</b>	10.349081.5474947
<b>LOCATION:</b>	Approximately 300 m upstream of Dickson Lake		
<b>HISTORY:</b>	Disturbed, floodplain site		
<b>GENERAL DESCRIPTION:</b>	Coastal western redcedar dominated forest canopies with red alder. Shrub species: salmonberry, Pacific ninebark, devil's club. Herb cover of 30%, represented by skunk cabbage. Moss cover low 5-10%.		
<b>PHYSICAL</b>			
Slope position/gradient/aspect	Flat and depressed areas of 1-3% slope. South and south west facing floodplain		
Microtopography	Moderately mounded		
<b>Soil</b>			

Soil depth/rooting depth	Generally >60 cm (50 cm min.)/ na
Soil texture/coarse fragments	Sandy loam over coarse stream gravels (>35 %)
Gleying/water table	n/a
A horizon	None
Humus form/thickness	Moders / 3 cm
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	Old growth Cwr and Ss, extends across Ash R. and north end of Dickson Lake
Stand Structural Stage	Mature / old growth
Canopy closure	60% (50-70%)
A Layer (Trees)	The main canopy (A2) was comprised of mature western redcedar with occasional Sitka spruce and big-leaf maple. Subcanopy (A3) species included red alder ( <i>Alnus rubra</i> ) with minor occurrences of western hemlock. Regenerating species included western redcedar, red alder, and Sitka spruce.
<b>Understory</b>	Shrub dominated
B Layer (Shrubs)	Shrub layers were dominated by salmonberry and Pacific ninebark. Other species included devil's club, black twinberry ( <i>Lonicera involucrata</i> ) and highbush cranberry ( <i>viburnum edule</i> ).
C Layer (Herbs)	Herb cover was generally moderate (30-50%). The most common species was skunk cabbage and sword fern.
D Layer (Bryophytes/Seedlings)	Moss coverage was generally low and included curly heron's-bill moss ( <i>Dicranum fuscescens</i> ), lanky moss ( <i>Rhytidiadelphus loreus</i> ), and large leafy moss ( <i>Rhizomnium glabrescens</i> ). Sitka spruce seedlings were noted.
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	CWD cover ranged from 5 to 10 %. Included a mix of medium diameter (<50 cm dia.), decay class IV-V CWD, and large diameter (>50 cm dia.) decay class I-II CWD.
<b>Wildlife Trees (Snags)</b>	Large diameter (>50 cm.) snags were present but not common. Small to medium diameter red alder snags were common.
<b>Wildlife: Direct Contacts</b>	Red squirrel, ruffed grouse, red-breasted sapsucker, American robins, spotted towhee, winter wren, common raven
<b>Wildlife: Sign</b>	Boring: Red-breasted sapsucker nest at 20 m on western redcedar Trails/tracks: Black-tailed deer, black bear Browse: Black-tailed deer (salmonberry) Feces: Black bear



View of forest cover on Ash floodplain, upstream of Dickson Lake

<b>SITE #</b>	<b>TRACK PLATE 4</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>Jun.3/02</b>	<b>ASPECT</b>	southwest <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHdm/03	<b>UTM:</b>	10.347752.5481349
<b>LOCATION:</b>	Approximately 500 m downstream of Elsie dam		
<b>HISTORY:</b>	disturbed	<b>Non-habitat features:</b>	
<b>GENERAL DESCRIPTION:</b>	Second growth coastal western hemlock dominated forest canopies with Douglas fir, western redcedar, some red alder. Shrub species: salal, red huckleberry, salmonberry. Herb cover of 30%, represented by bracken fern. Moss cover variable ranging from 25-50% represented by step moss ( <i>Hylocomium splendens</i> ) and Oregon beaked moss ( <i>Kindbergia oregana</i> ).		
<b>PHYSICAL</b>			
Slope position/gradient/aspect	Flat and gentle incline areas of 1-5% slope. West and south west facing slopes		
Microtopography	Slightly to moderately mounded		
Soil texture/coarse fragments	Sandy loam, loamy sand/ soils coarse (>35 - >70 %)		
Gleying/water table	n/a		
Organic horizon / thickness	Fm / 8 cm		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Young/early mature		
Canopy closure	65% (50-80%)		
A Layer (Trees)	The main canopy (A2) was comprised predominantly of Douglas-fir which		

	was occasionally co-dominant with western hemlock. Subcanopy (A3) species included Douglas-fir and western hemlock with minor occurrences of red alder ( <i>Alnus rubra</i> ). Regenerating species included western hemlock and small amounts of Sitka spruce.
<b>Understory</b>	Herb dominated
B Layer (Shrubs)	Shrub layers were dominated by salal and red huckleberry. Other common species included salmonberry, and Dull-Oregon grape ( <i>Mahonia nervosa</i> ) Trailing blackberry ( <i>Rubus ursinus</i> ) and twinflower ( <i>Linnaea borealis</i> ) were present but not common.
C Layer (Herbs)	Herb cover was generally moderate (30-50%). The most common species was sword fern ( <i>Polystichum munitum</i> ).
D Layer (Bryophytes/Seedlings, fungi)	Moss coverage was moderate and included step moss, Oregon-beaked moss. Other species included traces of curly heron's-bill moss ( <i>Dicranum fuscescens</i> ), lanky moss ( <i>Rhytidiadelphus loreus</i> ), wavy-leaved cotton moss ( <i>Plagiothecium undulatum</i> ), and large leafy moss ( <i>Rhizomnium glabrescens</i> ). Western hemlock seedlings were noted on CWD. Morel mushroom observed.
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	CWD cover ranged from 5 to 25 %. Usually a mix of medium diameter (<50 cm dia.), decay class IV-V CWD, and small to medium diameter (<20-50 cm dia.) decay class I-II CWD.
<b>Wildlife Trees (Snags)</b>	Small to medium diameter (<20 to 50 cm.) snags were common. Large snags were not present.
<b>Wildlife: Direct Contacts</b>	Red squirrel, red-breasted sapsucker, golden-crowned kinglet, chestnut backed chickadee, winter wren, northern flicker, common raven
<b>Wildlife: Sign</b>	Boring: Red-breasted sapsucker nest at 2.5 m on western hemlock Trails/tracks: Black-tailed deer Browse: Black-tailed deer (salal, sword fern) Feces: Black-tailed deer pellets



View of morel mushroom and red-breasted sapsucker nest hole near track plate 4

<b>SITE #</b>	<b>TRACK PLATE 5</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>Jun.4/02</b>	<b>ASPECT</b>	northeast <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHvm1/01	<b>UTM:</b>	10.343681.5478570
<b>LOCATION:</b>	Approximately 80 m northeast of the bottom of Turnbull hill		
<b>HISTORY:</b>	disturbed		
<b>GENERAL DESCRIPTION:</b>	Western hemlock dominated forest canopies with amabilis fir, Douglas fir and western hemlock. Shrub species: red huckleberry, copperbush, false azalea, and black huckleberry. Herb coverage low <15%, represented by deer fern, twinflower, sword fern. Moss coverage high >70%.		
<b>PHYSICAL</b>			
Slope position/gradient/aspect	gentle slope areas of 10-20% slope. Northeast facing.		
Microtopography	smooth		
<b>Soil</b>			
Soil depth/rooting depth	Generally <50 cm (30 cm min.)/ na		

Soil texture/coarse fragments	Loam and coarse sands, coarse (>50 %)
Gleying/water table	n/a
A horizon	Ae (8 cm)
Humus form/thickness	Mors, moders/ 10 cm
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Young 2 <sup>nd</sup> growth
Canopy closure	80% (70-90%)
A Layer (Trees)	The main canopy (A2) was comprised of western hemlock, amabilis fir, with some Douglas fir. Subcanopy (A3) species included western hemlock and amabilis fir. Regenerating species included western redcedar and Douglas fir.
<b>Understory</b>	Moss dominated
B Layer (Shrubs)	Shrub layers were comprised of copperbush and <i>Vaccinium spp.</i>
C Layer (Herbs)	Herb cover was generally (<10%) and comprised of deer fern and sword fern.
D Layer (Bryophytes/Seedlings)	Moss coverage was high and included curly heron's-bill moss ( <i>Dicranum fuscescens</i> ), lanky moss ( <i>Rhytidiadelphus loreus</i> ), and step moss.
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	CWD cover was rare. A few small diameter (<20 cm dia.), decay class IV-V CWD, and large diameter (>50 cm dia.) decay class VII CWD.
<b>Wildlife Trees (Snags)</b>	Absent.
<b>Wildlife: Direct Contacts</b>	Varied thrush
<b>Wildlife: Sign</b> <b>No Site Photo</b>	Boring: none Trails/tracks: none Browse: none Feces: Black bear

<b>SITE #</b>	Track Plate 6	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	June 4/02	<b>ASPECT</b>	west
<b>SITE SERIES</b>	CWHvm1/01	<b>UTM:</b>	10.342470.5479286
<b>LOCATION:</b>	North side of Else Lake, approximately 250 m west of campsite at upper end of lake		
<b>HISTORY:</b>	disturbed		
<b>GENERAL DESCRIPTION:</b>	Located along shoreline at point of land on north side of lake. Subalpine fir, amabilis fir and western hemlock dominated young second growth forest with high shrub and moss coverage.		
<b>PHYSICAL</b>			
Slope position/gradient/aspect	Lower slope/ 25% grade / southwest aspect		
Microtopography	smooth		
<b>Soil</b>			
Soil depth/rooting depth	na		
Soil texture/coarse fragments	High coarse fragment content		

Gleying/water table	na
A horizon	Na
Humus form/thickness	Mors / 9 cm
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Pole sapling
Canopy closure	75%
A Layer (Trees)	Dominant tree cover provided by amabilis fir, subalpine fir and western hemlock, some Douglas fir and western redcedar. Subcanopy of western hemlock. Regeneration of western hemlock and western redcedar.
<b>Understory</b>	
B Layer (Shrubs)	Oval -leaved and Alaskan blueberry, red and black huckleberry, copperbush, pink wintergreen, salal
C Layer (Herbs)	Deer fern,
D Layer (Bryophytes/Seedlings, fungi)	
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	Few pole sapling self-thinning small diameter decay class 2
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	None
<b>Wildlife: Sign</b> <b>No Site Photo</b>	None

<b>SITE #</b>	<b>Track plate 1</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>July 18/02</b>	<b>ASPECT</b>	south <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHdm/01	<b>UTM:</b>	10.348336.5480972
<b>LOCATION:</b>	Approximately 1 km downstream of Elsie dam		
<b>HISTORY:</b>	Not Disturbed – old growth Douglas-fir		
<b>GENERAL DESCRIPTION:</b>	South facing open rock outcrop with extensive moss coverage and mature Douglas-fir canopy		
<b>PHYSICAL</b>			
Slope position/gradient/shape	Lower slope / variable: 0 – 20% / concave		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Na		
Soil texture/coarse fragments	Loamy sands mineralized, with 50% coarse fragments		
Gleying/water table	Na / surface water in bedrock lined depression		
A horizon	Na		
Humus form/thickness	Moders / mors 5cm		
<b>VEGETATIVE</b>			

<b>Forest Canopy</b>	
Stand Structural Stage	Old Forest
Canopy closure	25%
A Layer (Trees)	The main canopy (A2) was comprised of Douglas-fir (Fd). Subcanopy (A3) species included Douglas-fir, with western redcedar (Cwr) and western hemlock (Hw) in depressions. Regenerating species included shore pine, yellow cedar.
<b>Understory</b>	Shrub dominated
B Layer (Shrubs)	Salal, kinnikinnick, dull Oregon grape, trailing blackberry, willow, red huckleberry, Alaskan blueberry, ocean spray, Saskatoon, Baldhip rose, western trumpet and hairy honeysuckle, common juniper, falsebox, common snowberry, prince's pine. Within canyon species included: Sitka mountain-ash, red alder, pacific ninebark, Douglas maple, copper bush, Sitka alder, black hawthorne, and Nootka rose
C Layer (Herbs)	Grasses, self-heal, rosy pussy toes, woodland strawberry, parsley fern, bracken fern, tiger lily, meadow death camas, broad-leaved starflower, rattlesnake plantain, twinflower, sword fern, spreading dogbane, Vancouver groundcone and candystick. Within canyon species included: common harebell, oxeye daisy, red columbine, nodding onion, goat's beard, maiden-hair fern and vanilla leaf.
D Layer (Bryophytes/Seedlings, fungi)	Awned haircap moss, lanky moss, apple moss, common beard moss, roadside rock moss, freckle pelt, lipstick cladonia.
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Medium to large diameter CWD decay class 4-5 common
<b>Wildlife Trees (Snags)</b>	Medium and large diameter snags common
<b>Wildlife: Direct Contacts</b>	Summer-run steelhead in canyon pools, red-breasted sapsucker, ruffed grouse and brood.
<b>Wildlife: Sign</b>	Black bear scat, deer skeletal remains and pellets, primary excavator holes abundant, mice and pine marten (track plate)



View of old growth Douglas-fir / rock outcrop at track plate 1 (July, 2002)

<b>SITE #</b>	Track plate 2	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	southwest
<b>MAPSHEET:</b>	92F.045		
<b>SITE SERIES</b>	CWHdm/03	<b>UTM:</b>	10.347726.5481724
<b>LOCATION:</b>	Approximately 100 m northeast of Elsie dam		
<b>HISTORY:</b>	disturbed		
<b>GENERAL DESCRIPTION:</b>	Second growth Hw and Fd on moss rock outcrop		
<b>PHYSICAL</b>			
Slope position/gradient/aspect	Lower slope / flat / southwest		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Shallow < 50 cm		
Soil texture/coarse fragments	Sandy loam with high coarse content		
Gleying/water table	Na		
A horizon	Na		
Humus form/thickness	Mors / 8 cm		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Pole sapling		
Canopy closure	35 %		
A Layer (Trees)	Canopy dominated by Douglas-fir with western hemlock and western redcedar in the sub canopy. Regeneration of Western hemlock, shorepine, western redcedar and Douglas-fir		

<b>Understory</b>	
B Layer (Shrubs)	Dominant shrub cover of salal and kinnikinnick, with red huckleberry, twinflower, dull Oregon grape, Saskatoon and trailing blackberry
C Layer (Herbs)	Rosy pussy toes, parsley fern, bracken fern, and Vancouver groundcone
D Layer (Bryophytes/Seedlings, fungi)	Awned haircap moss, lanky moss, common beard moss, roadside rock moss, freckle pelt, lipstick cladonia.
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Few medium diameter decay class 3-4
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	None
<b>Wildlife: Sign</b>	Mice (track plates) and squirrel middens



View towards Elsie Lake from track plate 2 (July, 2002)

<b>SITE #</b>	<b>Track plate 3 (July), Pitfall 3 (June)</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>July 18/02</b>	<b>ASPECT</b>	Southwest <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHdm/07	<b>UTM:</b>	10.347505.5481977
<b>LOCATION:</b>	Northwest side of Elsie Lake, 300 m north of dam site		
<b>HISTORY:</b>	Disturbed, second growth		
<b>GENERAL DESCRIPTION:</b>			
<b><i>PHYSICAL</i></b>			
Slope position/gradient/aspect	Toe of slope / 4% / southwest		

Microtopography	Moderately mounded
<b>Soil</b>	
Soil depth/rooting depth	Unknown
Soil texture/coarse fragments	Unknown
Gleying/water table	Present in depressed areas
A horizon	Unknown
Humus form/thickness	Mors/Moders / 5 cm
<b><i>VEGETATIVE</i></b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Young Forest
Canopy closure	80%
A Layer (Trees)	Douglas-fir dominant with western hemlock and redcedar, some black cottonwood on lake edge. Sub canopy included red alder, western hemlock. Regeneration of Cwr and Hw.
<b>Understory</b>	
B Layer (Shrubs)	Salal, willow on lake edge, red huckleberry, salmonberry and devil's club
C Layer (Herbs)	Lady fern, sword fern, maiden-hair fern, bracken fern, broad-leaved starflower, and vanilla leaf
D Layer (Bryophytes/Seedlings, fungi)	Step moss, lanky moss and Oregon-beaked moss
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Few small diameter self-thinnings decay class 2. Large diameter decay class 5 stumps and logs common.
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	Winter wren, chestnut-backed chickadee and red-breasted sapsucker
<b>Wildlife: Sign</b>	Bear scat and bed in plot, mice (track plate)



View of pitfall 3 (June, 2002)



View of forest cover at track plate 3 (July, 2002)

<b>SITE #</b>	Track plate 4		<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45		<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	Southwest	<b>MAPSHEET:</b> 92K.045
<b>SITE SERIES</b>	CWHdm/01		<b>UTM:</b>	10.347106.5482285
<b>LOCATION:</b>	150 m southeast of Katlum Creek bridge and 50 m below road			
<b>HISTORY:</b>	Disturbed, second growth			
<b>GENERAL DESCRIPTION:</b>	Young pole sapling Fd and Hw forest			
<b>PHYSICAL</b>				
Slope position/gradient	Lower slope approximately 80 m above Elsie Lake. 22% grade			
Microtopography	Moderately mounded			
<b>Soil</b>				
Soil depth/rooting depth	Na			
Soil texture/coarse fragments	Na			
Gleying/water table	No			
A horizon	Na			
Humus form/thickness	Mors/moders 6 cm			
<b>VEGETATIVE</b>				
<b>Forest Canopy</b>				
Stand Structural Stage	Pole sapling / self-thinning stage			
Canopy closure	80%			
A Layer (Trees)	Fd dominant with Hw and Cwr. No sub canopy or regen.			
<b>Understory</b>				
B Layer (Shrubs)	Dull Oregon grape, salal, oval-leaved blueberry, red huckleberry, salmonberry, prince's pine, trailing blackberry, pink wintergreen.			

C Layer (Herbs)	Broad-leaved starflower, vanilla leaf, twinflower, sword fern, woodland strawberry.
D Layer (Bryophytes/Seedlings, fungi)	Step moss, lanky moss, Oregon-beaked moss
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	Old decay class 4-5 stumps and logs common. Small diameter pole sapling self thinnings decay class 1-2 common
<b>Wildlife Trees (Snags)</b>	Small diameter decay class 1 –2 common
<b>Wildlife: Direct Contacts</b>	Ruffed grouse with brood of 7
<b>Wildlife: Sign</b>	Squirrel middens



View of pole / sapling forest cover at track plate 4 (July, 2002)

<b>SITE #</b>	Track plate 5 (July), Pit fall 4 (June)	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	south
<b>SITE SERIES</b>	CWHdm/03	<b>UTM:</b>	10.346664.5481991
<b>LOCATION:</b>	400 m west of Katlum Creek bridge. Plot located 30 m above high water mark.		
<b>HISTORY:</b>	Disturbed second growth		
<b>GENERAL DESCRIPTION:</b>	Spaced young Douglas-fir forest		
<b>PHYSICAL</b>			
Slope position/gradient	Toe of slope / 6% grade		
Microtopography	Slightly mounded		
<b>Soil</b>			

Soil depth/rooting depth	Deep > 50 cm / na
Soil texture/coarse fragments	Sandy loam with low coarse fragment content
Gleying/water table	Na
A horizon	Na
Humus form/thickness	Moders /mors / 3 cm
<b><i>VEGETATIVE</i></b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Young forest
Canopy closure	65%
A Layer (Trees)	Douglas fir dominant in canopy, western redcedar, red alder, shore pine and Douglas-fir in subcanopy. Regen of Cwr, Hw, Pl and Fd.
<b>Understory</b>	
B Layer (Shrubs)	Salal, red huckleberry, trailing blackberry, salmonberry, and devil's club
C Layer (Herbs)	Sword fern, bracken fern, lady fern, vanilla leaf, twinflower, three-leaved foamflower,
D Layer (Bryophytes/Seedlings, fungi)	Low moss coverage <10%. Step moss and Oregon-beaked moss.
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Old stumps and logs, decay class 4-5: few. Small diameter decay class 2-3:rare.
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	Winter wren, American robin, Pacific slope flycatcher, young male black bear, ruffed grouse and brood.
<b>Wildlife: Sign</b>	Mice / shrews (track plate), squirrel middens



View of managed young forest at track plate 5 (July, 2002)

<b>SITE #</b>	Track plate 6	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	southeast
		<b>MAPSHEET:</b>	92F.045
<b>SITE SERIES</b>	CWHdm/06	<b>UTM:</b>	10.346651.5481960
<b>LOCATION:</b>	800 m upstream from Elsie Lake on Ramsay Creek		
<b>HISTORY:</b>	Disturbed second growth		
<b>GENERAL DESCRIPTION:</b>	Spaced young Douglas-fir forest adjacent to small wetland.		
<b>PHYSICAL</b>			
Slope position/gradient	Middle slope / 3 % grade		
Microtopography	Moderately mounded		
<b>Soil</b>			
Soil depth/rooting depth	Na / na		
Soil texture/coarse fragments	Sandy with high coarse fragment content		
Gleying/water table	none		
A horizon	Na		
Humus form/thickness	Mors / 10 cm		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Young forest		
Canopy closure	70%		
A Layer (Trees)	Fd dominant in the main canopy Cwr and Ar in the subcanopy. Regen of Hw and Cwr.		
<b>Understory</b>			
B Layer (Shrubs)	Salal, cascara, salmonberry, trailing blackberry, red huckleberry, Saskatoon, dull Oregon grape, common snowberry, pink wintergreen, prince's pine, Menzie's pipsissewa		
C Layer (Herbs)	Bracken fern, sword fern, fireweed, western trillium, woodland strawberry, twinflower, wall lettuce, false lily-of-the-valley, broad-leaved starflower.		
D Layer (Bryophytes/Seedlings, fungi)	Low moss coverage < 5%, Oregon-beaked moss		
<b>CWD/WILDLIFE TREES/WILDLIFE</b>			
<b>Coarse Woody Debris</b>	Large old CWD decay class 4 - 5 common.		
<b>Wildlife Trees (Snags)</b>	Medium diameter snags rare.		
<b>Wildlife: Direct Contacts</b>	Western terrestrial garter snake, northern alligator lizard, varied thrush, American robin, red-tailed hawk.		
<b>Wildlife: Sign</b>	Black bear, Mice (track plate). Grouse tracks, bear tracks, squirrel middens, possible ermine tracks in wetland.		



View of forest cover at track plate 6 (July, 2002) on Ramsay Creek

<b>SITE #</b>	Track plate 7	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	<b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHmm1/ High bench	<b>UTM:</b>	10.343424.5478704
<b>LOCATION:</b>	100 m west of mouth of unnamed (Italian) creek near the west end of Turnbull hill		
<b>HISTORY:</b>	Disturbed, not replanted		
<b>GENERAL DESCRIPTION:</b>	Primarily deciduous riparian black cottonwood, willow and red alder		
<b>PHYSICAL</b>			
Slope position/gradient	Toe / flat		
Microtopography	Slightly mounded		
<b>Soil</b>			
Soil depth/rooting depth	Na		
Soil texture/coarse fragments	Lake bottom silts and organics over gravely soils		
Gleying/water table	Na		
A horizon	Na		
Humus form/thickness	None		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Pole sapling and shrub herb (maintained by seasonal flooding)		
Canopy closure	40 %		
A Layer (Trees)	Black cottonwood in canopy, subcanopy of red alder. Regen of Cwr.		
<b>Understory</b>			
B Layer (Shrubs)	Willow dominant shrub cover with red osier dogwood, Sitka alder, thimbleberry, Saskatoon, oval-leaved blueberry, baldhip rose, boxwood, salmonberry, trailing		

	blackberry, hardhack, and Pacific ninebark
C Layer (Herbs)	Kellogg's sedge, lesser spearwort and field mint dominant below high water mark. Bracken fern, lady fern and little buttercup dominant above high water mark with fireweed, plantain, woodland strawberry, pearly everlasting, vanilla leaf, false bugbane, red columbine, oxeye daisy, dandelion, self-heal, common paintbrush, tiger lily, goat's beard and wall lettuce
D Layer (Bryophytes/Seedlings, fungi)	No bryophytes. Red alder, western redcedar, willow and black cottonwood seedlings.
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	CWD composed of small and medium diameter decay class 2 driftwood along the high water mark. Above the high water mark CWD rare and composed of small diameter red alder decay class 2-3.
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	Juvenile hairy woodpecker. Violet green tree swallows
<b>Wildlife: Sign</b>	Mice, pine marten (track plate)



View of riparian vegetation at track plate 7

<b>SITE #</b>	<b>Track Plate 8</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>July 18/02</b>	<b>ASPECT</b>	north <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHmm2/08	<b>UTM:</b>	10.341400.5479432
<b>LOCATION:</b>	Approximately 100 m west of unnamed creek on south side of lake, and 1 km east of upper Ash River bridge crossing		
<b>HISTORY:</b>	Disturbed second growth		

<b>GENERAL DESCRIPTION:</b>	Shrub / herb and Young pole sapling
<b>PHYSICAL</b>	
Slope position/gradient	Lower slope / 4%
Microtopography	Slightly mounded
<b>Soil</b>	
Soil depth/rooting depth	Na
Soil texture/coarse fragments	Sandy
Gleying/water table	Na
A horizon	Na
Humus form/thickness	Mors / 4 cm
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Tall Shrub / herb and Young pole sapling
Canopy closure	40%
A Layer (Trees)	Dominant tree species was amabilis fir with western redcedar, yellow cedar and sub-alpine fir, no subcanopy. Regen of Cwr and amabilis fir
<b>Understory</b>	
B Layer (Shrubs)	Oval-leaved and Alaskan blueberry, red and black huckleberry, dull Oregon grape, Sitka mountain ash, Saskatoon, bunchberry, pink wintergreen and kinnikinnick in openings.
C Layer (Herbs)	Poorly developed herb layer of grasses
D Layer (Bryophytes/Seedlings, fungi)	Na
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	Old stumps and logs decay class 4-5 rare.
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	Mice (track plate), common merganser, Douglas squirrel
<b>Wildlife: Sign</b>	Holes in bank near mouth of unnamed creek (possibly mink). Wolf deer and pine marten tracks near mouth of creek.



View of forest cover at track plate 8

<b>SITE #</b>	Track plate 9 (July), Pit fall 3 (August)	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	Southeast
<b>SITE SERIES</b>	CWHmm2/ low bench	<b>UTM:</b>	10.342553.5479483
<b>LOCATION:</b>	Within draw-down zone of Elsie Lake, near campsite at west end of lake on north side		
<b>HISTORY:</b>	Disturbed, seasonally flooded		
<b>GENERAL DESCRIPTION:</b>	Area of riparian vegetation establishment with flat grade and depressed areas		
<b>PHYSICAL</b>			
Slope position/gradient	Depression / flat		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Na		
Soil texture/coarse fragments	Lake bottom silts and organics over sandy gravels		
Gleying/water table	Na		
A horizon	Na		
Humus form/thickness	Na		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Shrub / herb – maintained by seasonal flooding		
Canopy closure	Open		
A Layer (Trees)	None		
<b>Understory</b>			

B Layer (Shrubs)	Willow dominant riparian species below high water mark. Some young red alder present above high water mark
C Layer (Herbs)	Kellogg's sedge, lesser spearwort, and field mint
D Layer (Bryophytes/Seedlings, fungi)	Willow seedlings
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Stumps on lake bottom common, drift wood along the high water mark common
<b>Wildlife Trees (Snags)</b>	Na
<b>Wildlife: Direct Contacts</b>	Wilson's warbler, spotted sandpiper female and 1 young, Steller's jay
<b>Wildlife: Sign</b>	2 deer, 5 wolves, 1 bear, 2 pine marten tracks.



View of riparian vegetation in draw-down zone at track plate 9

<b>SITE #</b>	<b>Track plate 10</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>July 18/02</b>	<b>ASPECT</b>	southwest <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHmm1/03	<b>UTM:</b>	10.343425.5479957
<b>LOCATION:</b>	Approximately 300 m east of track plate 9		
<b>HISTORY:</b>	Disturbed second growth		
<b>GENERAL DESCRIPTION:</b>	Fd and Hw dominated young forest		
<b><i>PHYSICAL</i></b>			
Slope position/gradient	Lower slope / 3%		
Microtopography	Moderately mounded		
<b>Soil</b>			
Soil depth/rooting depth	Na		

Soil texture/coarse fragments	
Gleying/water table	None
A horizon	Na
Humus form/thickness	Mors / moders / 8 cm
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Young forest
Canopy closure	70%
A Layer (Trees)	Dominated by Fd with Hw in the subcanopy. Regen of Hw and Cwr.
<b>Understory</b>	
B Layer (Shrubs)	Low shrub coverage with red huckleberry, salmonberry and salal.
C Layer (Herbs)	Moderate herb layer with sword fern, vanilla leaf, deer fern.
D Layer (Bryophytes/Seedlings, fungi)	Moss coverage moderate with step moss, lanky moss, and Oregon beaked moss. Hw and Cwr seedlings
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	Old large diameter cut stumps and logs decay class 4-5 common. Small diameter pole sapling thinnings decay class 1-2 common
<b>Wildlife Trees (Snags)</b>	Small diameter pole sapling thinnings common
<b>Wildlife: Direct Contacts</b>	Red-breasted sapsucker, northern flicker, red-tailed hawk
<b>Wildlife: Sign</b>	Mice (track plate) Bear scat



View of forest cover at track plate 10

<b>SITE #</b>	Track plate 11	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	July 18/02	<b>ASPECT</b>	South
		<b>MAPSHEET:</b>	92F.045

<b>SITE SERIES</b>	CWHmm1/03	<b>UTM:</b>	10.344055.5480068
<b>LOCATION:</b>	On north side of lake approximately 2 km east of campsite. Located 50 m below 124 road and 40 m from high water mark opposite west end of island		
<b>HISTORY:</b>	Disturbed second growth		
<b>GENERAL DESCRIPTION:</b>	Located on bench above Elsie Lake. Mixed Fd and Ar.		
<b>PHYSICAL</b>			
Slope position/gradient	Toe of slope / 3 %		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Na – site located on old graded railway bed		
Soil texture/coarse fragments	Na		
Gleying/water table	NA		
A horizon	Na		
Humus form/thickness	Mors / moders 6 cm		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Young Forest		
Canopy closure	70%		
A Layer (Trees)	Dominated by Douglas-fir, subcanopy of Fd and Ar. Regen of Hw and Cwr.		
<b>Understory</b>			
B Layer (Shrubs)	Low shrub layer coverage with salal and red huckleberry.		
C Layer (Herbs)	Low to moderate herb layer development with sword fern, bracken fern vanilla leaf, and broad-leaved starflower		
D Layer (Bryophytes/Seedlings, fungi)	Low moss coverage with lanky moss and Oregon-beaked moss. Hw seedlings		
<b>CWD/WILDLIFE TREES/WILDLIFE</b>			
<b>Coarse Woody Debris</b>	Old medium and large diameter cut stumps and logs decay class 4-5 rare. Small and medium diameter decay class 1-3 self-thinnings common		
<b>Wildlife Trees (Snags)</b>	Small and medium diameter red alder rare		
<b>Wildlife: Direct Contacts</b>	Northern alligator lizard, sow and cub black bear, Pacific treefrog, Steller's jay		
<b>Wildlife: Sign</b>	Sapsucker drillings, mice (track plate)		



View of old road / rail grade at track plate 11

<b>SITE #</b>	<b>Track plate 12 (July), Pit fall 1 (August)</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>July 19/02</b>	<b>ASPECT</b>	Northwest
<b>SITE SERIES</b>	CWHdm/low bench	<b>UTM:</b>	10.347687.5479952
<b>LOCATION:</b>	In draw-down zone of bay at southeast end of lake, at south end of saddle dams		
<b>HISTORY:</b>	Disturbed – seasonally flooded		
<b>GENERAL DESCRIPTION:</b>	Riparian area		
<b>PHYSICAL</b>			
Slope position/gradient	Depression / flat		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Deep organics and lake bottom silts over mineral soils		
Soil texture/coarse fragments	Fines		
Gleying/water table	None		
A horizon	Na		
Humus form/thickness	None		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Shrub / herb		
Canopy closure	Na		
A Layer (Trees)	None		
<b>Understory</b>			
B Layer (Shrubs)	Willow (Pacific and Sitka), hardhack, red alder and Scouler's willow above the		

	high water mark. Black cottonwood located nearby.
C Layer (Herbs)	Kellogg's sedge, field mint and lesser spearwort
D Layer (Bryophytes/Seedlings, fungi)	Willow seedlings
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Small to large CWD drift wood and cut stumps abundant
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	Eleven Canada geese, 2 squirrels, pileated woodpecker, Steller's jay
<b>Wildlife: Sign</b>	Mice tracks (track plate), marten tracks, spotted sandpiper, snipe.



View to southeast end of Elsie dam and track plate 12

<b>SITE #</b>	<b>Track plate 13 (July), Pit fall 2 (August)</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>July 19/02</b>	<b>ASPECT</b>	Northwest <b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHdm/ low bench	<b>UTM:</b>	10.347336.5480934
<b>LOCATION:</b>	150 m south of control weir on Elsie Lake		
<b>HISTORY:</b>	Disturbed dam construction site		
<b>GENERAL DESCRIPTION:</b>	Exposed dry site		
<b><i>PHYSICAL</i></b>			
Slope position/gradient/aspect	Toe		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Na		

Soil texture/coarse fragments	Sands and coarse gravels (shoreline)
Gleying/water table	Na
A horizon	Na
Humus form/thickness	Na
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Shrub / herb along high water mark, pole sapling above high water mark
Canopy closure	20%
A Layer (Trees)	Black cottonwood with red alder along shoreline, Douglas-fir and shore pine above lake
<b>Understory</b>	
B Layer (Shrubs)	Willow along shoreline. Red huckleberry, scotch broom, kinnikinnick, salal, trailing blackberry, Himalayan blackberry, Saskatoon, oval-leaved blueberry above high water mark
C Layer (Herbs)	Rosy pussy toes, woodland strawberry, pearly everlasting above high water mark
D Layer (Bryophytes/Seedlings, fungi)	Black cottonwood and willow seedlings
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	Small to large diameter CWD drift wood along shoreline abundant.
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	Violet green tree swallow, red-breasted sapsucker, spotted sandpiper, belted kingfisher
<b>Wildlife: Sign</b>	Mice, pine marten adult and young (track plate),



View of shoreline at track plate 13

<b>SITE #</b>	<b>Pit fall 1 and 2</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>June 5/02</b>	<b>ASPECT</b>	<b>MAPSHEET:</b> 92F.036
<b>SITE SERIES</b>	CWHdm/ medium bench	<b>UTM:</b>	10.355646.5470491
<b>LOCATION:</b>	30 and 100 m upstream on unnamed fish-bearing tributary to lower Ash River		
<b>HISTORY:</b>	Disturbed second growth and floodplain forest		
<b>GENERAL DESCRIPTION:</b>	Red alder dominated bottomland		
<b>PHYSICAL</b>			
Slope position/gradient	Lower slope / 1.5%		
Microtopography	Moderately mounded		
<b>Soil</b>			
Soil depth/rooting depth	Na		
Soil texture/coarse fragments	Stream gravels		
Gleying/water table	Surface waters		
A horizon	Na		
Humus form/thickness	Na		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Young Forest		
Canopy closure	75%		
A Layer (Trees)	Red alder and big-leaf maple dominated canopies, with western hemlock and western redcedar in sub canopy. Regen of Cwr, Hw – some Fd and Ss.		
<b>Understory</b>			
B Layer (Shrubs)	Well developed shrub layer dominated by salmonberry and Pacific ninebark, with devil's club, common snowberry, and thimbleberry		
C Layer (Herbs)	Well developed herb layer with skunk cabbage, lady fern, sword fern.		
D Layer (Bryophytes/Seedlings, fungi)	Na		
<b>CWD/WILDLIFE TREES/WILDLIFE</b>			
<b>Coarse Woody Debris</b>	Small diameter CWD common. Large diameter cut stumps and logs decay class 5 common		
<b>Wildlife Trees (Snags)</b>	Medium diameter red alder snags few, large diameter snags rare.		
<b>Wildlife: Direct Contacts</b>	Two dusky shrews (Track Plate), northern flicker, olive sided flycatcher, Steller's jay, coho fry abundant in watercourse – stranded due to sub-surface flows downstream		
<b>Wildlife: Sign</b>	Raccoon tracks, bear scat, bear trails		



View of pitfall 1 (June, 2002) on tributary to lower Ash River



View of pitfall 2 (June, 2002) on tributary to lower Ash River

<b>SITE #</b>	Pit fall 1		<b>PLOTS</b>	1
<b>PROJ. ID.</b>	02.As.45		<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	Sept. 11/02	<b>ASPECT</b>		<b>MAPSHEET:</b> 92F.036
<b>SITE SERIES</b>	CWHdm/low bench		<b>UTM:</b>	10.355292.5470784

<b>LOCATION:</b>	Confluence of outlet stream from Moran Lake and Ash R.
<b>HISTORY:</b>	Disturbed second growth and floodplain
<b>GENERAL DESCRIPTION:</b>	Deciduous canopy, dense shrub and herb layer
<b>PHYSICAL</b>	
Slope position/gradient/shape	Depression / 1% / concave
Microtopography	Moderately mounded
<b>Soil</b>	
Soil depth/rooting depth	Na
Soil texture/coarse fragments	Stream bed gravels and cobbles
Gleying/water table	Na
A horizon	Na
Humus form/thickness	Na
<b>VEGETATIVE</b>	
<b>Forest Canopy</b>	
Stand Structural Stage	Young forest
Canopy closure	65%
A Layer (Trees)	A2 layer dominated by black cottonwood and red alder, subcanopy of red alder, western redcedar and big-leaf maple
<b>Understory</b>	
B Layer (Shrubs)	Salmonberry dominant with Pacific ninebark, thimbleberry, stink currant, trailing blackberry, red osier dogwood, willow, red elderberry and devil's club
C Layer (Herbs)	Skunk cabbage, wall lettuce, Siberian miner's lettuce, foamflower, little buttercup.
D Layer (Bryophytes/Seedlings, fungi)	None
<b>CWD/WILDLIFE TREES/WILDLIFE</b>	
<b>Coarse Woody Debris</b>	Small drift wood common, medium diameter instream woody debris common
<b>Wildlife Trees (Snags)</b>	Few medium diameter red alder snags
<b>Wildlife: Direct Contacts</b>	Summer run steelhead, coho in Ash R., red-breasted sapsucker, unidentified flycatcher, garter snake
<b>Wildlife: Sign</b>	Bear scat and trails, otter scat, racoon tracks



View of pitfall 1 (Sept., 2002) at confluence of the outlet stream from Moran Lake and Ash River

<b>SITE #</b>	<b>Pit fall 2</b>	<b>PLOTS</b>	1
<b>PROJ. ID.</b>	<b>02.As.45</b>	<b>SURVEYOR:</b>	Steve Toth
<b>DATE:</b>	<b>Sept. 11/02</b>	<b>ASPECT</b>	<b>MAPSHEET:</b> 92F.045
<b>SITE SERIES</b>	CWHdm/ high bench	<b>UTM:</b>	10.349031.5474880
<b>LOCATION:</b>	150 m downstream of the Ash Pit bridge on the Ash R.		
<b>HISTORY:</b>	Disturbed second growth and floodplain / abandoned gravel pit		
<b>GENERAL DESCRIPTION:</b>	Pit fall constructed commencing at water's edge, running upslope through pole sapling riparian forest		
<b>PHYSICAL</b>			
Slope position/gradient/shape	Depression / 3% / concave		
Microtopography	Micro		
<b>Soil</b>			
Soil depth/rooting depth	Na		
Soil texture/coarse fragments	River silts and sands over gravel and cobble		
Gleying/water table	None / na		
A horizon	None		
Humus form/thickness	None		
<b>VEGETATIVE</b>			
<b>Forest Canopy</b>			
Stand Structural Stage	Pole Sapling		
Canopy closure	70%		
A Layer (Trees)	Canopy dominated by Black cottonwood and Douglas-fir. Western redcedar, red alder, Douglas-fir and shore pine in sub canopy. Western hemlock and Cwr regen.		

<b>Understory</b>	Shrub dominated
B Layer (Shrubs)	Moderate coverage of salmonberry, Pacific ninebark, trailing blackberry
C Layer (Herbs)	Low coverage of sword fern, skunk cabbage, Siberian miner's lettuce and foamflower.
D Layer (Bryophytes/Seedlings, fungi)	Cwr seedlings
<b><i>CWD/WILDLIFE TREES/WILDLIFE</i></b>	
<b>Coarse Woody Debris</b>	Small and medium diameter driftwood common
<b>Wildlife Trees (Snags)</b>	None
<b>Wildlife: Direct Contacts</b>	American robin, rufous hummingbird, red crossbills, Steller's Jay
<b>Wildlife: Sign</b>	None
<b>No Site Photo</b>	

# *Appendix B*

## *Plant Species Identified within the Study Area*

<b>Species Name</b>	<b>Scientific Name</b>
<b>Trees</b>	
Amabilis fir	<i>Abies amabilis</i>
Subalpine fir	<i>Abies lasiocarpa</i>
Douglas maple	<i>Acer glabrum</i>
Big leaf maple	<i>Acer macrophyllum</i>
Red alder	<i>Alnus rubra</i>
Yellow cedar	<i>Chamaecyparis nootkatensis</i>
Western flowering dogwood	<i>Cornus nutalli</i>
Sitka spruce	<i>Picea sitchensis</i>
Shore pine	<i>Pinus contorta</i>
Western white pine	<i>Pinus monticola</i>
Black cottonwood	<i>Populus trichocarpa</i>
Bitter cherry	<i>Prunus emarginata</i>
Douglas-fir	<i>Pseudotsuga menziesii</i>
Western yew	<i>Taxus brevifolia</i>
Coastal western redcedar	<i>Thuja plicata</i>
Western hemlock	<i>Tsuga heterophylla</i>
<b>Shrubs</b>	
Sitka alder	<i>Alnus crispa</i>
Saskatoon	<i>Amelanchier alnifolia</i>
Kinnikinnick	<i>Arctostaphylos uva-ursi</i>
Copperbush	<i>Cladothamnus pyroliflorus</i>
Red-osier dogwood	<i>Cornus stolonifera</i>
Black hawthorne	<i>Crataegus douglasii</i>
Scotch broom	<i>Cytisus scoparius</i>
Salal	<i>Gaultheria shallon</i>
Oceanspray	<i>Holodiscus discolor</i>
Common juniper	<i>Juniperus communis</i>
Labrador tea	<i>Ledum groenlandicum</i>
Twinflower	<i>Linnaea borealis</i>
Western trumpet honeysuckle	<i>Lonicera ciliosa</i>
Hairy honeysuckle	<i>Lonicera hipidula</i>
Black twinberry	<i>Lonicera involucrata</i>
Dull Oregon grape	<i>Mahonia nervosa</i>
Pacific crab-apple	<i>Malus fusca</i>
False azalea	<i>Menziesia ferruginea</i>
Sweet gale	<i>Myrica gale</i>
Devil's club	<i>Oplopanax horridus</i>
Pacific ninebark	<i>Physocarpus capitatus</i>
Cascara	<i>Rhamnus purshiana</i>
Stink currant	<i>Ribes bracteosum</i>
Wild gooseberry	<i>Ribes divaricatum</i>
Black gooseberry	<i>Ribes lacustre</i>
Trailing black currant	<i>Ribes laxiflorum</i>
Baldhip rose	<i>Rosa gymnocarpa</i>
Nootka rose	<i>Rosa nutkana</i>

<b>Species Name</b>	<b>Scientific Name</b>
Himalayan blackberry	<i>Rubus discolor</i>
Blackcap	<i>Rubus leucodermis</i>
Thimbleberry	<i>Rubus parviflorus</i>
Five-leaved bramble	<i>Rubus pedatus</i>
Salmonberry	<i>Rubus spectabilis</i>
Trailing blackberry	<i>Rubus ursinus</i>
Pacific willow	<i>Salix lucida</i>
Scouler's willow	<i>Salix scouleriana</i>
Sitka willow	<i>Salix sitchensis</i>
Red elderberry	<i>Sambucus racemosa</i>
Sitka mountain-ash	<i>Sorbus sitchensis</i>
Hardhack	<i>Spiraea douglasii</i>
Common snowberry	<i>Symphoricarpos albus</i>
Alaskan blueberry	<i>Vaccinium alaskense</i>
Dwarf blueberry	<i>Vaccinium caespitosum</i>
Black huckleberry	<i>Vaccinium membranaceum</i>
Oval-leaved huckleberry	<i>Vaccinium ovalifolium</i>
Red huckleberry	<i>Vaccinium parvifolium</i>
Evergreen huckleberry	<i>Vaccinium ovatum</i>
High-bush cranberry	<i>Viburnum edule</i>
<b>Herbs</b>	
Yarrow	<i>Achillea millefolium</i>
Vanilla leaf	<i>Achlys triphylla</i>
Maidenhair fern	<i>Adiantum pedatum</i>
Nodding onion	<i>Allium cernuum</i>
Candystick	<i>Allotropa virgata</i>
Pearly everlasting	<i>Anaphalis margaritacea</i>
Cut-leaf anemone	<i>Anemone multifida</i>
Rosy pussytoes	<i>Antennaria microphylla</i>
Spreading dogbane	<i>Apocynum androsaemifolium</i>
Red columbine	<i>Aquilegia formosa</i>
Goat's beard	<i>Aruncus dioicus</i>
Maidenhair spleenwort	<i>Asplenium trichomanes</i>
Lady fern	<i>Athyrium felix-femina</i>
Sword fern	<i>Athyrium felix-femina</i>
Deer fern	<i>Blechnum spicant</i>
Vancouver groundcone	<i>Boschniakia hookeri</i>
Leathery grape fern	<i>Botrychium multifidum</i>
Common harebell	<i>Campanula rotundifolia</i>
Kellogg's sedge	<i>Carex kelloggii</i>
Slough sedge	<i>Carex obnupta</i>
Common red paintbrush	<i>Castilleja miniata</i>
Menzie's pipsissewa	<i>Chimaphila menziesii</i>
Prince's pine	<i>Chimaphila umbellate</i>
Bunchberry	<i>Cornus canadensis</i>
Parsley fern	<i>Cryptogramma crispa</i>
Pacific bleeding heart	<i>Dicentra formosa</i>

<b>Species Name</b>	<b>Scientific Name</b>
Foxglove	<i>Digitalis purpurea</i>
Fireweed	<i>Epilobium angustifolia</i>
Small-flowered willowherb	<i>Epilobium minutum</i>
Common horsetail	<i>Equisetum arvense</i>
Western fescue	<i>Festuca occidentalis</i>
Woodland strawberry	<i>Fragaria vesca</i>
King gentian	<i>Gentiana sceptrum</i>
Rattlesnake plantain	<i>Goodyera oblonifolia</i>
Cow parsnip	<i>Heracleum lanatum</i>
White-flowered hawkweed	<i>Hieracium albiflorum</i>
Western St. John's wort	<i>Hypericum formosum</i>
Pinesap	<i>Hypopitys monotropa</i>
Wall lettuce	<i>Lactuca muralis</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Tiger lily	<i>Lilium columbianum</i>
Skunk cabbage	<i>Lysichiton americanum</i>
False-lily-of-the-valley	<i>Maianthemum dilatatum</i>
Field mint	<i>Mentha arvensis</i>
Woodland penstemon	<i>Nothochelone nemorosa</i>
Pacific water parsley	<i>Oenanthe sarmentosa</i>
Mountain sweet-cicely	<i>Osmorhiza chilensis</i>
Sickletop lousewort	<i>Pedicularis racemosa</i>
Ribwort	<i>Plantago lanceolata</i>
Licorice fern	<i>Polypodium glycyrrhiza</i>
Self-heal	<i>Prunella vulgaris</i>
Bracken fern	<i>Pteridium aquilinum</i>
Pink wintergreen	<i>Pyrola asarifolia</i>
Lesser spearwort	<i>Ranunculus flammula</i>
Creeping buttercup	<i>Ranunculus repens</i>
Little buttercup	<i>Ranunculus uncinatus</i>
False Solomon's-seal	<i>Smilacina racemosa</i>
Star-flowered false Solomon's seal	<i>Smilacina stellata</i>
Foamflower	<i>Tiarella trifoliata</i>
False bugbane	<i>Trautvetteria caroliniensis</i>
Broad-leaved starflower	<i>Trientalis latifolia</i>
Western trillium	<i>Trillium ovatum</i>
Stinging nettle	<i>Urtica dioica</i>
Indian hellebore	<i>Veratrum viride</i>
Early blue violet	<i>Viola adunca</i>
Stream violet	<i>Violla glabella</i>
Meadow death camas	<i>Zygadenus venenosus</i>
<b>Bryophytes</b>	
Cedar-shake liverwort	<i>Plagiochila porelloides</i>
Lung liverwort	<i>Marchantia polymorpha</i>
Shaggy sphagnum	<i>Sphagnum squarrosum</i>
Black rock moss	<i>Andreaea rupestris</i>
Common haircap moss	<i>Polytrichum commune</i>

<b>Species Name</b>	<b>Scientific Name</b>
Crane's-bill moss	<i>Atrichum selwynii</i>
Fan moss	<i>Rhizomnium glabrescens</i>
Apple moss	<i>Batramia pomiformis</i>
Awned haircap moss	<i>Polytrichum piliferum</i>
Yellow moss	<i>Homalothecium fulgescens</i>
Cat-tail moss	<i>Isothecium myosuroides</i>
Oregon beaked moss	<i>Kindbergia oregana</i>
Lanky moss	<i>Rhytiadelphus loreus</i>
Menzies' neckera	<i>Metaneckera menziesii</i>
Douglas' neckera	<i>Neckera douglasii</i>
Step moss	<i>Hylocomium splendens</i>
Lungwort	<i>Lobaria pulmonaria</i>
Freckle pelt	<i>Peltigera britannica</i>
Wavy-leaved cotton moss	<i>Plagiothecium undulatum</i>
Tree-ruffle liverwort	<i>Porella navicularis</i>
Juniper haircap moss	<i>Polytrichum juniperinum</i>