

Appendix A –Transportation System Analysis

**Santiam Pass Summer Motorized Recreation Project
Transportation System Analysis
Alternative 2**

Kenny gabriel

August 8th 2007

Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2600822	Road	0.09	2	1	No	Administrative use only	0.09
2600823	Road	0.40				Administrative use only	0.40
2600830	Road	1.70	2	2	Yes	Open to mixed use	1.70
2600831	Road	0.23	2	2	No	Administrative use only	0.23
2600832	Road	0.20	2	1	No	Administrative use only	0.20
2600833	Road	0.64	2	1	No	Open to mixed use	0.64
2600851	Road	0.27	2	1	No	CV	0.17
2600851	Road		2	1	No	Administrative use only	0.10
2600852	Road	0.23	2	1	No	Decommission	0.23
2600890	Road	3.14	2	2	Yes	Open to mixed use	3.14
2600892	Road	0.64	2	2	No	Open to mixed use	0.64
2600894	Road	0.12			No	Administrative use only	0.12
2676000	Road	2.61	2	2	Yes	Open to mixed use	2.61
2676723	Road	2.48	2	2	No	Open to mixed use	2.48
2676724	Road	0.62	2	2	No	Open to mixed use	0.62
2676725	Road	0.61	2	2	No	Open to mixed use	0.61
2676726	Road	0.17	2	2	No	Administrative use only	0.17
2676866	Road	1.84	2	2	Yes	Open to mixed use	1.84
2690000	Road	3.92	5	5	Yes	Highway legal	3.92
2690799	Road	0.05			No	Administrative use only	0.05
2690800	Road	0.19	2	1	No	Administrative use only	0.19
2690801	Road	0.80	2	2	Yes	Highway legal	0.25
2690801	Road		2	2	No	Decommission	0.55
2690802	Road	0.16	2	1	No	Decommission	0.16
2690803	Road	0.62	2	1	No	Administrative use only	0.62
2690805	Road	0.51	5	5	Yes	Highway legal	0.51
2690806	Road	1.69	2	2	Yes	Administrative use only	1.69
2690808	Road	0.73	2	2	Yes	Administrative use only	0.73
2690809	Road	0.14	2	1	No	Administrative use only	0.14
2690810	Road	4.59	2	2	Yes	Open to mixed use	4.59
2690811	Road	1.18	3	3	Yes	Open to mixed use	0.40
2690811	Road		2	2	Yes	Open to mixed use	0.78
2690813	Road	0.10	2	1	No	Decommission	0.10
2690814	Road	2.63	2	1	No	Open to mixed use	1.33
2690814	Road		2	1	No	Administrative use only	1.30
2690815	Road	0.84	5	5	Yes	Highway legal	0.84
2690816	Road	0.6	2	1	No	Administrative use only	0.60
2690818	Road	2.21	2	2	No	Open to mixed use	1.58
2690818	Road		2	2	No	Decommission	0.46
2690818	Road		2	2	No	CV	0.17
2690819	Road	0.25	2	1	No	Open to mixed use	0.25
2690820	Road	0.97	2	2	No	Administrative use only	0.75
2690820	Road		2	2	No	CV	0.22

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Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2690821	Road	0.31	2	1	No	CV	0.17
2690821	Road		2	1	No	Decommission	0.14
2690822	Road	0.15	2	1	No	CV	0.15
2690823	Road	0.18	4	4	No	Highway legal	0.18
2690824	Road	0.08	2	1	No	Highway legal	0.08
2690825	Road	0.07			No	Highway legal	0.07
2690826	Road	0.95	2	1	No	Open to mixed use	0.95
2690827	Road	0.11	2	1	No	Administrative use only	0.11
2690828	Road	0.15	2	1	No	Administrative use only	0.15
2690829	Road	0.21	2	1	No	Administrative use only	0.21
2690830	Road	0.25	2	1	No	CV	0.25
2690831	Road	0.21	2	1	No	CV	0.21
2690832	Road	0.26	2	1	No	Open to mixed use	0.26
2690833	Road	0.07	2	1	No	Administrative use only	0.07
2690834	Road	0.02			No	Highway legal	0.02
2690842	Road	0.25	2	1	No	Decommission	0.07
2690842	Road		2	1	No	CV	0.18
2690843	Road	0.55	2	1	No	CV	0.55
2690844	Road	0.10	2	1	No	Decommission	0.10
2690845	Road	1.15	2	1	No	Open to mixed use	1.15
2690846	Road	0.15	2	1	No	Decommission	0.08
2690846	Road		2	1	No	CV	0.07
2690847	Road	0.14	2	1	No	CV	0.14
2690848	Road	0.47	2	2	No	Decommission	0.20
2690848	Road		2	2	No	CV	0.27
2690849	Road	0.33	2	1	No	CV	0.15
2690849	Road		2	1	No	Decommission	0.18
2690852	Road	0.15	1	1	No	Decommission	0.15
2690853	Road	0.07	2	1	No	Decommission	0.07
2690854	Road	0.10	2	1	No	Administrative use only	0.10
2690855	Road	0.24	1	1	No	Decommission	0.24
2690856	Road	0.11	2	1	No	CV	0.11
2690857	Road	0.29	2	1	No	CV	0.29
2690858	Road	0.12	2	1	No	CV	0.12
2690860	Road	3.02	2	2	No	Open to mixed use	3.02
2690861	Road	0.27	2	1	No	CV	0.27
2690862	Road	0.45	2	2	No	Open to mixed use	0.45
2690863	Road	0.66	2	2	No	CV	0.66
2690864	Road	0.48	2	1	No	CV	0.48
2690865	Road	0.14	2	1	No	Administrative use only	0.14
2690866	Road	0.10	2	1	No	CV	0.10
2690867	Road	0.08	2	1	No	Decommission	0.08
2690868	Road	0.39	2	1	No	Decommission	0.16
2690868	Road		2	1	No	CV	0.23
2690869	Road	0.69	2	1	No	Open to mixed use	0.69
2690870	Road	0.08	2	1	No	Decommission	0.08
2690875	Road	0.69	2	2	No	Open to mixed use	0.69
2690880	Road	1.43	2	2	No	Open to mixed use	1.43

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Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2690881	Road	0.53	2	1	No	CV	0.53
2690882	Road	0.19	2	1	No	Decommission	0.19
2690883	Road	0.27	2	2	No	CV	0.27
2690887	Road	0.26	2	1	No	Decommission	0.26
2690890	Road	3.53	2	2	No	Open to mixed use	2.64
2690890	Road		1	1	No	Decommission	0.89
2690891	Road	0.32	2	1	No	Open to mixed use	0.18
2690891	Road		2	1	No	Decommission	0.14
2690892	Road	0.22	2	2	Yes	Open to mixed use	0.22
2690893	Road	0.27	2	2	No	Open to mixed use	0.27
2690894	Road	0.31	2	2	No	Decommission	0.31
2690895	Road	0.30	2	2	No	CV	0.30
2690896	Road	0.28	2	2	No	CV	0.28
2690897	Road	0.09	2	1	No	Decommission	0.09
2690902	Road	0.73	3	3	Yes	Administrative use only	0.73
2690904	Road	0.23	2	2	Yes	Open to mixed use	0.23
2690906	Road	0.05			No	Administrative use only	0.05
2690907	Road	0.27	2	2	No	Decommission	0.27
2690910	Road	1.20	2	2	No	Administrative use only	0.23
2690910	Road		2	2	No	Open to mixed use	0.70
2690910	Road		2	2	No	Highway legal	0.27
2690911	Road	0.22	2	1	No	CV	0.22
2690915	Road	0.20	2	2	No	Decommission	0.20
2690916	Road	0.32	2	1	No	Decommission	0.32
2690920	Road	1.47	2	1	No	Open to mixed use	0.97
2690920	Road		2	1	No	CV	0.36
2690920	Road		2	1	No	Decommission	0.14
2690928	Road	0.21	2	1	No	CV	0.21
2690940	Road	0.61	2	2	No	Open to mixed use	0.61
2690942	Road	0.15	2	1	No	Decommission	0.15
2690950	Road	0.54	2	2	No	Open to mixed use	0.08
2690950	Road		2	2	No	Decommission	0.46
2690951	Road	0.34	2	1	No	Decommission	0.34
2690953	Road	0.23	2	2	No	Decommission	0.23
2690960	Road	1.01	3	3	Yes	Highway legal	1.01
Road Totals							
Designation			Miles				
Highway Legal			7.15				
Mixed Use			37.75				
Administrative use			9.17				
CV = Convert to motorized trail			7.13				
Decommission			7.04				
Total miles			68.24				

**Santiam Pass Summer Motorized Recreation Project
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Alternative 3**

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August 8th 2007

Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2600822	Road	0.09	2	1	No	Administrative use only	0.09
2600823	Road	0.40				Administrative use only	0.40
2600830	Road	1.70	2	2	Yes	Open to mixed use	1.70
2600831	Road	0.23	2	2	No	Administrative use only	0.23
2600832	Road	0.20	2	1	No	Administrative use only	0.20
2600833	Road	0.64	2	1	No	Open to mixed use	0.64
2600851	Road	0.27	2	1	No	CV	0.17
2600851	Road		2	1	No	Decommission	0.10
2600852	Road	0.23	2	1	No	Decommission	0.23
2600890	Road	3.14	2	2	Yes	Open to mixed use	2.69
2600890	Road		2	2	Yes	Open to Class I & III	0.28
2600890	Road		2	2	Yes	Administrative use only	0.17
2600892	Road	0.64	2	2	No	Open to mixed use	0.64
2600894	Road	0.12			No	Administrative use only	0.12
2676000	Road	2.61	2	2	Yes	Open to mixed use	2.61
2676723	Road	2.48	2	2	No	Open to mixed use	2.48
2676724	Road	0.62	2	2	No	Open to mixed use	0.62
2676725	Road	0.61	2	2	No	Open to mixed use	0.61
2676726	Road	0.17	2	2	No	Administrative use only	0.17
2676866	Road	1.84	2	2	Yes	Administrative use only	1.84
2690000	Road	3.92	5	5	Yes	Highway legal	3.92
2690799	Road	0.05			No	Administrative use only	0.05
2690800	Road	0.19	2	1	No	Administrative use only	0.19
2690801	Road	0.80	2	2	Yes	Highway legal	0.25
2690801	Road		2	2	No	Decommission	0.55
2690802	Road	0.16	2	1	No	Decommission	0.16
2690803	Road	0.62	2	1	No	Administrative use only	0.62
2690805	Road	0.51	5	5	Yes	Highway legal	0.51
2690806	Road	1.69	2	2	Yes	Administrative use only	1.69
2690808	Road	0.73	2	2	Yes	Administrative use only	0.73
2690809	Road	0.14	2	1	No	Administrative use only	0.14
2690810	Road	4.59	2	2	Yes	Open to mixed use	2.58
2690810	Road		2	2	Yes	Administrative use only	2.01
2690811	Road	1.18	3	3	Yes	Open to mixed use	0.40
2690811	Road		2	2	Yes	Open to mixed use	0.78
2690813	Road	0.10	2	1	No	Decommission	0.10
2690814	Road	2.63	2	1	No	Open to mixed use	1.33
2690814	Road		2	1	No	Administrative use only	1.30
2690815	Road	0.84	5	5	Yes	Highway legal	0.84
2690816	Road	0.60	2	1	No	Administrative use only	0.60
2690818	Road	2.21	2	2	No	Open to mixed use	1.58
2690818	Road		2	2	No	CV	0.17
2690818	Road		2	2	No	Decommission	0.46

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Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2690819	Road	0.25	2	1	No	Open to mixed use	0.25
2690820	Road	0.97	2	2	No	Administrative use only	0.10
2690820	Road		2	2	No	CV	0.87
2690821	Road	0.31	2	1	No	CV	0.17
2690821	Road		2	1	No	Decommission	0.14
2690822	Road	0.15	2	1	No	CV	0.15
2690823	Road	0.18	4	4	No	Highway legal	0.18
2690824	Road	0.08	2	1	No	Highway legal	0.08
2690825	Road	0.07			No	Highway legal	0.07
2690826	Road	0.95	2	1	No	Open to mixed use	0.95
2690827	Road	0.11	2	1	No	CV	0.11
2690828	Road	0.15	2	1	No	Administrative use only	0.15
2690829	Road	0.21	2	1	No	Administrative use only	0.21
2690830	Road	0.25	2	1	No	CV	0.25
2690831	Road	0.21	2	1	No	CV	0.21
2690832	Road	0.26	2	1	No	Open to mixed use	0.26
2690833	Road	0.07	2	1	No	Administrative use only	0.07
2690834	Road	0.02			No	Highway legal	0.02
2690842	Road	0.25	2	1	No	Decommission	0.07
2690842	Road		2	1	No	CV	0.18
2690843	Road	0.55	2	1	No	CV	0.55
2690844	Road	0.10	2	1	No	Decommission	0.10
2690845	Road	1.15	2	1	No	Open to mixed use	1.15
2690846	Road	0.15	2	1	No	Decommission	0.08
2690846	Road		2	1	No	CV	0.07
2690847	Road	0.14	2	1	No	CV	0.14
2690848	Road	0.47	2	2	No	CV	0.47
2690849	Road	0.33	2	1	No	CV	0.15
2690849	Road		2	1	No	Decommission	0.18
2690852	Road	0.15	1	1	No	Decommission	0.15
2690853	Road	0.07	2	1	No	Decommission	0.07
2690854	Road	0.10	2	1	No	Decommission	0.10
2690855	Road	0.24	1	1	No	Decommission	0.24
2690856	Road	0.11	2	1	No	CV	0.11
2690857	Road	0.29	2	1	No	CV	0.29
2690858	Road	0.12	2	1	No	CV	0.12
2690860	Road	3.02	2	2	No	Open to mixed use	3.02
2690861	Road	0.27	2	1	No	CV	0.27
2690862	Road	0.45	2	2	No	Open to mixed use	0.45
2690863	Road	0.66	2	2	No	CV	0.66
2690864	Road	0.48	2	1	No	CV	0.48
2690865	Road	0.14	2	1	No	Administrative use only	0.14
2690866	Road	0.10	2	1	No	CV	0.10
2690867	Road	0.08	2	1	No	Decommission	0.08
2690868	Road	0.39	2	1	No	Decommission	0.16
2690868	Road		2	1	No	CV	0.23
2690869	Road	0.69	2	1	No	Decommission	0.28

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Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2690869	Road		2	1	No	CV	0.41
2690870	Road	0.08	2	1	No	Decommission	0.08
2690875	Road	0.69	2	2	No	Open to mixed use	0.69
2690880	Road	1.43	2	2	No	Open to mixed use	1.43
2690881	Road	0.53	2	1	No	CV	0.53
2690882	Road	0.19	2	1	No	Decommission	0.19
2690883	Road	0.27	2	2	No	CV	0.27
2690887	Road	0.26	2	1	No	Decommission	0.26
2690890	Road	3.53	2	2	No	Open to mixed use	2.64
2690890	Road		1	1	No	Decommission	0.89
2690891	Road	0.32	2	1	No	Open to mixed use	0.18
2690891	Road		2	1	No	Decommission	0.14
2690892	Road	0.22	2	2	Yes	Open to mixed use	0.22
2690893	Road	0.27	2	2	No	Open to mixed use	0.27
2690894	Road	0.31	2	2	No	Decommission	0.31
2690895	Road	0.30	2	2	No	CV	0.30
2690896	Road	0.28	2	2	No	CV	0.28
2690897	Road	0.09	2	1	No	Decommission	0.09
2690902	Road	0.73	3	3	Yes	Highway legal	0.73
2690904	Road	0.23	2	2	Yes	CV	0.23
2690906	Road	0.05			No	Administrative use only	0.05
2690907	Road	0.27	2	2	No	Decommission	0.27
2690910	Road	1.20	2	2	No	Administrative use only	0.20
2690910	Road		2	2	No	CV	1.00
2690911	Road	0.22	2	1	No	CV	0.22
2690915	Road	0.20	2	2	No	Decommission	0.20
2690916	Road	0.32	2	1	No	Decommission	0.32
2690920	Road	1.47	2	1	No	CV	1.37
2690920	Road		2	1	No	Decommission	0.10
2690928	Road	0.21	2	1	No	CV	0.21
2690940	Road	0.61	2	2	No	CV	0.61
2690942	Road	0.15	2	1	No	Decommission	0.15
2690950	Road	0.54	2	2	No	CV	0.08
2690950	Road		2	2	No	Decommission	0.46
2690951	Road	0.34	2	1	No	Decommission	0.34
2690953	Road	0.23	2	2	No	Decommission	0.23
2690960	Road	1.01	3	3	Yes	Highway legal	1.01

Road Totals

Designation	Miles
Highway Legal	7.61
Mixed Use	30.17
Administrative use	11.47
Open to Class I & III	0.28
CV = Convert to motorized trail	11.43
Decommission	7.28
Total miles	68.24

**Santiam Pass Summer Motorized Recreation Project
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Alternative 4**

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August 8th 2007

Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2600822	Road	0.09	2	1	No	Administrative use only	0.09
2600823	Road	0.40				Administrative use only	0.40
2600830	Road	1.70	2	2	Yes	Open to mixed use	1.70
2600831	Road	0.23	2	2	No	Administrative use only	0.23
2600832	Road	0.20	2	1	No	Administrative use only	0.20
2600833	Road	0.64	2	1	No	Open to mixed use	0.64
2600851	Road	0.27	2	1	No	CV	0.17
2600851	Road		2	1	No	Administrative use only	0.10
2600852	Road	0.23	2	1	No	Administrative use only	0.23
2600890	Road	3.14	2	2	Yes	Open to mixed use	2.69
2600890	Road		2	2	Yes	Open to Class I & III	0.28
2600890	Road		2	2	Yes	Administrative use only	0.17
2600892	Road	0.64	2	2	No	Open to mixed use	0.64
2600894	Road	0.12			No	Administrative use only	0.12
2676000	Road	2.61	2	2	Yes	Open to mixed use	2.61
2676723	Road	2.48	2	2	No	Open to mixed use	2.48
2676724	Road	0.62	2	2	No	Open to mixed use	0.62
2676725	Road	0.61	2	2	No	Open to mixed use	0.61
2676726	Road	0.17	2	2	No	Administrative use only	0.17
2676866	Road	1.84	2	2	Yes	Administrative use only	1.84
2690000	Road	3.92	5	5	Yes	Highway legal	3.92
2690799	Road	0.05			No	Administrative use only	0.05
2690800	Road	0.19	2	1	No	Administrative use only	0.19
2690801	Road	0.80	2	2	Yes	Highway legal	0.25
2690801	Road		2	2	No	Decommission	0.55
2690802	Road	0.16	2	1	No	Decommission	0.16
2690803	Road	0.62	2	1	No	Administrative use only	0.62
2690805	Road	0.51	5	5	Yes	Highway legal	0.51
2690806	Road	1.69	2	2	Yes	Administrative use only	1.69
2690808	Road	0.73	2	2	Yes	Administrative use only	0.73
2690809	Road	0.14	2	1	No	Administrative use only	0.14
2690810	Road	4.59	2	2	Yes	Highway legal	4.59
2690811	Road	1.18	3	3	Yes	Highway legal	0.40
2690811	Road		2	2	Yes	Highway legal	0.78
2690813	Road	0.10	2	1	No	Decommission	0.10
2690814	Road	2.63	2	1	No	Open to mixed use	1.33
2690814	Road		2	1	No	Administrative use only	1.30
2690815	Road	0.84	5	5	Yes	Highway legal	0.84
2690816	Road	0.6	2	1	No	Administrative use only	0.60
2690818	Road	2.21	2	2	No	Open to mixed use	1.58
2690818	Road		2	2	No	CV	0.17
2690818	Road		2	2	No	Decommission	0.46
2690819	Road	0.25	2	1	No	Open to mixed use	0.25

**Santiam Pass Summer Motorized Recreation Project
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Alternative 4**

Kenny gabriel

August 8th 2007

Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2690820	Road	0.97	2	2	No	CV	0.97
2690821	Road	0.31	2	1	No	CV	0.17
2690821	Road		2	1	No	Decommission	0.14
2690822	Road	0.15	2	1	No	CV	0.15
2690823	Road	0.18	4	4	No	Highway legal	0.18
2690824	Road	0.08	2	1	No	Highway legal	0.08
2690825	Road	0.07			No	Highway legal	0.07
2690826	Road	0.95	2	1	No	Open to mixed use	0.95
2690827	Road	0.11	2	1	No	CV	0.11
2690828	Road	0.15	2	1	No	Administrative use only	0.15
2690829	Road	0.21	2	1	No	Administrative use only	0.21
2690830	Road	0.25	2	1	No	CV	0.25
2690831	Road	0.21	2	1	No	CV	0.21
2690832	Road	0.26	2	1	No	Open to mixed use	0.26
2690833	Road	0.07	2	1	No	Administrative use only	0.07
2690834	Road	0.02			No	Highway legal	0.02
2690842	Road	0.25	2	1	No	Decommission	0.07
2690842	Road		2	1	No	CV	0.18
2690843	Road	0.55	2	1	No	CV	0.55
2690844	Road	0.10	2	1	No	Decommission	0.10
2690845	Road	1.15	2	1	No	Open to mixed use	1.15
2690846	Road	0.15	2	1	No	Decommission	0.08
2690846	Road		2	1	No	CV	0.07
2690847	Road	0.14	2	1	No	CV	0.14
2690848	Road	0.47	2	2	No	CV	0.47
2690849	Road	0.33	2	1	No	CV	0.15
2690849	Road		2	1	No	Decommission	0.18
2690852	Road	0.15	1	1	No	Decommission	0.15
2690853	Road	0.07	2	1	No	Decommission	0.07
2690854	Road	0.10	2	1	No	Decommission	0.10
2690855	Road	0.24	1	1	No	Decommission	0.24
2690856	Road	0.11	2	1	No	CV	0.11
2690857	Road	0.29	2	1	No	CV	0.29
2690858	Road	0.12	2	1	No	CV	0.12
2690860	Road	3.02	2	2	No	Open to mixed use	2.35
2690860	Road		2	2	No	CV	0.16
2690860	Road		2	2	No	Decommission	0.51
2690861	Road	0.27	2	1	No	CV	0.27
2690862	Road	0.45	2	2	No	CV	0.27
2690862	Road		2	2	No	Decommission	0.18
2690863	Road	0.66	2	2	No	CV	0.66
2690864	Road	0.48	2	1	No	CV	0.48
2690865	Road	0.14	2	1	No	Administrative use only	0.14
2690866	Road	0.10	2	1	No	CV	0.10
2690867	Road	0.08	2	1	No	Decommission	0.08
2690868	Road	0.39	2	1	No	Decommission	0.16
2690868	Road		2	1	No	CV	0.23
2690869	Road	0.69	2	1	No	CV	0.42

**Santiam Pass Summer Motorized Recreation Project
Transportation System Analysis
Alternative 4**

Kenny gabriel

August 8th 2007

Route Number	Route Type	Route Length	Oper Maint Level	Objective Maint level	Key Forest RD	Proposed Road Use	Miles Affected
2690869	Road		2	1	No	Decommission	0.27
2690870	Road	0.08	2	1	No	Decommission	0.08
2690875	Road	0.69	2	2	No	Decommission	0.28
2690875	Road		2	2	No	CV	0.41
2690880	Road	1.43	2	2	No	Decommission	1.43
2690881	Road	0.53	2	1	No	Decommission	0.53
2690882	Road	0.19	2	1	No	Decommission	0.19
2690883	Road	0.27	2	2	No	Decommission	0.27
2690887	Road	0.26	2	1	No	Decommission	0.26
2690890	Road	3.53	2	2	No	Administrative use only	2.64
2690890	Road		1	1	No	Decommission	0.89
2690891	Road	0.32	2	1	No	Open to mixed use	0.18
2690891	Road		2	1	No	Decommission	0.14
2690892	Road	0.22	2	2	Yes	Open to mixed use	0.22
2690893	Road	0.27	2	2	No	Decommission	0.27
2690894	Road	0.31	2	2	No	Decommission	0.31
2690895	Road	0.30	2	2	No	CV	0.30
2690896	Road	0.28	2	2	No	CV	0.28
2690897	Road	0.09	2	1	No	Decommission	0.09
2690902	Road	0.73	3	3	Yes	Administrative use only	0.73
2690904	Road	0.23	2	2	Yes	Open to mixed use	0.23
2690906	Road	0.05			No	Administrative use only	0.05
2690907	Road	0.27	2	2	No	Decommission	0.27
2690910	Road	1.20	2	2	No	CV	0.93
2690910	Road		2	2	No	Administrative use only	0.27
2690911	Road	0.22	2	1	No	CV	0.22
2690915	Road	0.20	2	2	No	Decommission	0.20
2690916	Road	0.32	2	1	No	Decommission	0.32
2690920	Road	1.47	2	1	No	CV	1.37
2690920	Road		2	1	No	Decommission	0.10
2690928	Road	0.21	2	1	No	CV	0.21
2690940	Road	0.61	2	2	No	CV	0.61
2690942	Road	0.15	2	1	No	CV	0.11
2690942	Road		2	1	No	Decommission	0.04
2690950	Road	0.54	2	2	No	Decommission	0.50
2690950	Road		2	2	No	CV	0.04
2690951	Road	0.34	2	1	No	CV	0.34
2690953	Road	0.23	2	2	No	Decommission	0.23
2690960	Road	1.01	3	3	Yes	Highway legal	1.01
Road Totals							
Designation		Miles					
Highway Legal		12.65					
Mixed Use		20.49					
Administrative use		13.13					
Open to Class I & III		0.28					
CV = Convert to motorized trail		11.69					
Decommission		10.00					
Total miles		68.24					

Appendix B – SHPO Consultation Documentation



Oregon

Theodore R. Kulongoski, Governor

Parks and Recreation Department

State Historic Preservation Office

725 Summer St. NE, Suite C

Salem, OR 97301-1266

(503) 986-0707

FAX (503) 986-0793

www.hcd.state.or.us



Nature
HISTORY
Discovery

September 20, 2007

Ms. Cara Kelly
USDA Forest Service Detroit Ranger District
HC 73 Box 320
Mill City, OR 97360

RE: SHPO Case No. 07-2160
Santiam Wagon Road Motorized Recreation Project
Willamette National Forest, McKenzie River Ranger District, Linn County

Dear Ms. Kelly:

We have reviewed the above-ground materials submitted on the project referenced above, and we concur with a determination of No Historic Properties Adversely Affected for this undertaking.

Our response here is to assist you with your responsibilities under Section 106 of the National Historic Preservation Act (per 36 CFR Part 800). Please feel free to contact me if you have further questions, comments or need additional assistance.

Sincerely,

Sarah Jalving
Historic Compliance Specialist
(503) 986-0679 or Sarah.Jalving@state.or.us





Oregon

Theodore R. Kulongoski, Governor

Parks and Recreation Department

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Nature
HISTORY
Discovery

11/23/2007

Ms. Cara Kelly
USDA FS Detroit RD
HC 73 Box 320
Mill City, OR 97360

RE: SHPO Case No. 07-2160
Santiam Wagon Road Motorized Recreation Proj
Multiple legals, Willamette NF McKenzie R RD, Linn County

Dear Cara:

Our office recently received your report about the project referenced above. I have reviewed your report and agree that the project will have no adverse affect on any known cultural resources. No further archaeological research is needed with this project aside from the monitoring of sites and avoidance of other sites which is addressed in your report.

Please be aware, however, that if during development activities you or your staff encounters any cultural material (i.e., historic or prehistoric), all activities should cease immediately and an archaeologist should be contacted to evaluate the discovery. Under state law (ORS 358.905-955) it is a Class B misdemeanor to impact an archaeological site on public or private land in Oregon. Impacts to Native American graves and cultural items are considered a Class C felony (ORS 97.740-760). If you have any questions regarding any future discovery or my letter, feel free to contact our office at your convenience.

Dennis Griffin, Ph.D., RPA
State Archaeologist
(503) 986-0674
dennis.griffin@state.or.us

Appendix C – Biological Evaluation, Botany



File Code: 2670 Plants
Route To:

Date: September 24, 2007

Subject: Biological Evaluation-Santiam Pass Summer Recreation Project

To: Santiam Pass Summer Recreation Team Leader/Analysis Files

I. Introduction

Purpose:

The purpose of this Biological Evaluation is to review the Santiam Pass Summer Motorized Recreation Area project in sufficient detail as to determine whether the proposed action will result in a trend toward Federal listing of any sensitive botanical species.

Forest management activities that may impact populations or alter habitat for PETS (proposed, endangered, threatened, or sensitive) species require a Biological Evaluation (FSM 2671.44) to be completed. The Biological Evaluation process (FSM 2672.43) is used to assist in determining the possible effects the proposed management activities have on:

- A. Species listed or proposed to be listed as endangered (E) or threatened (T) by the U.S. Fish and Wildlife Service (FWS).
- B. Species listed as sensitive (S) by the USDA Forest Service, Region 6. There are 72 plants listed on the Regional Forester's Sensitive Botanical List that are documented or suspected to occur on the Willamette National Forest (Attachment 1).

Biological Evaluation Process:

Under the suggested procedure for conducting a biological evaluation as described in a memo issued August 17, 1995 by the Regional Foresters of regions 1, 4, and 6, the Biological Evaluation is a 7 step process to evaluate possible effects to Proposed, Endangered, Threatened, and Sensitive (PETS) species. The seven steps are as follows:

1. Review of existing documented information.
2. Field reconnaissance of the project area.
3. Determination of effects of proposed actions on PETS species
4. Determination of irreversible or irretrievable commitment of resources (required for listed and proposed species only).
5. Determination of conclusions on effects
6. Recommendations for removing, avoiding, or compensating adverse effects
7. Documentation of consultation with other agencies, references, and contributors

Evaluation of effects for each species may be complete at the end of step #1 or may extend through step #5, depending on project details.



Steps 1, 2, and 5 from above are included in this document. The other steps are included in the Environmental Assessment, and will not be discussed in detail in this document.

II. Description of the Proposed Project

Location:

This project is located on the McKenzie River Ranger District, Willamette National Forest. The Legal location: T.13S, R.7E, T.13S, R.7 1/2E, T.14S, R.7 1/2E, and T.14S, R.7 1/2E; W.M.

Proposed Action:

The District Ranger on the McKenzie River Ranger District proposes to implement actions in response to the needs for action. The Proposed Action, represented by Alternative 2 in the environmental assessment (EA), proposes to designate a system of Forest roads and trails for recreational OHV use along with other actions listed below. This proposal contains much the same set of actions that were described in the February 3, 2005 scoping letter.

Specific route locations and have changed during project development and refinement. The resulting action has a reduction in overall mileage for the road and trail network, it has a fewer number of dispersed camping sites, there are changes in the size and locations of staging areas, with these and other changes appearing on modified Alternative 2 mapping.

A detailed description of the proposed action is provided in Chapter 2 of the Environmental Assessment.

In addition to actions presented in the February 2005 scoping letter, Alternative 2 would also include two non-significant amendments to the Willamette Forest Plan, implemented through a Forest Order.

All alternatives propose the following actions:

- Designate road and trails for OHV use
- Designate and rehabilitate portions of the Santiam Wagon Road
- Develop staging areas
- Designate regulated camping zones
- Create a Kiddy Loop

III. Existing Environment

Sensitive Botanical Species:

Current management direction mandates conservation of several categories of rare plants on the Willamette National Forest (Attachment 1). The Endangered Species Act mandates protection of federally listed Threatened and Endangered species. No federally listed Threatened and Endangered, or Proposed plants occur in the project area. Sensitive species are protected by USDA Forest Service regulations and manual direction (FSM 2672.4).

Prefield reviews are conducted to determine which species from the Regional Foresters 2007 Sensitive Species List for the Willamette National Forest are known from the project area or have suitable habitat present and potentially occur in the project area. Prefield review results show no known occurrences of sensitive botanical species within the project area. There is potential habitat for sensitive species in the project area (see Table 1).

Survey Results:

Surveys of the proposed project area for sensitive botanical species were conducted during August of 2005 and 2006. Survey results are found in Table 1. Three sensitive plants have potential to occur in the project area; *Gentiana newberryi*, and *Agoseris elata* are species associated with mesic meadow communities. *Botrychium pumicola* is a grapefern species suspected to occur on the Willamette National Forest. It is found in lodgepole pine forest on pumice substrates at high elevations above 7200 feet.

Most routes are existing ski trails, existing OHV routes, or skid roads with little to no need for vegetation removal. Other routes are through lodgepole pine forest, with volcanic, well-drained soils. Trees on these sites are scattered and the understory is sparsely vegetated with shrubs, some forbs, and grasses. Three routes pass through dry bunch-grass dominated meadows.

No sensitive botanical species were observed during these surveys.

Many Region 6 sensitive fungi are mycorrhizal, living in symbiosis with the roots of trees. The complex mycorrhizal relationships between fungi and trees are somewhat understood by experts and resource managers; however, locating the underground network of mycelia during project level pre-disturbance surveys is not exact. With the exception of *Bridgeoporus nobillissimus*, pre-disturbance surveys for all other listed fungi is impractical at this time. *Bridgeoporus* is a large conk found on large diameter noble fir stumps, snags, and infrequently, live trees above 3000 feet in elevation. There are no noble fir trees in the project area; therefore, no habitat for *Bridgeoporus* would be disturbed.

IV. Impacts of the Proposed Project

Direct and Indirect Impacts:

Implementation of this project would have no direct or indirect effect on sensitive botanical species because no sensitive plants were located during surveys.

Direct and Indirect Impacts to unknown fungi:

This project involves habitat disturbance in terms of trail construction. Without knowing for certain the presence or absence of sensitive fungi deemed impractical for pre-disturbance surveys, it is assumed that there would be very localized direct impacts to the mycelial network by selecting any of the alternatives. The soils in the Santiam Pass Summer Recreation area are volcanic, well-drained, and nutrient-poor. The risk of negative impacts to listed fungi is low due to the lack of nutrient-rich organic material available for decomposition. Therefore, the likelihood of offering suitable habitat for other listed fungi is low.

The indirect impacts to fungi would be evident by increased soil compaction, which reduces pore space for root penetration and production of feeder rootlets where mycorrhizae form. The volcanic soils in the project area are readily displaced, thus not subject to the degree of compaction of other soil types found in the Western Cascades. Therefore, the risk of indirect soil compaction is low in the project area and would not lead to a trend toward federal listing of species.

Cumulative Effects:

The cumulative effects analysis area for the Santiam Pass Summer Motorized Recreation area is the entire project area. Past management activities in the last 50 years include road construction, road maintenance, fire suppression, salvage logging, construction of Hoodoo Ski Area, and other developed recreation areas. Included in these activities is the Fall 2007 Santiam Wagon Road maintenance work, involving heavy machinery. Because the equipment to implement this maintenance would need to meet timber sale contract provisions for cleanliness, there are no expected cumulative effects on sensitive plants from the road project. Implementing any of the action alternatives would have no additional cumulative effect on sensitive botanical species because no sensitive plant species were located in the project area during surveys.

V. Determination

It is my determination that selection of any alternative or combination of alternatives proposed would have “no impact” on sensitive botanical species.

For listed fungi, this project “may impact individuals or habitat, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species”. The risk of adverse effects to listed fungi from implementation of this project is low because of soil productivity in the project area.

Prepared by: /s/ Burtchell Thomas Date: September 24, 2007
Burtchell Thomas, Botanist
McKenzie River Ranger District

Table 1: Summary of Potential Habitat and Presence for Sensitive Botanical Species

Species	Prefield Review	Species Presence
<i>Agoseris elata</i>	habitat present	No
<i>Arabis hastatula</i>	habitat not present	No
<i>Arnica viscosa</i>	habitat not present	No
<i>Asplenium septentrionale</i>	habitat not present	No
<i>Aster gormanii</i>	habitat not present	No
<i>Boletus pulcherrimus</i>	habitat not present	No
<i>Botrychium minganense</i>	habitat not present	No
<i>Botrychium montanum</i>	habitat not present	No
<i>Botrychium pumicola</i>	habitat present	No
<i>Bridgeoporus nobillissimus</i>	habitat not present	No
<i>Calamagrostis breweri</i>	habitat not present	No
<i>Carex livida</i>	habitat not present	No
<i>Carex scirpoidea</i> var. <i>stenochlaena</i>	habitat not present	No
<i>Castilleja rupicola</i>	habitat not present	No
<i>Chaenotheca subroscida</i>	habitat not present	No
<i>Cimicifuga elata</i>	habitat not present	No
<i>Coptis trifolia</i>	habitat not present	No
<i>Cordyceps capitata</i>	habitat not present	No
<i>Cortinarius barlowensis</i>	habitat not present	No
<i>Corydalis aqua-gelidae</i>	habitat not present	No
<i>Cudonia monticola</i>	habitat not present	No
<i>Dermatocarpon luridum</i>	habitat not present	No
<i>Eucephalis(Aster) vialis</i>	habitat not present	No
<i>Frasera umpquaensis</i>	habitat not present	No
<i>Gentiana newberryi</i>	habitat present	No
<i>Gomphus kaufmanii</i>	habitat not present	No
<i>Gyromitra californica</i>	habitat not present	No
<i>Hypogymnia duplicata</i>	habitat not present	No
<i>Iliamna latibracteata</i>	habitat not present	No
<i>Leptogium burnetiae</i> var. <i>hirsutum</i>	habitat not present	No
<i>Leptogium cyanescens</i>	habitat not present	No
<i>Leucogaster citrinus</i>	habitat not present	No
<i>Lewisia columbiana</i> var. <i>columbiana</i>	habitat not present	No
<i>Lobaria linita</i>	habitat not present	No
<i>Lupinus sulphureus</i> var. <i>kincaidii</i>	habitat not present	No
<i>Lycopodiella inundata</i>	habitat not present	No
<i>Lycopodium complanatum</i>	habitat not present	No

<i>Montia howellii</i>	habitat not present	No
<i>Mycenia monticola</i>	habitat not present	No
<i>Nephroma occultum</i>	habitat not present	No
<i>Ophioglossum pusillum</i>	habitat not present	No
<i>Pannaria rubiginosa</i>	habitat not present	No
<i>Pellaea andromedaefolia</i>	habitat not present	No
<i>Peltigera neckeri</i>	habitat not present	No
<i>Peltigera pacifica</i>	habitat not present	No
<i>Phaeocollybia attenuata</i>	habitat not present	No
<i>Phaeocollybia dissiliens</i>	habitat not present	No
<i>Phaeocollybia pseudofestiva</i>	habitat not present	No
<i>Phaeocollybia sipei</i>	habitat not present	No
<i>Pilophorus nigricaulis</i>	habitat not present	No
<i>Polystichum californicum</i>	habitat not present	No
<i>Potentilla villosa</i>	habitat not present	No
<i>Pseudocyphellaria mallota</i>	habitat not present	No
<i>Pseudocyphellaria rainierensis</i>	habitat not present	No
<i>Ramalina pollinaria</i>	habitat not present	No
<i>Ramaria amyloidea</i>	habitat not present	No
<i>Ramaria aurantiisiccescens</i>	habitat not present	No
<i>Ramaria gelatinaurantia</i>	habitat not present	No
<i>Ramaria largentii</i>	habitat not present	No
<i>Rhizomnium nudum</i>	habitat not present	No
<i>Romanzoffia thompsonii</i>	habitat not present	No
<i>Scheuchzeria palustris</i> <i>var. americana</i>	habitat not present	No
<i>Schistostega pennata</i>	habitat not present	No
<i>Scirpus subterminalis</i>	habitat not present	No
<i>Scouleria marginata</i>	habitat not present	No
<i>Sisyrrinchium sarmentosum</i>	habitat not present	No
<i>Sowerbyella rhenana</i>	habitat not present	No
<i>Tetraphis geniculata</i>	habitat not present	No
<i>Thorluna disimilis</i>	habitat not present	No
<i>Usnea longissima</i>	habitat not present	No
<i>Utricularia minor</i>	habitat not present	No
<i>Wolffia borealis</i>	habitat not present	No
<i>Wolffia columbiana</i>	habitat not present	No

ATTACHMENT 1: **Regional Forester's Sensitive Botanical Species List for the Willamette National Forest FY 2007.** Species of federal, state and local importance are included on the R-6 list.

Species	Occurrence on WNF	ONHP Status	State Status	Federal Status	Habitat Types
<i>Agoseris elata</i>	S	2			MM,DM
<i>Arabis hastatula</i>	D	1		SofC	RO
<i>Arnica viscosa</i>	S	2			RS
<i>Asplenium septentrionale</i>	S	2			RO
<i>Aster gormanii</i>	D	1			RS
<i>Boletus pulcherrimus</i>	D	1			CF
<i>Botrychium minganense</i>	D	2			RZ,CF
<i>Botrychium montanum</i>	D	2			RZ,CF
<i>Botrychium pumicola</i>	S	1	LT		HV
<i>Bridgeoporus nobilissimus</i>	D	1			CF
<i>Calamagrostis breweri</i>	D	2			MM,RZ
<i>Carex livida</i>	S	2			WM
<i>Carex scirpoidea</i>	D	2			RO
<i>var. stenochlaena</i>					
<i>Castilleja rupicola</i>	D	2			RO
<i>Chaenotheca subroscida</i>	D	3			CF
<i>Cimicifuga elata</i>	D	1	C		CF
<i>Coptis trifolia</i>	S	2			WM,CF
<i>Cordyceps capitata</i>	D	unlisted			CF
<i>Cortinarius barlowensis</i>	D				montane CF
<i>Corydalis aqua-gelidae</i>	D	1	C		RZ,CF
<i>Cudonia monticola</i>	D	not listed			CF
<i>Dermatocarpon luridum</i>	S	3			RZ on rock
<i>Eucephalis (Aster) vialis</i>	S	1	LT	SofC	CF
<i>Frasera umpquaensis</i>	D	1	C		MM
<i>Gentiana newberryi</i>	D	2			MM
<i>Gomphus kaufmanii</i>	D	3			CF
<i>Gyromitra californica</i>	D	2			CF
<i>Hypogymnia duplicata</i>	S	3			CF
<i>Iliamna latibracteata</i>	S	2			CF,RZ
<i>Leptogium burnetiae</i>					
<i>var. hirsutum</i>	S	3			CF
<i>Leptogium cyanescens</i>	D	3			CF
<i>Leucogaster citrinus</i>	D	3			CF
<i>Lewisia columbiana</i>	D	2			RS
<i>var. columbiana</i>					
<i>Lobaria linita</i>	D	2			RO
<i>Lupinus sulphureus</i>					
<i>var. kincaidii</i>	S	1	LT	LT	MM,DM
<i>Lycopodiella inundata</i>	D	2			WM
<i>Lycopodium complanatum</i>	D	2			CF

Species	Occurrence on WNF	ONHP Status	State Status	Federal Status	Habitat Types
<i>Montia howellii</i>	D	4	C		RZ
<i>Mycenia monticola</i>	D	not listed			CF
<i>Nephroma occultum</i>	D	4			CF
<i>Ophioglossum pusillum</i>	D	2			WM
<i>Pannaria rubiginosa</i>	D	2			CF
<i>Pellaea andromedaefolia</i>	S	2			RO
<i>Peltigera neckeri</i>	D	not listed			CF
<i>Peltigera pacifica</i>	D	not listed			CF
<i>Phaeocollybia attenuata</i>	D	4			CF
<i>P. dissiliens</i>	D	3			CF
<i>P. pseudofestiva</i>	D	3			CF
<i>P. sipei</i>	D	3			CF
<i>Pilophorus nigricaulis</i>	D	2			RO
<i>Polystichum californicum</i>	D	2			RO
<i>Potentilla villosa</i>	D	2			RS, RO
<i>Pseudocyphellaria mallota</i>	D				CF,RZ
<i>Pseudocyphellaria rainierensis</i>	D	4			CF,RZ
<i>Ramalina pollinaria</i>	D	2			CF, RZ
<i>Ramaria amyloidea</i>	D	2			CF
<i>R. aurantiisiccescens</i>	D	4			CF
<i>R. gelatiniaurantia</i>	D	3			CF
<i>R. largentii</i>	D	3			CF
<i>Rhizomnium nudum</i>	D	2			CF
<i>Romanzoffia thompsonii</i>	D	1			RS
<i>Scheuchzeria palustris var. americana</i>	D	2			WM
<i>Schistostega pennata</i>	D	2			CF
<i>Scirpus subterminalis</i>	D				WM
<i>Scouleria marginata</i>	S	3			RZ
<i>Sisyrrinchium sarmentosum</i>	S	1	C	SofC	MM,DM
<i>Sowerbyella rhenana</i>	D	3			CF
<i>Tetraphis geniculata</i>	S	2			CF
<i>Thorluna disimilis</i>	D	2			CF
<i>Usnea longissima</i>	D	3			CF,RZ
<i>Utricularia minor</i>	D	2			SW
<i>Wolffia borealis</i>	S	2			SW
<i>Wolffia columbiana</i>	S	2			SW

Occurrence on Willamette National Forest:

- S = Suspected
- D = Documented

Oregon Natural Heritage Program (ORNHP):

- 1 = Taxa threatened or endangered throughout range.
- 2 = Taxa threatened or endangered in Oregon but more common or stable elsewhere.
- 3 = Species for which more information is needed before status can be determined, but which may be threatened or endangered (Review).
- 4 = Species of concern not currently threatened or endangered (Watch).

Oregon State Status:

- LT = Threatened
- LE = Endangered
- C = Candidate

Federal Status: These plant species were originally published as CANDIDATE THREATENED (CT) in the Smithsonian Report, **Federal Register**, July 1, 1975, or as PROPOSED ENDANGERED (PE) in a later report, **Federal Register**, June 16, 1976. The latest **Federal Register** consulted was dated September 30, 1993. Updated listings appear periodically in the Notice of Review (USFWS); the status of several species is categorized as follows:

- LE = Listed as an Endangered Species
- LT = Listed as a Threatened Species
- PE = Proposed as an Endangered Species
- PT = Proposed as a Threatened Species
- C = Candidate for Listing as Threatened or Endangered
- Sof C = Species of Concern; taxa for which additional information is needed to support proposal to list under the ESA.

Habitat Types:

- | | |
|----------------------------------|----------------------------|
| MM = Mesic meadows | RS = Rocky slopes, scree |
| WM = Wet meadows | RO = Rock outcrops, cliffs |
| DM = Dry meadows | DW = Dry open woods |
| RZ = Riparian zones, floodplains | HV = High volcanic areas |
| CF = Coniferous forest | SW = Standing water |

ATTACHMENT 2: Field reconnaissance survey levels for determining presence potential for TES species.

Level A:	Aerial photo interpretation and review of existing site records. Determination of the potential for a listed species to occur within the proposed project area. No field surveys completed.	
	Low potential:	Less than 40% potential for listed species inhabiting the project area.
	Moderate potential:	40-60% potential for a listed species inhabiting the proposed project area.
	High potential:	Greater than 60% potential for listed species inhabiting the proposed project area.
Level B:	Single entry survey of probable habitats. Areas are identified by photos and existing field knowledge. Field surveys are conducted during the season most favorable for species identification.	
	Low intensity:	Selected habitat surveys (approximately 5-10% of area) are conducted with a single entry for listed species inhabiting the proposed project area.
	Moderate intensity:	Selected habitat surveys (approximately 10-40% of area) are conducted with a single entry for listed species inhabiting the proposed project area.
	High intensity:	Selected habitat surveys (approximately 40-60% of area) are conducted with a single entry for listed species inhabiting the proposed project area.
Level C:	Multiple entry surveys are conducted for listed species likely to inhabit the proposed project area.	
	Low intensity:	Selected habitat surveys (approximately 5-10% of area) are conducted with repeated entries for listed species inhabiting the proposed project area.
	Moderate intensity:	Selected habitat surveys (approximately 10-60% of area) are conducted with

repeated entries for listed species
inhabiting the proposed project area.

High intensity:

Selected habitat surveys (approximately
60-80% of area) are conducted with
repeated entries for listed species
inhabiting the proposed project area.

ATTACHMENT 3:
Conclusions Of Effects For Use In Biological Evaluations and Assessments
USDA Forest Service - Regions 1, 4, and 6
August, 1995

Listed Species:

1. No Effect

Occurs when a project or activity will not have any “effect”, on a listed species, or critical habitat.

2. May Affect - Likely to Adversely Affect (LAA)

If the determination in the biological assessment is that the project May Affect - Likely to Adversely Affect a listed species or critical habitat, formal consultation must be initiated (50 CFR 402.12). Formal consultation must be requested in writing through the Forest Supervisor (FSM 2670.44) to the appropriate FWS Field Supervisor, or NOAA Fisheries office.

3. May Affect - Not Likely to Adversely Affect (NLAA)

If it is determined in the biological assessment that there are “effects” to a listed species or critical habitat, but that those effects are not likely to adversely affect listed species or critical habitat, then written concurrence by the FWS or NOAA Fisheries is required to conclude informal consultation (50 CFR 402.13).

4. Beneficial Effect

Written concurrence is also required from the FWS or NOAA Fisheries if a beneficial effect determination is made.

Requests for written concurrence must be initiated in writing from the Forest Supervisor to the State Field Supervisor (FWS or NOAA).

Proposed Species:

Whenever serious adverse effects are predicted for a proposed species or proposed critical habitat, conferencing is required with the FWS or NOAA Fisheries.

1. No Effect

When there are “no effects” to proposed species, conferencing is not required with FWS or NOAA.

2. Not Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat

This conclusion is used where there are effects or cumulative effects, but where such effects would not have the consequence of losing key populations or adversely affecting “proposed critical habitat”. No conferencing is required with FWS or NOAA if this conclusion is made. However, for any proposed activity that would receive a “Likely To Adversely Affect” conclusion if the species were to be listed, conferencing may be initiated.

3. Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat

This conclusion must be determined if there are significant effects that could jeopardize the continued existence of the species, result in adverse modification or destruction of proposed critical habitat, and/or result in irreversible or irretrievable commitments of resources that could foreclose options to avoid jeopardy, should the species be listed. If this is the conclusion, conferencing with FWS or NMFS is required.

Sensitive Species:

1. No Impact (NI)

A determination of “No Impact” for sensitive species occurs when a project or activity will have no environmental effects on habitat, individuals, a population or a species.

2. May Impact Individuals or Habitat, But Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species (MIIH)

Activities or actions that have effects that are immeasurable, minor or are consistent with Conservation Strategies would receive this conclusion. For populations that are small - or vulnerable - each individual may be important for short and long-term viability.

3. Will Impact Individuals or Habitat With a Consequence That the Action May Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species (WIFV)

Loss of individuals or habitat can be considered significant when the potential effect may be:

1. Contributing to a trend toward Federal listing (C-1 or C-2 species);
2. Results in a significantly increased risk of loss of viability for a species; or,
3. Results in a significantly increased risk of loss of viability for a significant population (stock).

4. Beneficial Impact (BI)

Projects or activities that are designed to benefit, or that measurably benefit a sensitive species should receive this conclusion.

ATTACHMENT 4:

**Conclusions Of Effects For Use In Biological Evaluations and Assessments
USDA Forest Service - Regions 1, 4, and 6
August, 1995**

Listed Species:

1. No Effect

Occurs when a project or activity will not have any “effect”, on a listed species, or critical habitat.

2. May Affect - Likely to Adversely Affect (LAA)

If the determination in the biological assessment is that the project May Affect - Likely to Adversely Affect a listed species or critical habitat, formal consultation must be initiated (50 CFR 402.12). Formal consultation must be requested in writing through the Forest Supervisor (FSM 2670.44) to the appropriate FWS Field Supervisor, or NOAA Fisheries office.

3. May Affect - Not Likely to Adversely Affect (NLAA)

If it is determined in the biological assessment that there are “effects” to a listed species or critical habitat, but that those effects are not likely to adversely affect listed species or critical habitat, then written concurrence by the FWS or NOAA Fisheries is required to conclude informal consultation (50 CFR 402.13).

4. Beneficial Effect

Written concurrence is also required from the FWS or NOAA Fisheries if a beneficial effect determination is made.

Requests for written concurrence must be initiated in writing from the Forest Supervisor to the State Field Supervisor (FWS or NOAA).

Proposed Species:

Whenever serious adverse effects are predicted for a proposed species or proposed critical habitat, conferencing is required with the FWS or NOAA Fisheries.

1. No Effect

When there are “no effects” to proposed species, conferencing is not required with FWS or NOAA.

2. Not Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat

This conclusion is used where there are effects or cumulative effects, but where such effects would not have the consequence of losing key populations or adversely affecting “proposed critical habitat”. No conferencing is required with FWS or NOAA if this conclusion is made. However, for any proposed activity that would receive a “Likely To Adversely Affect” conclusion if the species were to be listed, conferencing may be initiated.

3. Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat

This conclusion must be determined if there are significant effects that could jeopardize the continued existence of the species, result in adverse modification or destruction of proposed critical habitat, and/or result in irreversible or irretrievable commitments of resources that could foreclose options to avoid jeopardy, should the species be listed. If this is the conclusion, conferencing with FWS or NMFS is required.

Sensitive Species:

1. No Impact (NI)

A determination of “No Impact” for sensitive species occurs when a project or activity will have no environmental effects on habitat, individuals, a population or a species.

2. May Impact Individuals or Habitat, But Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species (MIIH)

Activities or actions that have effects that are immeasurable, minor or are consistent with Conservation Strategies would receive this conclusion. For populations that are small - or vulnerable - each individual may be important for short and long-term viability.

3. Will Impact Individuals or Habitat With a Consequence That the Action May Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species (WIFV)

Loss of individuals or habitat can be considered significant when the potential effect may be:

4. Contributing to a trend toward Federal listing (C-1 or C-2 species);
5. Results in a significantly increased risk of loss of viability for a species; or,
6. Results in a significantly increased risk of loss of viability for a significant population (stock).

4. Beneficial Impact (BI)

Projects or activities that are designed to benefit, or that measurably benefit a sensitive species should receive this conclusion.

Appendix D – Biological Evaluation, Fisheries



File Code: 2670
Route To: Files

Date: July 9, 2007

Subject: Specialist Report (Biological Evaluation, Manguson-Stevens Act Assessment, and Management Indicator Species Review)

To: Mary Allison – District Ranger
Al Brown – Natural Resources Planner

Preface for Specialist Report

This specialist report serves as the following:

- The Biological Evaluation that addresses species listed under the Endangered Species Act (1973).
- The evaluation of effects to fish covered under the Manguson-Stevens Fisheries Conservation Act (MSA) and associated Essential Fish Habitat (EFH).
- The evaluation of Management Indicator Species (MIS) as required by the Willamette Land and Resource Management Plan (the Forest Plan). MIS fish species are designated in the Forest Plan as anadromous fish and resident trout species.

Executive Summary

All of the alternatives have the same effect on ESA listed fish, MSA-EFH, and MIS fish. That is, **no effect** whatsoever. The following rationale is used for this effects determination:

- There are no listed fish (spring Chinook salmon and bull trout) or designated critical habitat upstream of Tamolitch Falls which is approximately 20 miles “downhill” from the project area. In addition, there are no streams in the project area that have surface connection to the McKenzie River and it is therefore physically impossible for effects from OHV use to be transmitted downstream to ESA listed fish habitat. This rationale is also applicable for a “no effect” to designated critical habitat for spring Chinook salmon and bull trout.
- MSA-EFH is not designated upstream of historical barriers (i.e. Tamolitch Falls). Therefore no EFH exists in the project area, and as described above it is physically impossible for effects from OHV use to be transmitted downstream to EFH.
- MIS fish that inhabit Big Lake were planted in the lake to provide for recreational opportunities. From a biological standpoint they would not be considered desirable to the lake ecosystem. These populations persist naturally and by hatchery plantation (ODFW), and given the impacts from current OHV use and the ability of these fish to persist it is highly unlikely that any alternative would have a negative effect to these fish.
- Executive Order 12962: Recreational Fishing. None of the alternatives would impact fish stocked in Big Lake, and none of the alternatives propose to limit fishing



opportunities or to close boat ramps. The Forest Service would continue to work with ODFW to stock fish appropriate for recreational angling purposes.

Project Background

The 13,854-acre Project Area is located on the McKenzie River Ranger District, Willamette National Forest. The project area is bounded by Forest road 2676 on the west (roadway is included), U.S. Highway 20 on the north, the Willamette National Forest boundary and Pacific Crest divide on the east, and the Mt. Washington Wilderness Area boundary on the south. Public access into this area from U.S. Highway 20 is primarily by the paved Big Lake Road, or Forest road 2890.

The Santiam Pass area is a popular destination for summer motorized recreation, and the project area is part of a larger 17,242 acre Dispersed Recreation, Semiprimitive Motorized Management Area determined in the 1990 Willamette National Forest Land and Resource Management Plan. In addition to OHV riding, other dispersed recreation activities that occur in the area include dispersed camping, hunting, hiking, horseback riding, bicycling, driving for sight-seeing and to visit the Sand Mountain Lookout.

The project area currently has 66 miles of existing Forest system roads. Unmanaged OHV use has resulted in more than 8 miles of user-created tracks within the project area. Dispersed day-use and overnight-use camping sites are located along Forest road 2890 and on portions of the historic Santiam Wagon Road, which runs east to west through the project area. The Santiam Wagon Road is segmented within the project area as Forest roads 2676-866, 2690-810, and 2690-811. Approximately 3.4 miles of the Pacific Crest National Scenic Trail runs along the Cascade Crest on the east side of the project area. Developed recreation sites in the project area include the Hoodoo Ski Area, under a special use permit, and the Big Lake Campground Complex.

Legal description of the project: T.13S, R.7E, Sections 13-15, 22-27, 34-36; T.13S, R.7 1/2E, Sections 21-28, 33-36; T.14S, R.7 1/2E, Sections 1-3, 10-12; and T.14S, R.7 1/2E, Sections 1-4, 9-12, 15 and 15; Willamette Meridian; Linn County, Oregon.

Purpose and Need

There is a need to implement a more formal management approach to conditions in the project area, in the Big Lake Campground area, in and around the Hoodoo Ski Area, and in the Santiam Wagon Road and Sand Mountain Special Interest Areas.

Increases in both total use and the types of use have prompted this analysis of methods to provide appropriate uses which result in quality recreation experiences, with an emphasis on opportunities unique to the area. At the same time, heritage resources must be protected, as well as sensitive plant and animal habitats in the area.

The Proposed Action

The Proposed Action, represented as Alternative 2, would satisfy the need to provide designated motorized use within the project area; to restore recreation-related resource impacts to heritage

resources, to restore plant and animal habitat and to protect these resources into the future. In general, the following would be implemented in this proposal:

OHV, Road and Trail Development:

- Designate 37.3 miles of Forest Road open to Motorized Mixed Use.
- Designate 7.6 miles of Forest Road open to ATV Class I & III only.
- Close 16.3 miles of Forest Road to motorized use.
- Reconstruct 4.4 miles of user created tracks, which will be open to ATV Class I & III.
- Construct 7.9 miles of new motorized trails open to ATV Class I & III
- Close 5.6 miles of user-created tracks to all motorized use and rehabilitate.

Santiam Wagon Road

- Designate 6.0 miles of the Santiam Wagon Road open to Motorize Mixed Use.
- Rehabilitate all portions of the Santiam Wagon Road to approximate historic route, profile, and width, close and rehabilitate user-created OHV crossings.

Staging Area Development

- Establish two, day-use staging areas for off-loading OHVs from trailers, one located along the Big Lake Road at the junction of Forest Road 2690 and south side of 2690-860, and the other near the junction of Forest Road 2690 and 2690-810, (Santiam Wagon Road). User education and information kiosks and toilet facilities would be included at each site.

Regulated Camping Zone

- Designate 34 dispersed campsites within the Regulated Camping Zone, along Big Lake Road 2690 and Santiam Wagon Road, the 2690-810 portion.
- Block and rehabilitate existing dispersed campsites not incorporated into this action.

Open Play Area and Kiddy Loop

- Establish 22.4 acres as Open Play Area within the sand blowout feature that exists at the junction of the Sand Mountain lookout road 2690-810 and Santiam Wagon Road 2676-866 portion.
- Establish a 18.3 acre Kiddy Loop Trail Area north of Big Lake Campground between the Big Lake Road 2690 and Santiam Wagon Road, 2690-810.

Alternative 1 – The Current Management Situation (No Action)

This alternative assesses the present condition of the affected environment and serves as the basis of comparison for the other alternatives analyzed. Under the existing management scenario, within the project area, recreation use will continue to be managed as it currently is.

Alternative 1 would not take actions to meet the need to manage motorized use within the Santiam Pass Summer Motorized Recreation Project Area. It does not restore and protect recreation-related resource impacts to historic properties and sensitive habitat for plants and animals. The no action alternative does change the opportunity for quality recreation experiences within the project area.

Current trends of OHV use in the project area at Santiam Pass would continue. The McKenzie River Ranger District would continue current monitoring and enforcement under existing regulations for OHV use on the forest roads and unauthorized user-created tracks within the project area.

This alternative does not close and or rehabilitate, unauthorized user-created tracks and no existing dispersed campsites would be rehabilitated. Camping by motorized users at existing dispersed camp sites is likely to continue unchanged. Unregulated dispersed motorized camping would expand existing campsites into undisturbed areas. Loading and unloading of OHVs at existing camp sites would continue in the current unregulated manner.

No new information Kiosks or sanitation facilities would be built. No Open Play Areas or Kiddy Loop Trail Areas would be added.

Alternative 2 – The Proposed Action

Alternative 2 – the Proposed Action, is generally the same alternative that was presented in the February 3, 2005 scoping letter. Minor changes were made to this alternative after considering scoping comments received. Alternative 2 would implement the following actions, which meets the project purpose and need to provide designated motorized use within the Santiam Pass Summer Motorized Recreation Project Area; and to restore recreation-related resource impacts to heritage resources and plant and animal habitat and protect these resources in the future.

OHV, Road and Trail Development:

- Designate 37.3 miles of Forest Road open to Motorized Mixed Use.
- Designate 7.6 miles of Forest Road open to ATV Class I & III only.
- Close 16.3 miles of Forest Road to motorized use.
- Reconstruct 4.4 miles of user created tracks, which will be open to ATV Class I & III.
- Construct 7.9 miles of new motorized trails open to ATV Class I & III
- Close 5.6 miles of user-created tracks to all motorized use and rehabilitate.

Santiam Wagon Road

- Designate 6.0 miles of the Santiam Wagon Road open to Motorize Mixed Use.
- Rehabilitate all portions of the Santiam Wagon Road to approximate historic route, profile, and width, close and rehabilitate user-created OHV crossings.

Staging Area Development

- Establish two, day-use staging areas for off-loading OHVs from trailers, one located along the Big Lake Road at the junction of Forest Road 2690 and south side of 2690-860, and the other near the junction of Forest Road 2690 and 2690-810, (Santiam Wagon Road). User education and information kiosks and toilet facilities would be included at each site.

Regulated Camping Zone

- Designate 34 dispersed campsites within the Regulated Camping Zone, along Big Lake Road 2690 and Santiam Wagon Road, the 2690-810 portion.
- Block and rehabilitate existing dispersed campsites not incorporated into this action.

Open Play Area and Kiddy Loop

- Establish 22.4 acres as Open Play Area within the sand blowout feature that exists at the junction of the Sand Mountain lookout road 2690-810 and Santiam Wagon Road 2676-866 portion.
- Establish a 18.3 acre Kiddy Loop Trail Area north of Big Lake Campground between the Big Lake Road 2690 and Santiam Wagon Road, 2690-810.

Alternative 3

Alternative 3 would implement the following actions, which meets the project purpose and need to provide designated motorized use within the Santiam Pass Summer Motorized Recreation Project Area; and to restore recreation-related resource impacts to heritage resources and plant and animal habitat and protect these resources in the future.

OHV, Road and Trail Development:

- Designate 30.6 miles of Forest Road open to Motorized Mixed Use.
- Designate 12.1 miles of Forest Road open to ATV Class I & III only.
- Close 18.5 miles of Forest Road to motorized use.
- Reconstruct 5.2 miles of user created tracks, which will be open to ATV Class I & III.
- Construct 9.8 miles of new motorized trails open to ATV Class I & III
- Close 4.8 miles of unauthorized user-created tracks to all motorized use and rehabilitate.

Santiam Wagon Road

- Designate 4.5 miles of the Santiam Wagon Road open to Motorized Mixed Use; starting at the junction of Forest Road 860 / 810, east to the Forest boundary.
- Close 1.5 miles of the Santiam Wagon Road to ATV Class I, II, and III; from the junction of Forest Road 890, west to the junction of Forest Road 2676
- Rehabilitate all portions of the Santiam Wagon Road to approximate historic route, profile, and width, close and rehabilitate user-created OHV crossings not incorporated in the trail system.

Staging Area Development

- Establish a day-use staging areas for off-loading OHVs from trailers, located along the Big Lake Road at the junction of Forest Road 2690 and 2690-860.
- Designate a section of Ray Benson SnoPark for day use parking.
- Designate Little Nash SnoPark at the junction of Forest Road 2676 and HWY 20/126 as a staging area.

Regulated Camping Zone

- Designate 20 dispersed campsites within the Regulated Camping Zone, along Big Lake Road 2690 and Santiam Wagon Road the 2690-810.
- Block and rehabilitate all other dispersed campsites not incorporated into this action.
- Designate a section of Ray Benson SnoPark for overnight fee camping.

Open Play Area and Kiddy Loop

- Close the sand blowout feature that exists at the junction of the Sand Mountain lookout road 2690-810 and Santiam Wagon Road 2676-866 portion to all motorized use.

- Establish two Kiddy Loop Trail Areas: one northwest of Ray Benson SnoPark and one south of the Santiam Wagon Road.

Alternative 4

Alternative 4 would implement the following actions, which meets the project purpose and need to provide designated motorized use within the Santiam Pass Summer Motorized Recreation Project Area; and to restore recreation-related resource impacts to heritage resources and plant and animal habitat and protect these resources in the future.

OHV, Road and Trail Development:

- Designate 17.8 miles of Forest Road open to Motorized Mixed Use.
- Designate 14.5 miles of Forest Road open to ATV Class I & III only.
- Close 24.3 miles of Forest Road to motorized use.
- Reconstruct 2.7 miles of user created tracks, which will be open to ATV Class I & III.
- Construct 6.6 miles of new motorized trails open to ATV Class I & III.
- Close 7.3 miles of user-created tracks to all motorized use and rehabilitate.

Santiam Wagon Road

- Designate 4.1 miles of the Santiam Wagon open to Highway Legal Vehicles; starting at the junction of Forest Road 2676-866 and Sand Mountain Road, east to the Forest boundary.
- Close 1.9 miles of the Santiam Wagon Road to all motorized vehicles from the junction of Forest Road 2676, east to the junction of Forest Road 2676-866 and Sand Mountain Road.
- Rehabilitate all portions of the Santiam Wagon Road within the planning area, to approximate historic route, profile, and width. Establish two motorized trail crossings to facilitate access to Big Lake Campground.

Staging Area Development

- Establish a day-use staging areas for off-loading OHVs from trailers, located along the Big Lake Road at the junction of Forest Road 2690 and 2690-860.
- Designate a section of Ray Benson SnoPark as a day use staging area.

Regulated Camping Zone

- Designate 15 dispersed campsites within the Regulated Camping Zone, along Big Lake Road 2690 and Santiam Wagon Road the 2690-810.
- Block and rehabilitate all other dispersed campsites not incorporated into this action.
- Designate a section of Ray Benson SnoPark for overnight fee camping.

Open Play Area and Kiddy Loop

- Close the sand blowout feature that exists at the junction of the Sand Mountain lookout road 2690-810 and Santiam Wagon Road 2676-866 portion, to all motorized use.
- Establish a 3.6 acre Kiddy Loop Trail Area northwest of Ray Benson SnoPark.

Description of the project area as it relates to fish.

The project area lies within that portion of the watershed that is dominated by the Early High Cascades Platform. This area is characterized by very porous and permeable soils, and has relatively few perennial streams. The majority of streams in the area are ephemeral in nature and have no surface connection to the McKenzie River.

Big lake is the only fish bearing water body in the project area. Historically it is a fishless lake, but is currently stocked by the Oregon Department of Fish and Wildlife (ODFW). The Upper McKenzie Watershed Analysis documented that brook trout, rainbow trout, cutthroat trout, and kokanee (landlocked sockeye salmon) are stocked in Big Lake. ODFW has recently begun stocking spring Chinook salmon in the lake in order to decrease the kokanee population. Like the kokanee, these Chinook salmon are landlocked (i.e. there is no outlet streams that would allow the fish to fulfill their anadromous life history).

The hatchery Chinook salmon planted in Big Lake are not considered part of the ESA listing because there is no opportunity for the salmon to migrate to the ocean. The non-ESA listed status of the hatchery Chinook was affirmed by the National Marine Fisheries Service (NMFS) in an e-mail message to the Willamette National Forest. In that message NMFS stated the following:

The lake is out of the range of naturally migrating and outplanted listed fish, with no access by other Chinook populations. The fish stocked into Big Lake are surplus to the smolt program in the North Santiam River and are not needed, nor intended for, conservation/recovery purposes of the ESU. This release is strictly for fishing purposes in the lake.

Because the purpose of the fish in Big Lake is recreational fishing opportunities, the effects of other actions will not affect the ESU. Depending on when your proposed actions take place, they may be gone--and further outplantings are not expected. The Hatchery ESA Listing Policy was described originally in Federal Register Notice 69 FR 31354, and summarized in the final policy in 70 FR 37204 with the following statement germane to these stocked fish:

‘Tribal harvest, non-tribal harvest, and other beneficial uses of surplus listed hatchery fish may be allowed provided they are managed consistent with the conservation and recovery needs of listed salmon and steelhead ESUs. Specifically, NMFS proposed to allow for the harvest of hatchery fish listed as threatened that are surplus to the conservation and recovery needs of the ESU, in accordance with fishery management plans approved under section 4(d) of the ESA.’

In this situation, the Chinook stocked in Big Lake, not for reintroduction or recovery purposes, provide no conservation value to the ESU, and fit the intent of our regulations.

Effects Determination

The proposed action, and all of the alternatives, would have the same effect on ESA listed fish, MSA-EFH designated fish and habitat, and MIS fish: **no effect**.

Rationale:

None of the alternatives would have actions adjacent to Big Lake (the only fish bearing water body in the project area); There is no designated EFH upstream of Tamolitch Falls; the hatchery Chinook salmon planted in Big Lake are not necessary to the conservation of the ESU (Evolutionary Significant Unit); and there are no streams with surface connection to the McKenzie River.

The proposed action is consistent with Executive Order 12962 (Recreational Fishing) as it would not limit recreational fishing opportunities in Big Lake.

/s/ Ramon Rivera

RAMON RIVERA

Supervisory Fisheries Biologist

Appendix E – Biological Evaluation, Wildlife

File Code:	2670 T, E, and S species	Date:	27 July 2007
Route To:	Project File		
Subject:	Terrestrial Fauna Biological Evaluation (BE) for Santiam Pass Summer Motorized Recreation Project		

SUMMARY OF DETERMINATIONS

Determinations:

The following summarizes effect or impact determinations to species currently listed as threatened, endangered, or sensitive (TES) that may have suitable habitat identified, and have either documented or suspected occurrence within the project area. **There are no recognized effects or impacts to TES species from No Action.**

Activities associated with the proposed project **will have no affect** on the following federally listed threatened species:

- **Northern Spotted Owl**

Activities associated with the proposed project should have **no impact** on individuals of the following regionally listed sensitive species or their habitat:

- **Peregrine Falcon**
- **Bald Eagle**
- **Wolverine**
- **Pacific Fringe-tailed Bat**
- **Bufflehead**
- **Crater Lake Tightcoil**

Cumulative effects of this project in conjunction with other reasonably foreseeable projects in and adjacent to the project area are not expected to jeopardize the continued existence of any TES species as a result of modification of their essential habitat; nor would they likely contribute to a trend towards Federal listing or cause a loss of viability to populations of species designated as R-6 Sensitive or as Management Indicator Species on the Willamette National Forest. Maintenance and/or recovery of late successional habitat serving as current or potential dispersal corridors surrounding the project area will ensure ongoing opportunities for occupancy and movement of terrestrial TES wildlife species that may occur in the vicinity of this project and are dependent on such habitat.

SUMMARY OF SEASONAL RESTRICTIONS/RECOMMENDATIONS

Implementing the following recommendations would ensure effects or impacts on listed species from proposed activities would be no greater than those addressed in this document, and also would mitigate those impacts.

Spotted Owl

- Impose seasonal restriction on activities associated with project that generate above-ambient noise levels during the spotted owl critical nesting period between March 1 and July 15.

Pacific Fringe-tailed Bat

- Protect decadent trees and snags >12" dbh (roosting habitat) adjacent to the project area to the greatest extent feasible while conducting project activities.

Introduction

This document addresses potential effects to proposed, threatened, endangered or sensitive (TES) fauna listed in the Region 6 Regional Forester's Federally Listed or Proposed, and Sensitive Species Lists (dated July 21, 2004) with documented or suspected occurrences on the Willamette National Forest from activities associated with this project. Biological Evaluations of the potential effects to threatened, endangered and sensitive fish and flora are in separate documents prepared by this project's Fish Biologist and Botanist. This evaluation, required by the Interagency Cooperative Regulations (Federal Register, January 4, 1978), ensures compliance with the provisions of the Endangered Species Act (ESA) of 1973, P.L. 93-205 (87Stat. 884), as amended. A review of potential effects to non-TES wildlife species from this project proposal is presented in a separate Wildlife Specialist Report in the project analysis file.

Project Location and Description

Alternatives:

The Santiam Pass Summer Motorized Recreation Project will be analyzed in an Environmental Analysis that reviews four alternatives –a No Action alternative and three action Alternatives.

No Action Alternative: There is no rationale to suggest the No Action alternative would affect or impact any terrestrial TES species based on current habitat conditions in the project area and ecological requirements of these listed species. Considering the No Action Alternative would have no effect/impact on TES terrestrial wildlife species is based on the following assumption - taking no action would not affect current habitat or wildlife species that may be present as either evolves without human management. The dynamic nature of habitat suitability that may be subject to an unknown frequency and variety of stochastic events is considered beyond the scope of this evaluation. Only potential effects or impacts of the Action Alternative will be discussed further in this document.

Action Alternative: The influence of proposed activities on terrestrial wildlife is considered in the context of whether or not suitable habitat may be modified or if a species may be present at or near sites where physical disturbance may occur, or be sensitive to and thereby influenced by anthropogenic activities occurring during implementation of this project. Habitat disturbance that may impact some terrestrial TES species could occur as a result of this project. That potential is addressed later in this BE.

Management Direction Compliance

The alternative selected for management of the Willamette National Forest includes a strategy that provides Management Requirements (MRs) exceeding the minimum MRs established for Management Indicator Species (MIS) as presented in the Willamette Forest Plan FEIS Appendices - Volume 1 (USDA 1990, pp B-79 through 82). Maintenance of the MRs ensures the viability of MIS and the species they represent. The MRs have been further enhanced for most MIS species (i.e. those species dependent on old growth and mature conifer habitat, and dead and defective tree habitat) under the Forest Plan S&Gs as amended by the Northwest Forest Plan.

Proposed action associated with this project complies with current Standards and Guidelines (S&Gs) pertaining to MIS management, including those MIS species also listed as threatened, endangered, or sensitive. This proposal also complies with other S&Gs established in the Willamette National Forest Land and Resource Management Plan (1990) as amended by the Northwest Forest Plan Records of Decision (ROD) (1994, 2001, and 2004).

TES SPECIES – REVIEW AND ASSESSMENT

The Biological Evaluation (BE) is a 6-step process that identifies known or suspected threatened, endangered, and sensitive (TES) or Proposed wildlife species that may be associated with a project area, and evaluates impacts the project may have to those species. The six steps are as follows:

1. Prefield review of existing information.
2. Field reconnaissance of the project area to document evidence of a species or habitat.
3. Assessment of whether known or suspected populations of TES or Proposed species will be affected by the project.
4. Analysis of the significance of the project's effects on local and entire populations of TES or Proposed species.
5. If step 4 cannot be completed due to lack of information, a biological investigation is done.*
6. Conferencing or informal/formal consultation with the U.S. Fish & Wildlife Service (USFWS) is initiated at appropriate stage as outlined in FSM 2673.2-1, or is otherwise arranged through formal channels.

* Step 5 pertains only to listed species and will not be indicated except when applicable.

A summary of ecological requirements for Federally listed¹ or proposed² species, and animal species on the Regional Forester's Sensitive Species List³ for species with documented or suspected occurrence in the the Willamette National Forest is displayed in Table 1.

A summary of the BE process showing **effects determinations**⁴ for Federally listed or proposed species, and **impact determinations**⁵ for animal species on the Regional Forester's Sensitive Species List for species with known or potential occurrence in the project area is displayed in Table 2.

- 1 Species listed based on the USDA Forest Service Pacific Northwest Region Federally Listed or Proposed Species list (updated 7/21/04) having documented or suspected occurrence on the Willamette National Forest.
- 2 When a species is proposed for listing under the Endangered Species Act of 1973 (with amendments), a notice is published in the Federal Register, a daily publication of the Federal Government. The Federal Register is available on the internet at the following site: <http://www.access.gpo.gov/nara/nara005.html>
- 3 Species listed based on the USDA Forest Service Regional Forester's Sensitive Animal List (updated 7/21/04) (USDA 2004a,b) having documented or suspected occurrence on the Willamette National Forest.
- 4 The criteria for effects determinations can be found in the *Endangered Species Act Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conferences* (USFS and NMFS 1998).
- 5 Impact determinations are required for all species listed under the Regional Forester's Sensitive Species List (Forest Service Manual 2670.32, 2670.5). Direct, indirect, and cumulative effects should be considered. For a discussion of cumulative effects analysis, see the document *Considering Cumulative Effects under the National Environmental Policy Act* (Council on Environmental Quality 1997).

Table 1. Summary of Ecological Requirements for Animal Species on the Regional Forester's Federally Listed and Sensitive Species Lists for species with documented or suspected occurrence on the Willamette National Forest (July 21, 2004).

Species	Habitat
<p>Northern Spotted Owl <i>Strix occidentalis</i></p> <p>Status: Federally Threatened</p>	<p>Occur primarily in the interior of older timber stands with structure required for food, cover, nest sites, and protection from weather and predation. Reproductive habitat = forest w/ canopy closure 60 – 80%; multi-layered, multi-species canopy dominated by large overstory trees (> 30”dbh); abundant large trees w/deformities (e.g. large cavities, broken tops, dwarf-mistletoe infections, decadence); abundant large snags/down logs; and sufficient open flying space below the canopy. Foraging habitat = forest w/ > 2 canopy layers; overstory trees > 21" DBH; abundant snags/down wood; and a 60-80% canopy closure. Dispersal habitat = forest w/ > 11" DBH trees and > 40% canopy closure. Numerous sightings and occupied territories recorded on the McKenzie River RD.</p>
<p>Northern Bald Eagle <i>Haliaeetus leucocephalus</i></p>	<p>Use scattered old-growth conifer trees in proximity to open water near rivers, lakes, and reservoirs with plentiful prey. Feed primarily on fish, but will also eat waterfowl and carrion. On the McKenzie River RD, they currently nest at Blue River Reservoir, with activity at lakes and reservoirs and foraging along the McKenzie River.</p>
<p>Least Bittern <i>Ixobrychus exilis</i></p>	<p>Freshwater or brackish marshes with tall vegetation. Stalks through the weeds to find prey. Eats small fish, frogs, insects, small mammals, and sometimes bird eggs and chicks. Nests are small platform of sticks and live or dead vegetation, placed in cattails, bulrushes, or bushes 8-14” above water. No confirmed sightings on the McKenzie River RD.</p>
<p>Bufflehead <i>Bucephala albeola</i></p>	<p>Summers on wooded lakes and rivers, winters on lakes and coastal waters. Nesting normally occurs near lakes in tree cavities 5-50 feet high. Dives underwater and eats small mollusks, fish, snail, and crustaceans. Also eats aquatic insects. Winter sightings common along reservoirs, and nesting activity suspected at sites associated with numerous high elevation lakes on the McKenzie River RD.</p>
<p>Harlequin Duck <i>Histrionicus histrionicus</i></p>	<p>During nesting (April-June) adults require fast-flowing water with midstream loafing sites nearby, dense shrub or timber/shrub mosaic vegetation on the bank, and an absence of human disturbance. Nest on ground under the shelter of vegetation, rocks, or large woody debris in close proximity to water. Broods prefer low gradient streams with adequate macroinvertebrate abundance. Breeding and foraging known to occur along portions of the McKenzie River and South fork McKenzie River.</p>
<p>American Peregrine Falcon <i>Falcon peregrinus anatum</i></p>	<p>Preferred nesting sites are sheer cliffs 75 ft. or more in height having horizontal ledges or small caves. Foraging is associated with a variety of open and forested habitats, however is most closely associated with riparian settings. Numerous potential nest sites and occupied territories occur on the McKenzie River RD.</p>
<p>Yellow Rail <i>Coturnicops noveboracensis</i></p>	<p>Feeds in shallow water, eating snails, insects, and some seeds and grasses. Summers on wet meadows, marshes; winters on grasslands, fields, and coastal marshes. No documented occurrence in potential habitat on McKenzie River RD.</p>
<p>Black Swift <i>Cypseloides niger</i></p>	<p>Found near wet cliffs in mountainous regions. Feeds on-the-wing eating flying insects. Nests in small colonies on ledges or mountain crevices associated with waterfalls. There are historical records in the Lane County.</p>
<p>Baird’s Shrew <i>Sorex bairdii permiliensis</i></p>	<p>Poorly understood but generally considered a non-riparian associate. In 1986 two specimens were trapped from an open Douglas-fir forested area with numerous rotting logs in Polk Co. It has also been trapped on McKenzie River RD in the Mill Creek area and in the Blue River watershed.</p>

<p>Pacific Shrew <i>Sorex pacificus cascadenis</i></p>	<p>Poorly understood, but considered a riparian associate generally found in moist areas along class III-IV streams with abundant vegetation and down material. Occasionally found in adjacent conifer forest with moist abundant decaying logs and brush. Nests made of grasses, mosses, lichens, or leaves. Feed on slugs, snails, insects, and sometimes vegetation. No known locations on Mckenzie River RD.</p>
<p>Pacific Fisher <i>Martes pennanti</i></p>	<p>Considered a riparian associate but found in a wide variety of densely forested habitats at low to mid-elevations. Diet consists of small and medium-sized forest mammals (porcupines, snowshoe hares, tree squirrels, mice, and voles most common). Also eat carrion, and will seasonally eat birds, bird eggs, amphibians, fish, and insects. Use ground burrows, tree cavities, witches brooms or other clumped growth, or occasionally bird or small mammal nests as resting sites. Tree cavities are used by most maternal females with young and ground burrows are used mostly in winter. Data suggests they do better in areas with minimized fragmentation of old growth, second-growth, and riparian area and in areas with abundant down and standing woody material important. A few sighting on the Mckenzie River RD.</p>
<p>California Wolverine <i>Gulo gulo</i></p>	<p>Found primarily in wilderness or remote country where human activity is limited. High elevation areas appear to be preferred in summer, which may effectively separate wolverines and intensive human disturbance in most areas. In winter wolverines may move to lower elevations that are snowbound and/or have very limited human activity. They are capable of foraging widely (30-40 km) on a daily basis, and do not significantly use young, dense stands of timber or clearcuts. The majority of activity occurs in large expanses of scattered mature timber, with some use of ecotonal areas such as small timber pockets, and rocky, broken areas of timbered benches. Heavy use of openings w/ good winter populations of big game, a principal source of carrion which makes up much of the wolverine's diet. They also feed on marmots, snowshoe hares, various rodents, insects, insect larvae, eggs, and berries. A few sightings on the Mckenzie River RD.</p>
<p>Pacific Fringe-tailed Bat <i>Myotis thysanodes vespertinu</i></p>	<p>Occurs in Oregon, however habitat use is poorly documented. Three captured in 1971 were associated with young coniferous forest. They are known to use caves, mines, rock crevices, and buildings as both day and night roosts. Nothing is known about habits in winter. Diet of moths, leafhoppers, lacewings, daddy-loglegs, crickets, flies, true bugs, and spiders. Occurrence has not been documented on the Mckenzie River RD.</p>
<p>Oregon Slender Salamander <i>Batrachoseps wrighti</i></p>	<p>Live in forested areas, especially old-growth Douglas-fir and younger stands with abundant downed large logs. They lay their eggs under thick bark, inside a crevice in a log, or in talus. Juveniles and adults live under thick bark, inside partially decayed logs, or in debris piles around the bases of large snags. They also occur in moist talus w/ abundant woody debris. Sightings have been documented at lower elevation sites on Mckenzie River RD.</p>
<p>Cascade Torrent Salamander <i>Rhyacotriton cascadae</i></p>	<p>Live in very cold, clear springs, seeps, headwater streams, and waterfall splash zones. Forage in moist forests adjacent to these areas. Eggs are laid in rock crevices in seeps. Larve and adults live in gravel or under small cobbles in silt-free, very shallow water that is flowing or seeping. Adults may be found under debris on streambanks or in streamside forests and talus during rainy periods. Limited sightings reported on the Mckenzie River RD.</p>
<p>Foothill Yellow-legged Frog <i>Rana boylei</i></p>	<p>Live in sections of low-gradient streams with exposed bedrock or rock and gravel substrates. Attach eggs to the bottom of quiet scour-pools or riffles in gentle-gradient streams, often where there is only slight flow from the main river. Hatchlings cling to egg masses initially and then to rocks. Nearest known sightings are on private lands adjacent to the Sweet Home RD to the north. No sightings on the Mckenzie River RD.</p>

<p>Oregon Spotted Frog <i>Rana pretiosa</i></p>	<p>Favor lakes and slow moving streams associated w/a permanent water source w/ a soft and muddy bottom. A marsh specialist w/strong preference/requirement for warmer waters; more aquatic than other ranids; often found in water or water's edge floating on the surface or resting on aquatic vegetation. Diet is invertebrates caught above and below the surface. Early breeders: egg masses are typically deposited on top of one another in a communal fashion, not attached to vegetation, and deposited in warmer shallow water, making them susceptible to mortality due to freezing or drying. Documented populations on the Mckenzie River RD occurs in the Mink Lake Basin Area.</p>
<p>Northwestern Pond turtle <i>Clemmys marmorata marmorata</i></p>	<p>Inhabit marshes, sloughs, moderately deep ponds, slow moving portions of creeks and rivers. Observed in altered habitats including reservoirs, abandoned gravel pits, stock ponds, and sewage treatment plants. Occur from sea level to about 1,830 meters. Require basking sites, such as partially submerged logs, vegetation mats, rocks and mud banks, and may even climb a short way onto tree branches that dip into the water. They use uplands for egg laying, overwintering, and dispersal. They may move up to 500 meters and possibly more for overwintering where they burrow into leaf litter or soil. Nest distances from the water course ranges from 3 meters to over 402 meters. Sparse vegetation, usually short grasses or forbs characterize most nesting areas. Limited sightings on the district.</p>
<p>Mardon Skipper <i>Polites mardon</i></p>	<p>A small, tawny-orange butterfly currently known to exist at seven, small, geographically disjunct areas in Washington, Oregon, and California. In the southern Washington Cascades, the mardon skipper is found in open, fescue grasslands within Ponderosa pine savanna/woodland habitat at elevations ranging from 1900' to 5100'. South Cascade sites vary in size from small, ½ acre or less meadows, to large grassland complexes, and site conditions range from dry, open ridgetops, to areas associated with wetlands or riparian habitats. Within these environments a variety of nectar source plants are important. The short, open stature of native fescue bunchgrass stands allows mardon skippers to access nectar and oviposition plants. There are no known populations of this species on the Mckenzie River RD.</p>
<p>Crater Lake Tightcoil <i>Pristiloma arcticum crateris</i></p>	<p>Species may be found sparsely distributed throughout Oregon Cascades above 2000' elevation associated with perennially wet environment in mature conifer forests and meadows among vegetation or under rocks and woody debris. Suitable locations within 10 meters of open water generally in areas under snow for extended periods during winter. One documented site on Middle Fork RD along with a few sites on Mt Hood, Deschutes, Umpqua, Winema, and Rouge River National Forests.</p>

Table 2. Biological Evaluation process for Willamette TES (or Proposed) fauna associated with potential effects from Santiam Pass Summer Motorized Recreation Project Action Alternatives.

	STEP 1	STEP 2	STEP 3	STEP 4	STEP 6
	<i>Prefield Review</i>	<i>Field Recon.</i>	<i>Risk Assessment</i>	<i>Analysis of Significance</i>	<i>USFWS Review</i>
SPECIES	Habitat Present (B,R,F,D)*	Occupancy Status	Conflicts? Action Alt	Effects / Impacts Action Alt	Consulation? BA¹/BO²
Northern Spotted Owl <i>Strix occidentalis caurina</i>	B,R,F,D	Assumed Occupied	No Conflict	NE Seasonal restriction Mar 1-July15	NA
Northern Bald Eagle <i>Haliaeetus leucocephalus</i>	F	Occupied	No Conflict	NE Adjacent to Foraging cooridor	
Least Bittern <i>Ixobrychus exilis</i>	No			NI	
Bufflehead <i>Bucephala albeola</i>	F,D	Assumed Occupied	No Conflict	NI	
Harlequin Duck <i>Histrionicus histrionicus</i>	No			NI	
American Peregrine Falcon <i>Falcon peregrinus anatum</i>	F,D	Occupied	No Conflict	NI Seasonal Restriction Jan1-July15	
Yellow Rail <i>Coturnicops noveboracensis</i>	No			NI	
Black Swift <i>Cypseloides niger</i>	No			NI	
Baird's Shrew <i>Sorex bairdii permiliensis</i>	No			NI	
Pacific Shrew <i>Sorex pacificus cascadenis</i>	No			NI	
Wolverine <i>Gulo gulo</i>	F,D	Winter habitat only	No Conflict	NI	
Fisher <i>Martes pennanti</i>	No			NI	
Pacific Fringe-tailed Bat <i>M. thysanodes vespertinu</i>	R,F	Unknown	No Conflict	NI	
OR Slender Salamander <i>Batrachoseps wrighti</i>	No			NI	
Cascade Torrent Salamander <i>Rhyacotriton cascadae</i>	No			NI	
Foothill Yellow-legged Frog <i>Rana boylei</i>	No			NI	
Oregon Spotted Frog <i>Rana pretiosa</i>	No			NI	
Northwestern Pond Turtle <i>C. marmorata marmorata</i>	No			NI	
Mardon Skipper <i>Polites mardon</i>	No			NI	
Crater Lake Tightcoil <i>Pristiloma arcticum crateris</i>	B,R,F,D	Unknown	No Conflict	NI	

* B = breeding (nesting/denning) habitat R = roosting/cover habitat F = foraging habitat D = dispersal habitat

¹ Date of Biological Assessment (BA) Consultation initiated with USFWS

² Date Biological Opinion (BO) or Concurrence issued from USFWS

NA = not applicable

NE = No Effect

BE = Beneficial Effect

NLAA^a = May Affect, Not Likely to Adversely Affect

LAA^b = May Affect, Likely to Adversely Affect

NI = No Impact.

NLCT = May impact individuals or their habitat, but the action will Not Likely Contribute to a Trend towards Federal Listing or loss of viability to the population or species.

MCT^c = May impact individuals or their habitat, with a consequence that the action May Contribute to a Trend towards Federal Listing or a loss of viability to the population or species.

BI = Beneficial Impact

a A NLAA determination requires *informal consultation* with the U.S. Fish and Wildlife Service.

b For *listed* species, a LAA determination requires *formal consultation* with the U.S. Fish and Wildlife Service. For *proposed* species, a LAA determination requires *conferencing* with the U.S. Fish and Wildlife Service (WO Amendment 2600-91-3, Forest Service Manual 2671.45, March 31, 1991).

c A MCT determination may require that an Environmental Impact Statement be written.

AFFECTED WILDLIFE – Discussion/Determinations/Recommendations

A discussion of the affects of the proposed project on TES species follows. **If it was determined that suitable habitat for a species does not occur in the proposed project area (Table 2), it is concluded that the proposed action would have no potential to effect or impact those listed TES species, and the species will not be discussed further in this document. A No Action proposal is expected to have no effect on federally listed threatened, endangered, or proposed species, and is also expected to have no impact on sensitive species identified by the Regional Forester.** References used to support discussion, determinations, and recommendations are listed at the end of this document (Appendix 1).

1) Northern Spotted Owl (*Strix occidentalis caurina*)

Status: Federal: Threatened

State: Threatened

FS R-6: Sensitive, Identified as Management Indicator Species (MIS)

Determination: "No Effect" northern spotted owls, "no effect" on designated critical habitat.

Status Background: It has been reported that in some regards the northern spotted owl is the most studied raptor in the world (Blakesley 2004), yet prior to the early 1970's little was known about this species in the Pacific Northwest. Knowledge and interest quickly accumulated throughout the 1970's and in 1977 management guidelines for spotted owls on public land in Oregon were established. Driven by concerns over habitat loss, the USFWS conducted their first status review of the species in 1982. In 1987 a petition was submitted to list the spotted owl as endangered under the Federal ESA. The USFWS considered listing the species unwarranted at the time, however that decision was later reversed and the owl was officially listed as threatened under the Federal ESA in 1990.

Since that time a DRAFT Recovery Plan was released (USDI 1992), and the Northwest Forest Plan was implemented (1994) and subsequently amended (USDA et al. 2001, 2004) in efforts to most appropriately manage Federal land within the range of the northern spotted owl with the welfare of this and other late-successional species in mind.

On April 26, 2007 the US Fish and Wildlife Service (USFWS) proposed a Draft Recovery Plan for the Northern Spotted Owl and requested public comments on its proposal. The comment period closes on August 24, 2007.

Habitat and Ecology: The northern spotted owl is a species strongly associated with old-growth forests containing a component of large diameter Douglas-fir. These forest stands commonly provide a variety of structural features such as large diameter trees having central cavities, dense canopies with a high level of vertical and horizontal diversity, and an abundance of snags and down logs (Thomas et al. 1990). Stands with all these characteristics provide the best suitable (nesting, roosting, foraging) habitat for spotted owls. However, all of the above characteristics may not need be present for spotted owls to make use of an area as nesting, roosting or foraging habitat. The owl's affinity to old-growth forest types may result from adaptation and niche partitioning of this species to foraging on prey commonly present in such stands under lack of predation pressure and interspecies competition typical of more open areas (USDI 1992). Nevertheless, spotted owls have been known to forage short distances into harvested openings from a forested edge if a prey is available (Carey 2004).

Dispersal-only habitat for the northern spotted owl generally consists of mid seral stage stands between 40 and 80 years of age with canopy closures of 40 percent or greater and trees with a mean dbh of 11 inches or greater. Older stands lacking structural development that supports nesting may be considered dispersal habitat, however on some occasions may provide roosting or foraging opportunities for the species. Spotted owls generally use dispersal habitat to move between blocks of suitable habitat or, for juveniles, to disperse from natal territories (Forsman et al. 2002, USDI 2004a).

The reader is referred to the following documents for a more comprehensive and account of the biology, ecology, and status of the northern spotted owl: A Conservation Strategy for the Northern Spotted Owl (Thomas et al. 1990); Recovery Plan for the Northern Spotted Owl - (USDI 1992); Northern Spotted Owl Five-year Review Summary and Evaluation (USDI 2004a); Status and trends in demography of northern spotted owls, 1985 – 2003 (Anthony et al. 2004); Scientific evaluation of the status of the northern spotted owl - SEI Report (Courtney et al. 2004).

Pre-field Review: This project is consistent with current standards established for projects that could affect the northern spotted owl. These standards were established for the Willamette Province and are listed in both the Programmatic Biological Assessment (BA) (USDA et al. 2006) and the subsequent USFWS Letter of Concurrence (LOC) (USDI 2006) for projects which may disturb bald eagles and northern spotted owls during FY 2007 and 2008.

Effects not specifically discussed in this document pertaining to new threats to the spotted owl (USDI 2004a, Anthony et al. 2004, Courtney et al. 2004) such as wildfire, west Nile virus, and barred owls are of a cumulative nature considered beyond the scope of this individual project. Such threats are addressed in the FY 2007 – 2008 Disturbance BA and LOC, which provide a thorough analysis of new information pertaining to potential threats to this species.

Field Reconnaissance: A portion of the project area is adjacent to or within 0.25 mile of suitable spotted owl habitat. No current surveys have been conducted for spotted owls associated with this habitat that may be used for roosting, foraging, or nesting activity. Based on recent U.S. Fish & Wildlife Biological Opinions pertaining to projects that may disturb spotted owls, unsurveyed suitable habitat may be assumed occupied. Project areas are not within any Late Successional Reserves. A portion of the project is within a designated Critical Habitat Unit and the Santiam Area of Concern for spotted owls.

On June 12, 2007 the USFWS proposed a revision to designated critical habitat for the northern spotted owl. The public comment period on this proposal ends August 13, 2007. In 1992, about 6.9 million acres were designated as Critical Habitat in Washington, Oregon, and California across the range of the spotted owl; the current proposal would reduce the areas included as critical habitat to about 5.3 million acres. The current proposal would also realign designated Critical Habitat Units to more closely overlap existing Late Successional Reserves, a reserve network on federal lands established under the 1994 Northwest Forest Plan.

The Willamette National Forest has identified an area of concern in the vicinity of the Santiam Pass that encompasses portions of the Sweet Home, Detroit and McKenzie River Ranger Districts. The land allocation – matrix – is unable to fully facilitate dispersal requirements for Northern spotted owls. Spotted owl dispersal is limited in two quarter-townships around the Santiam Pass Area of Concern. This area has the potential to be a biological bottleneck for north/south and east/west movement and is highlighted as an area of general dispersal needs in the following documents: Northern spotted owl Draft Environmental Impact Statement (EIS), final Supplemental EIS, Scientific Assessment Team (SAT), Forest Ecosystem Management Assessment Team (FEMAT), A Conservation Strategy for the Northern Spotted Owl, and the Northwest Forest Plan (NWFP) Record of Decision (ROD).

The Northwest Forest Plan ROD assumes that the riparian reserves, 15% green tree retention, other administratively withdrawn areas, and 100-acre LSRs should provide adequate dispersal in most cases. In the case of Santiam Pass Area of Concern, dispersal is a concern for the next 30 years while current early successional forests achieve dispersal conditions (commonly known as 50/11/40).

The current boundary of the Santiam Pass Area of Concern for Northern spotted owl dispersal was developed in 1990 before adoption of the NWFP. In 1998, a team of three district biologists from Detroit, Sweet Home and McKenzie Ranger Districts, along with the Forest Level 1 Team members, analyzed the dispersal needs of spotted owls based on current habitat conditions relative to the NWFP. The results and rationale of this effort from which a recommendation has been made to change the boundary of the Santiam Area of Concern to more effectively meet critical spotted owl dispersal needs.

Only specific small individual trees will be felled for this project. No suitable habitat acres will be modified by this project; no dispersal habitat will be degraded and noise-generating activities associated with this project that may disturb spotted owls during the critical breeding season (March 1 – July 15) will be restricted from occurring.

Risk Assessment:

Project Effects: There are no recognized direct or indirect effects to spotted owl habitat from activities associated with this project as proposed. The project area experiences high ambient noise levels with its proximity to a major highway corridor, a high use recreational lake with motor boats and jet skis and a dispersed motorized recreation area with off highway vehicle OHV use.

Cumulative Effects: The changing trend in timber management occurring within the past decade, and projected for the future, should positively influence occupancy of suitable habitat for northern spotted owls as previously harvested stands within these watersheds redevelop, and as more emphasis is placed on recruitment of key structural components missing from harvested stands as well as retention of key structural components present in unharvested stands and restoration/maintenance of special habitats as key components of biodiversity at a landscape level.

Current Standards and Guidelines governing management of the surrounding landscape provide direction that should provide for long-term maintenance of amount and distribution of suitable spotted

owl habitat. Because of the location of harvest and non-harvest allocations, it is unlikely that cumulative effects would influence the ability of local populations to persist, or become established, by eliminating demographic linkages beyond the species dispersal capabilities.

Analysis of Significance: The Project does propose to fell individual small trees along trails and roads. These trees are not good candidates for suitable spotted owl habitat. Primary constituent elements of designated spotted owl critical habitat will not be measurably affected. A seasonal restriction on activities associated with project that could generate above-ambient noise levels during the spotted owl critical nesting period between March 1 and July 15. Implementing the Action Alternative **will have no effect on northern spotted owls**. This project will have **no effect on designated critical habitat**.

Communication with U.S. Fish and Wildlife Service: None required for no effect determination.

Recommendations: None warranted

2) American Peregrine Falcon (*Falco peregrinus anatum*)

Status Federal: None (Delisted 8/99)

State: Endangered

FS R-6: Sensitive, Identified as Management Indicator Species (MIS)

Determination: "no impact" to peregrine falcons or their habitat.

Status Background: Following a global population depression and the near total disappearance of the American peregrine falcon (*Falco peregrinus anatum*) from habitat throughout much of the United States, largely as a result of environmental contamination (Cade et al. 1988, USFWS 2003), the peregrine was listed as endangered in 1970 under the Endangered Species Conservation Act of 1969 (precursor to the ESA) and subsequently listed under the ESA in 1973. After meeting a variety of objectives listed in regional recovery plans, the peregrine was removed from the ESA list of endangered species on August 25, 1999. Since that time monitoring results suggest that population growth has continued throughout the lower 48 states (USFWS 2003).

Habitat: In the Pacific states, preferred peregrine falcon nesting sites are sheer cliffs 150 ft. or more in height with horizontal ledges (USFWS 1982). On the Willamette National Forest, cliffs with potential for nesting by peregrine falcons include those that are at least 75 feet high, have horizontal ledges, ledges with overhangs or cave-like openings, have sheer faces inaccessible to ground predators and within .5 miles of riparian habitat (USDA 2000). Peregrine falcons feed almost exclusively on birds, many of which may be associated with riparian zones, large bodies of water or an abundance of snag habitat. Small birds on which peregrine falcons feed are present in drier open areas, particularly where hardwood shrubs and trees are abundant. Some avian prey species select for closed coniferous forest. Peregrine falcons can forage widely for prey and will hunt over closed coniferous forest canopies as well as in open areas and over hardwood patches - wherever prey is abundant (Cade et al. 1988).

Pre-field review: There is no suitable peregrine nesting habitat within or immediately adjacent to the project area.

As a result of annual site monitoring, adult and young peregrines from the nearby nest sites are known to forage for avian prey in and near the project area. Young peregrines may linger in this type of habitat

while dispersing from a nest site. Proposed activities would not modify or disturb any suitable peregrine nesting habitat. All proposed activities would either occur outside the peregrine breeding season (January 1- July 31) entirely, or late in the breeding season and at a sufficient distance from nesting habitat such that any disturbance potential would be avoided (Pagel 1992, USDA 2002).

Field reconnaissance: There are no known peregrine nest sites within the project area. However, surveys of potential habitat continue in adjacent areas.

Formal breeding bird surveys have not been conducted within the planning area. The complete range of avian prey species that may currently occur in habitat throughout the project area is unknown, but expected to be typical for habitat associated with this area (O'Neil et al. 2001

Risk Assessment:

Project Effects: No suitable peregrine nesting habitat will be modified by this project. Due to the location and timing of proposed activities there should be no direct or indirect effects to peregrines from disturbance that would influence breeding, foraging, or dispersal behavior.

Felling of individual trees may modify or disturb habitat suitable for use by some potential peregrine prey species. Because tree felling would occur in late summer, habitat modification or disturbance would occur outside the breeding seasons for most prey species that could be utilizing affected habitat. Modification or disturbance activities are considered relatively insignificant considering the overall amount of foraging habitat within immediate project area.

Cumulative Effects: Utilization of foraging habitat for peregrines as more emphasis is placed on recruitment of key structural components missing from harvested stands, retention of key structural components present in unharvested stands, and restoration and maintenance of special habitats as key components of biodiversity at a landscape level should positively influence occupancy of suitable nesting habitat by peregrines.

Analysis of Significance: This project does not propose any activity that would modify suitable peregrine falcon nesting habitat, and activities that could result in disturbance to peregrines by influencing either breeding or foraging behavior are not expected to occur due to spatial and temporal factors. Ongoing monitoring of potential habitat adjacent to the planning area would help to document occupancy and breeding success. It is therefore determined this project should have **no impact on peregrine falcons and their habitat.**

Communication with U.S. Fish and Wildlife Service: Not required.

Recommendations: None warranted.

3) Northern Bald Eagle (*Haliaeetus leucocephalus*)

Status Federal: None (Delisted 6/07)
FS R-6: Sensitive, Identified as Management Indicator Species (MIS)

Determination: "no impact" to bald eagles or their habitat.

Bald eagles requires habitat consisting of scattered old-growth conifer trees in proximity to available food sources, such as lakes, reservoirs, and rivers (USDI 1990).

Conflict Determination

Potential nesting, foraging, and roosting habitat exists in the vicinity of Lost lake. Foraging habitat exists near big lake.

Habitat Trends

Bald eagle habitat is increasing in the area as stands continue to develop old growth structures. Water quality in the lakes is currently high, and this is expected to continue.

Direct/Indirect and Cumulative Effects

No Action Alternative: There are no expected affects to bald eagles associated with implementation of the no action alternative. In the absence of disturbance from wildfire, young stands will continue to succeed into mature forests, providing additional nesting structures in the future

Action Alternatives: There are no expected affects to bald eagle occupied nesting habitat, since there are no known nest sites in the proposed project area.

Yearly surveys of potential nesting habitat within this landscape will continue.

Conclusion: No adverse affect to individuals or population.

4) Wolverine (*Gulo gulo*)

Status: Federal: None
State: Threatened
FS R-6: Sensitive

Determination: "no impact" to wolverine or its habitat.

Status Background: The Santiam Pass Summer Motorized Recreation Project is within the recognized historic and current range for the wolverine (*Gulo gulo (luscus)*) which was petitioned for federal listing under the Endangered Species Act (ESA) in July 2000. On October 21, 2003 the U.S. Fish and Wildlife Service (FWS) issued a 90-day Finding for a Petition To List as Endangered or Threatened Wolverine in the Contiguous United States. In that finding it was determined that the petition did "not provide substantial information indicating that listing may be warranted". An earlier (1994) petition to list the wolverine was found to be "not warranted" by FWS.

Taxonomy can lead to confusion when assessing the status of this species and its historic or current potential occurrence in these watersheds. Sighting records frequently include the name "California Wolverine". However, the validity of such a nominal subspecies has been questioned or is not recognized throughout much of the published literature devoted to addressing this species (Banci 1994, Johnson and O'Neil 2001, NatureServe 2005, Verts and Carraway 1998). Therefore further references to wolverine in this document are intended to be interpreted as *Gulo gulo*.

Records show that the wolverine has been listed on the Regional Forester's Sensitive Animal List for at least the past fifteen years. The wolverine was one of the original species classified as threatened by the Oregon Fish and Wildlife Commission in 1975. The status of the species was reviewed in 1988 (Marshall 1988) and as a result of that review wolverine are currently listed as threatened under the Oregon Endangered Species Act.

Habitat and Ecology: A large block of literature has been published in the past decade pertaining to the biology, ecology, and management of wolverine (Banci 1994, Claar et al. 1999, Copeland 1996, Heinemeyer et al. 2001, O'Neil et al. 2001, Verts and Carraway 1998). This is not meant to suggest that all aspects of the ecological relationships between this species and its environment are well understood. On the contrary, some relationships such as responses to human disturbance are just beginning to be understood based on a scientific rather than anecdotal context (Joslin and Youmans 1999; Rowland et al. 2003). The following is a gross summary of wolverine ecology considered pertinent to the presence of this species in the vicinity of the project area. The reader is strongly encouraged to reference the literature for a more thorough understanding of this species.

The wolverine has been referenced as the largest-bodied terrestrial mustelid (Banci 1994) with a body weight three to four times greater than the fisher despite having a similar overall body length. Its robust appearance allows adults to be described as resembling a small bear.

O'Neil et al. (2001) list the wolverine in Oregon as associated with 26 forest structural conditions, 11 habitat types, 17 habitat elements, and as serving 5 key ecological functions within the identified associations. Overall data do not support any statistical association between the species and a particular vegetative community – a fact reflected by O'Neil in attaching a low confidence to all associations listed for structural conditions and habitat types. Forested habitats used by wolverines appear to vary geographically and seasonally in areas where they have been studied (Claar et al. 1999). Habitat preferences have been linked to areas based on the availability of food and low human occurrence. The most specific habitat need of wolverines may be for female denning habitat secure from human disturbance (Copeland 1996) throughout the breeding season, which can range from November through April (Banci 1994).

Current definition and subsequent identification of suitable wolverine habitat has evolved largely from Copeland's (1996) study of a wolverine population in central Idaho. Because of a widely published concern regarding the sensitivity of wolverines to human disturbance at natal den sites (Banci 1994, Claar et al. 1999, Copeland 1996, Krebs and Lewis 1999, Lyon et al. 1994, Youmans 1999a), there seems to be scientific consensus that identification of female denning habitat is key to managing for this species where it is likely (or known) to occur. Following that logic the Willamette National Forest created a GIS layer in 1998 based on criteria provided by the Regional Office in an effort to identify potential denning habitat. Habitat generally described as areas having a northerly aspect for higher elevation cirque landscape features with a large boulder/talus component and a relatively open canopy was mapped across the Forest.

Wolverine are generally described as opportunistic omnivores in summer and primarily scavengers in winter while they utilize extremely large home ranges in proportion to their body size. Adult wolverine home range sizes average 148mi² for females and 610mi² for males (Copeland 1996). They are capable of foraging widely (30-40 km) on a daily basis, and do not significantly use young, dense stands of timber or clearcuts (Banci 1994). Virtually all studies that have investigated food habitats for the species have shown wolverine to be closely associated with a dependency upon the availability of large mammal carrion to balance its energy budget during critical periods of its lifecycle.

Pre-field Review: Habitat conditions during the reference era in watersheds surrounding the project area favored the likelihood of occupancy by wolverine as it is located well within the historic range for this species, and would have been relatively free from human disturbance – especially during the breeding season. Then, as now, population densities would be expected to have been low given our current understanding of wolverine ecology.

An issue regarding the reliability of current and historical presence of species such as the wolverine based on anecdotal records considered to be unverifiable has been raised (Aubry and Lewis 2003; McKelvey et al. 2002; McKelvey et al. 2000). The issue is associated with using such observational data combined with verifiable records to arrive at conservation actions and management recommendations. While some investigators believe combining such occurrence records results in scientific and legal vulnerability, others apparently do not (Rowland et al. 2003). Based on historic and current information, this analysis assumes the potential for wolverine to utilize habitat associated with this project for one or more of its biological requirements.

Field Reconnaissance: This project is located on a prominent landscape feature providing a westerly extension to upper elevation habitat connected to a vast remote area of the Western Oregon Cascades. The 1998 habitat mapping revealed small patches of potential denning habitat located to the north and south of the project area. Rocky outcrops associated with some potential habitat are visible from various locations within the project area. Most potential denning habitat is considered to be relatively free of human disturbance from winter recreation activities throughout much of the breeding season. However, winter activities such as cross country skiing and snowmobiling can be expected to occur periodically in surrounding areas. Although currently small in scale, these types of winter recreation do have potential to disturb wolverine – particularly a female that may be utilizing nearby denning habitat. This project and surrounding areas are open to a variety of human recreation activities throughout the remainder of the year. Activities such as hiking, horse back riding, and pleasure driving are considered to have less potential to disturb any wolverine that may be simply foraging or dispersing through nearby habitat.

Risk Assessment:

Project Effects: No denning habitat exists in the project area. There exists some winter dispersal and foraging habitat however, because this project is a summer recreation project, there are no recognized direct or indirect effects to this species associated with the project.

Cumulative Effects: No summer habitat therefore no cumulative effects.

Analysis of Significance: This project does not propose any activity that would modify or otherwise disturb potential wolverine denning habitat. Considering the wide-ranging nature of daily movements associated with wolverine foraging and/or dispersal behavior along with the low likelihood of occurrence and timing of project activities, this project should not result in disturbance to the species. It is therefore determined this project should have **no impact to wolverines or their habitat.**

Communication with U.S. Fish and Wildlife Service: Not required.

Recommendations: None warranted.

4) Pacific Fringe-tailed Bat (*Myotis thysanodes vespertinu*)

Status: Federal: None
State: None
FS R-6: Sensitive

Determination: "no impact" to individuals or habitat for Pacific Fringe-tailed bats

Habitat: The Pacific fringe-tailed bat was added to the Regional Forester's sensitive animal list in November 2000 based on the Natural Heritage Ranking for the species. This species is one of the three named sub-species of fringed myotis (*Myotis thysanodes*), which is among the bat species whose specific habitat needs are addressed under a Northwest Forest Plan standard and Guideline (2001 ROD pp 37-38).

This bat is considered a riparian associate species that has been associated with mixed-conifer forests having relatively dry moisture regimes in the Coast Range and southern Cascade Range of Oregon (NatureServe 2005, O'Neil et al. 2001). Other scattered locations occur in the Washington Cascades and into California and the desert Southwest. They may occur from near sea level to above 4000' in Oregon and utilize a wide range of habitats – from forested to non-forested (Hayes 2003, Verts and Carraway 1998). Foraging behavior specific to this species is poorly documented, however they have been described as aerial foragers and hovering gleaners (O'Neil et al. 2001). Maternity sites, hibernacula, and most documented individual roost sites for fringed myotis occur in rock crevices, caves, or anthropogenic structures. However Weller and Zabel (2001) recently published data that show a significant amount of individual roosting occurring in trees/snags when this species occurs in or near forested habitat. Structures associated with live trees or snags have since been recognized as the primary roost structures for this species when it occurs in/near forested habitat and features associated with caves, mines, bridges or buildings may serve as primary roost structures in non-forested habitat (Hayes 2003). Knowledge of roosting behavior is almost exclusively based on data obtained during the breeding season for this species which likely extends from May through August (O'Neil et al. 2001).

Pre-field Review: The potential exists that at least single individuals may utilize available forage and roost habitat throughout the summer and early fall in or adjacent to areas where proposed project activities would occur.

Field Reconnaissance: Formal bat surveys within the project area have not been conducted. There are no caves, mines, or abandoned wooden bridges and buildings that would serve as suitable hibernacula nor are there known roost sites associated with other structures within 250 feet that would be affected by proposed activities. Some snags and decadent trees occurring adjacent to proposed activities contain features suitable for roost use by bats – including *Myotis thysanodes*.

Risk Assessment:

Project Effects: This project fell trees within a size class considered to provide potential as roosting habitat for *Myotis thysanodes* (Weller and Zabel 2001). Measures will be taken to protect snags or decadent trees adjacent to the project trees that may provide roosting habitat. Project activities proposed should not compromise roosting or foraging opportunities for any individual to any estimable extent, and therefore should not result in any direct effect to Pacific fringe-tailed bats.

Cumulative Effects: Current Standards and Guidelines governing management of the landscape in watersheds surrounding the project area provide direction that should provide for long-term maintenance of amount and distribution of suitable habitat for *Myotis thysanodes*. Because of the range and location

of land allocations in this area, it is unlikely that cumulative effects would influence the ability of local populations to persist, or become established, by eliminating demographic linkages beyond the species dispersal capabilities. The cumulative effect of this project on roosting or forage habitat as it pertains directly to this species would be immeasurable on a landscape scale.

Analysis of Significance: There is no known threat to hibernacula or maternity roosts from activities proposed under this Project. Suitable roosting habitat adjacent to the project areas should not be affected by this proposal, and activities that could result in disturbance to this species by influencing either roosting or foraging behavior are not expected to occur. It is therefore determined this project should have **no impact on Pacific fringe-tailed bats and their habitat.**

Communication with U.S. Fish and Wildlife Service: Not required.

Recommendations: Protect decadent trees and snags >12" dbh (roosting habitat) adjacent to the project area to the greatest extent feasible while conducting restoration activities.

5) Crater Lake Tightcoil (*Pristiloma arcticum crateris*)

Status: Federal: None
State: ODFW none / Natural Heritage S1
FS R-6: Sensitive / Survey and Manage Species

Determination: "no impact" to individuals or habitat for Crater Lake Tightcoil.

Status Background: The Crater Lake tightcoil has been listed as a Survey and Manage species since the 1994 Northwest Forest Plan ROD (USDA, USDI 1994). Under the 2001 ROD (USDA, USDI 2001) it was classified as a Category B species. The species was changed to a Category A species following the 2002 Annual Species Review where it remains considered rare, and for which pre-disturbance surveys are practical if habitat is present. It was added to the Regional Forester's sensitive animal list in July 2004.

The species is endemic to Oregon, and known to occur above 2000 feet elevation throughout the Oregon Cascades from the Mt Hood National Forest south to the Winema National Forest. As of August 2005 specimens had been confirmed at approximately 160 sites from very limited locations across this range (Duncan 2004, NatureServe 2005).

Habitat and Ecology: *Pristiloma arcticum crateris* "may be found in perennially moist situations in mature conifer forests and meadows among rushes, mosses and other surface vegetation or under rocks and woody debris within 10 m. of open water in wetlands, springs, seeps and streams, generally in areas which remain under snow for long periods in the winter. Essential habitat components include uncompacted soil, litter, logs, and other woody debris in a perennially wet environment." (Duncan 2004).

This species is among many organisms functioning as primary and secondary consumers that contribute to soil building and dissemination of spores and microbes. Having very limited dispersal capabilities on their own, they may be assisted in dispersal by other vectors capable of transporting mud that may contain eggs or adults across distances into suitable habitat (Duncan et al. 2004). An example of such dispersal could be individuals in mud transported on the hoof of a deer or elk.

Loss or degradation of suitable wetland habitat has been identified as the major threat to this species.

Pre-field Review: Prior to 2005 the presence of the Crater Lake Tightcoil had not been documented on the Willamette National Forest. However in May 2005 a specimen that has since been confirmed to be *Pristiloma arcticum crateris* was collected on the Middle Fork Range District south of this project area.

Nevertheless, based on habitat described in an established survey protocol for this species (Duncan et al. 2003) it is considered that suitable habitat for Crater Lake Tightcoil exists within the project area.

Field Reconnaissance: Based evaluation criteria to determine the need to conduct a survey, surveys for Crater Lake Tightcoil are not considered to be required for this project. This consideration is made because perennially wet habitat will not be degraded or removed with this project. For this reason the persistence of the species if present in the project area should not be compromised.

Risk Assessment:

Project Effects: Because measures will be taken to protect suitable habitat for this species against disturbance or modification from effects associated with proposed activities, there are no recognized direct or indirect effects to this species or its habitat from the project.

Cumulative Effects: Because measures will be taken to protect suitable habitat for this species against disturbance or modification from effects associated with proposed activities, there are no recognized cumulative effects to this species or its habitat from the project.

Analysis of Significance: Suitable habitat for the Crater Lake Tightcoil exists in portions of the project area, however measures will be taken to protect this habitat where it occurs against disturbance or modification from effects associated with proposed activities, therefore there should be **no impact to Crater Lake Tightcoil or its habitat** from this proposal.

Communication with U.S. Fish and Wildlife Service: Not required.

Recommendations: Ensure that measures identified to prevent habitat disturbance within 10 meters of perennially wet areas.

This document was prepared by:

/s/ Shane D. Kamrath Date: 7/27/2007

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Appendix 1: Literature referenced during this biological evaluation to arrive at determinations regarding potential effects/impacts from proposed projects and activities.

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