SAR Species at Risk

Report Criteria

TSA:	Okanagan	**Prov Stat:**	
BEC:	ICH mk	**Sec7**	

Species	Prov Status	Key Stand Features	Crown Closure	Critical Aspect 1	Slope Range Comment	Age Class	Topographic or Distinguishing Feature	Max Elevation	Lead Species	Additional Management Considerations	Likelihood
American Avocet (Recurvirostra americana)	Red-listed	water's edge, wetlands, alkaline ponds, mudflats	Not Applicable	Not Available	flat or gentle slopes	Not Applicable	wetlands, lakes with islands, alkaline ponds	Not available	Not Applicable	Likely more breeding pairs/small colonies at alkaline ponds and other types of wetlands than documented. Prudent to apply Riparian Area Management Guidebook or Riparian Area Regulation, regardless of wetland or pond size if suitable shoreline exists and water depth >.75m. A no resource extraction or access buffer may enhance success of nesting as well as provide post-fledging areas; adults move young several hundred m or more post-fledging for security. Information gaps large, so prudent to apply what little info is available.	Unknown
American Avocet (Recurvirostra americana)	Red-listed	water's edge, wetlands, alkaline ponds, mudflats	Not Applicable	Not Available	flat or gentle slopes	Not Applicable	wetlands, lakes with islands, alkaline ponds	Not available	Not Applicable	Likely more breeding pairs/small colonies at alkaline ponds and other types of wetlands than documented. Prudent to apply Riparian Area Management Guidebook or Riparian Area Regulation, regardless of wetland or pond size if suitable shoreline exists and water depth >.75m. A no resource extraction or access buffer may enhance success of nesting as well as provide post-fledging areas; adults move young several hundred m or more post-fledging for security. Information gaps large, so prudent to apply what little info is available.	Unknown
American Bittern (Botaurus lentiginosus)	Blue-listed	wetlands	Not Applicable	Not Available	Likely flat is most applicable, since nest and forage for in/near water.	Not Applicable	Wetland, riparian, aquatic systems	1300m	Not Applicable	Large wetlands, and aquatic and wetland complexes, should be avoided for any resource use, including timber harvest. For harvesting: maintain a buffer of existing stand, if present, surrounding wetland to avoid impact or disturbance; if grassland surrounding wetland, maintain existing grassland buffer with no roads, etc, sufficient to avoid impact. Dense emergent vegetation is a seral stage and wetland management (MoE?) should ensure sustainability by monitoring and maintaining water levels. Riparian Area Mgmt Guidebook may be used to determine buffer size.	Low-Moderate
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Badger (Taxidea taxus)	Red-listed	Not Applicable	<20%	N/A	Not Relevant	<4	Moraine (disturbed soils)	2800	Not Applicable	Where appropriate, apply restoration treatments to maintain/create grassland and open forest conditions suitable as badger habitat. Where feasible, maintain disturbed, early seral NDT3 sites as badger habitat by delaying and/or reducing restocking. Protect prey species. Do not use rodenticides. Off-road vehicle use (e.g., ATVs) should be restricted in areas of high badger use.	Low-Moderate

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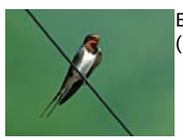
Band-tailed Pigeon (Patagioenas fasciata)	Blue-listed	Proximity of: mineral lick/spring, riparian, mature forest	Not Available	Not Available	Not Applicable	Not available; likely >4	Riparian, Mineral springs or mineral graveling sites, <400m from open water	<1000	Cwr, Hw, Dr, Fd, Pl, S	Open forest with mineral licks and/or springs, open water within <400m, and early seral components, particularly fruit bearing shrubs, are key habitat components; these mature montane forests provide habitats to flocks of migrating birds across the landscape; habitat mosaics may be important as clearcuts mature and produce forage plants Terrain and landscape important: proximity of key features should determine reserve size	Variable
Band-tailed Pigeon (Patagioenas fasciata)	Blue-listed	Proximity of: mineral lick/spring, riparian, mature forest	Not Available	Not Available	Not Applicable	Not available; likely >4	Riparian, Mineral springs or mineral graveling sites, <400m from open water	<1000	Cwr, Hw, Dr, Fd, Pl, S	Open forest with mineral licks and/or springs, open water within <400m, and early seral components, particularly fruit bearing shrubs, are key habitat components; these mature montane forests provide habitats to flocks of migrating birds across the landscape; habitat mosaics may be important as clearcuts mature and produce forage plants Terrain and landscape important: proximity of key features should determine reserve size	Variable
 Barn Swallow (Hirundo rustico)	Blue-listed	Riparian habitats and wetlands	Not Available	Not Available	Not Relevant	Not Available	Wetland, riparian, aquatic systems, Open forest or grasslands	Not available	Not Available	Likely use clearcuts since prefer open habitats; also, may use vets since nest in buildings, barns, etc. Retain herbaceous vegetation near wetlands/riparian	Not available
Barn Swallow (Hirundo rustico)	Blue-listed	Riparian habitats and wetlands	Not Available	Not Available	Not Relevant	Not Available	Wetland, riparian, aquatic systems, Open forest or grasslands	Not available	Not Available	Likely use clearcuts since prefer open habitats; also, may use vets since nest in buildings, barns, etc. Retain herbaceous vegetation near wetlands/riparian	Not available
Fisher (Martes pennanti)	Blue-listed	large, elevated CWD (>65cm DBH), decay classes 2-6 (logs), largest coniferous and deciduous trees available, particularly with heart rot and/or cavities, trees with brooms, wildlife tree classes 2-3 preferred, 2-6 acceptable	30	Not Available	Slope likely not applicable, critical habitat component: stand structure	>4	River/stream, wetlands	2500	Not Applicable	Old forest structure more important than forest type. Large diameter Act critical for breeding, largest trees within a landscape should be retained; highest habitat suitability are characteristics of old growth SBS, SWB, and BWBS zones, particularly riparian/wetland; retain trees with heart rot and >54cm bole diameter at 5m above ground; maintain connectivity between upland and riparian	Moderate

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Great Basin Spadefoot (Spea intermontana)	Blue-listed	Uncompacted soils adjacent/nearby aquatic systems, CWD and vets (CWD recruitment)	<30%	S, SW	As per M. Sarell	Unknown	Shallow and ephemeral water: River/Stream, Flooded land, Lake, Pond	1200	Unknown	Confirm breeding by tadpole identification in Jun-Jul; breeding typically < 600m elevation, aquatic habitat; foraging and hibernation in xeric, upland sites; frequent valley bottoms. See FSP results and strategies	Very Low
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Great Blue Heron (Ardea herodias herodias)	Blue-listed	Riparian forest, including Act and mixed conif-decid, trees capable of supporting nest platform 50-100cm diameter	Not Available	Not Relevant	Not Relevant	>2	valley bottoms	1100	Act, Cw, Fd, Hw, Sx	Avoid disturbance mid-February-August 31 (breeding period) within 500m of breeding colonies; no harvest core (nest/colony), partial cut 300m buffer, clearcut beyond	Low-Moderate
Great Blue Heron (Ardea herodias herodias)	Blue-listed	Riparian forest, including Act and mixed conif-decid, trees capable of supporting nest platform 50-100cm diameter	Not Available	Not Relevant	Not Relevant	>2	valley bottoms	1100	Act, Cw, Fd, Hw, Sx	Avoid disturbance mid-February-August 31 (breeding period) within 500m of breeding colonies; no harvest core (nest/colony), partial cut 300m buffer, clearcut beyond	Low-Moderate
Grizzly Bear (Ursus arctos)	Blue-listed	Riparian habitats and wetlands, avalanche tracks and run out zones, Hedysarum (pea family/vetch) and glacier lily complexes, Sub-alpine parkland meadows, berry-producing sites	Not Available	N (denning)	generally steep, north aspects (denning)	1-9	Mid-slope (for denning), Slides (avalanche chutes), talus slopes, alpine meadows, wetlands	Alpine	Not Applicable	Grizzly bear mgmt should follow a broad landscape approach; listed here are stand and watershed requirements only; see high level plans (ie: FSP results and strategies). At cutblock level, key is to remove bear attractants, and at watershed level implement aggressive access mgmt plan that deactivates roads asap. Across landscape and over time, early seral stages that produce herbs and berries are critical for foraging.	Moderate
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Lewis's Woodpecker (Melanerpes lewis)	Red-listed	Preferred tree size >44cm, in absence of large trees retain >29cm (acceptable)	<25%	W (west side of valleys)	Not Relevant	5-9	Not Applicable	1160	Act, Fd	Nests found >1000m elevation were at burn edges; used shrub, herbeceous openings to forage for insects See FSP results and strategies	Low
Northern Leopard Frog (Rana pipiens)	Red-listed	Not Applicable, frogs avoid wooded areas; but will travel overland in 15-30cm tall veg.	Not Applicable	Not Available	Not Relevant	Not Applicable	Wetland, riparian, aquatic systems	1400	Not applicable; avoid road construction	Frogs breed in shallow ponds or wetlands, may disperse through connecting riparian areas to deeper ponds that do not freeze to the bottom, where they remain overwinter. This core area (1x2km) should be protected from traffic and livestock, with a 50m buffer (management zone). Winter area =1.7km-800m from breeding and adjacent terrestrial foraging habitat.	Very Low
Northern Myotis (Myotis septentrionalis)	Blue-listed	wildlife trees with bark, nearby mines, caves, crevices, tunnels, Riparian habitats and wetlands	Not Available	Not Available	Not Applicable	Not available; likely >4	Caves or cave-like features, Wetland, riparian, aquatic systems	Not available	Not Available	Not available in IWMS; information gaps considerable. May prefer mines over caves, crevices for roosting. Where mines occur, avoid reducing/fragmenting mature-old forest stands both coniferous and deciduous, particularly if riparian nearby. If occurrence known or suspected, may be best to consult MoE/RPBio for best mgmt strategy.	Moderate
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Olive-sided Flycatcher (Contopus cooperi)	Blue-listed	forest openings, Snags, riparian forest, tall live conifers, standing dead trees taller than surrounding forest	Not Available	Not Available	May not be relevant if wetland/riparian/bog dependent	Not Available	Wetland, riparian, aquatic systems, marsh, bog/fen; ponds	Not available	Not Available	Variable height snags appear to be critical: used for perching, foraging (insect capture). Live coniferous trees may be most important for nest placement (2-15m above ground). Harvest systems should mimic natural disturbance regime: fire, insect, flood, where applicable (ie: openings with standing dead trees some taller than surrounding forest).	Moderate
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Racer (Coluber constrictor mormon)	Blue-listed	Rock outcroppings, talus, ground vegetation cover, boulders, CWD	Not Applicable	S	Warm slopes	Not Applicable	rock outcrop, talus, rock fissures		Not Applicable	Maintain/maximize connectivity between dens and foraging habitats	Low
Sandhill Crane (Grus canadensis)	Blue-listed	Riparian forest concealing characteristics, wetlands	Not Available	Not Available	Flat terrain	0-9	Wetland, riparian, aquatic systems	1220	Not Available	Maintain shallow freshwater wetlands/aquatic systems, retain adjacent riparian forests; avoid harvesting within 800m of aquatic systems used for breeding Apr-Aug (breeding season)	Low-Moderate

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Short-eared Owl (Asio flammeus)	Blue-listed	ground vegetation cover	Not Applicable	Not Available	Not Applicable	<3	Open areas, wetlands	975	Not Applicable	Use non-forested, 'grassland' sites (incl clearcuts). Maintain high grass for microtine population abundance; avoid road building through known nest areas	Low
Short-eared Owl (Asio flammeus)	Blue-listed	ground vegetation cover	Not Applicable	Not Available	Not Applicable	<3	Open areas, wetlands	975	Not Applicable	Use non-forested, 'grassland' sites (incl clearcuts). Maintain high grass for microtine population abundance; avoid road building through known nest areas	Low
Tiger Salamander (Ambystoma tigrinum)	Red-listed	riparian forest, wetlands, grassland openings	Not Available	Unknown	Not Applicable	Not Available	Shallow and ephemeral warm water: Lake, Pond, Wetlands	1250	Not Available	Prefer grassland/sage habitat; but will use open forest with uncompacted, well developed soils adjacent to riparian and wetlands at higher elevations See FSP results and strategies	Unknown
Townsend's Big-eared Bat (Corynorhinus townsendii)	Blue-listed	Mixed deciduous-coniferous, multi-layered canopy patches, shrubs	Not Available	Not Available	Not Applicable	Not Available	Caves or cave-like features, mosaic landscapes	Not available	Not Available	Tend to avoid grasslands and forage at forest canopy/shrub/riparian vegetation edges	Unknown
Townsend's Big-eared Bat (Corynorhinus townsendii)	Blue-listed	Mixed deciduous-coniferous, multi-layered canopy patches, shrubs	Not Available	Not Available	Not Applicable	Not Available	Caves or cave-like features, mosaic landscapes	Not available	Not Available	Tend to avoid grasslands and forage at forest canopy/shrub/riparian vegetation edges	Unknown
Western Grebe (Aechmophorus occidentalis)	Red-listed	Shores of large lakes, marsh edges, wetlands, riparian	Not Available	Not Available	Not Applicable	Not Available	large lakes, marshes, estuaries	Not available	Not Available	Large information gaps for W. Grebe; main impacts appear to be nest disturbance at colonies and complete breeding failure due to boat and water sports on lakes. Although little impact appears to be generated by forestry, avoiding road construction near breeding colonies and leaving a buffer, if any, would help. Similarly, avoid disturbance of coastal wintering colonies. W. Grebes may also overwinter on coastal rivers and interior lakes that do not freeze. Declining across the province.	Unknown

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Western Painted turtle (Chrysemys picta)	Blue-listed	Large CWD, wetlands	Not Available	S slope fr wetland	Not Applicable	Not Available	Permanent and ephemeral: River/Stream; Flooded Land; Lake; Marsh	Not Available	Not Available	Little information is available for Painted turtles; where they are known to occur, avoid development and disturbance of aquatic systems and adjacent upland, particularly access; consult MoE for Best Management Practices (fencing, tunnel may be requried)	Unknown
Western Painted turtle (Chrysemys picta)	Blue-listed	Large CWD, wetlands	Not Available	S slope fr wetland	Not Applicable	Not Available	Permanent and ephemeral: River/Stream; Flooded Land; Lake; Marsh	Not Available	Not Available	Little information is available for Painted turtles; where they are known to occur, avoid development and disturbance of aquatic systems and adjacent upland, particularly access; consult MoE for Best Management Practices (fencing, tunnel may be requried)	Unknown
Western Rattlesnake (Crotalus oreganus)	Blue-listed	CWD, riparian/wetland vegetation	Not Applicable	S	Warm slopes during cooling seasonal temperatures	Not Applicable	rock outcrop, coarse talus, deep rock fissures		Not Applicable	Maintain/maximize connectivity between dens and foraging habitats	Low
Western Rattlesnake (Crotalus oreganus)	Blue-listed	CWD, riparian/wetland vegetation	Not Applicable	S	Warm slopes during cooling seasonal temperatures	Not Applicable	rock outcrop, coarse talus, deep rock fissures		Not Applicable	Maintain/maximize connectivity between dens and foraging habitats	Low
Western Skink (Eumeces skiltonianus)	Blue-listed	CWD, rocks, riparian, forest openings	Not Available	S	Warm, south aspect slopes for nesting	Not Available	rock outcrop, talus, rock fissures		Not Available	Use a variety of habitats where rock/talus occur, including old-growth and younger forests; require CWD	Unknown
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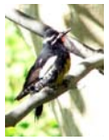
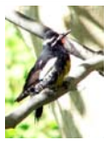
 Williamson's Sapsucker (Sphyrapicus thyroideus thyroideus)	Red-listed	All vets, all mature trees with decay, cavities, damage sign, wildlife sign	<75%	S, SE, SW	Not Relevant	>4	Low-mid intensity burn	1490	At, Ct, Ep, Fd, Lw, Pl, Se, Sx	On south aspects, retain patches of some mature and all veteran Lw, Py, Pl, Fd >60cm DBH and At >30cm DBH with broken or dead tops, heart rot decay, cavities, feeding signs; silviculture system can be patch or scattered tree retention; increase retention of mature-old mixed spp stands; particularly incorporate large decadent Lw into landscape planning (OGMA, UWR, etc)	Low
 Williamson's Sapsucker (Sphyrapicus thyroideus thyroideus)	Red-listed	All vets, all mature trees with decay, cavities, damage sign, wildlife sign	<75%	S, SE, SW	Not Relevant	>4	Low-mid intensity burn	1490	At, Ct, Ep, Fd, Lw, Pl, Se, Sx	On south aspects, retain patches of some mature and all veteran Lw, Py, Pl, Fd >60cm DBH and At >30cm DBH with broken or dead tops, heart rot decay, cavities, feeding signs; silviculture system can be patch or scattered tree retention; increase retention of mature-old mixed spp stands; particularly incorporate large decadent Lw into landscape planning (OGMA, UWR, etc)	Low
Wolverine (Gulo gulo)	Blue-listed	Mature - old-growth structure	Not Applicable	Not applicable	Not Relevant	>4	valley bottoms, Riparian corridors	Not available	Not Applicable	Landscape planning is very important for wide-ranging wolverines: adjacency of early and late seral structural stages is important to provide habitat features across all BEC (elevations); avoid development on both sides of a watershed at the same time and provide old forest connectivity between watersheds as travel corridors.	High
Wolverine (Gulo gulo)	Blue-listed	Mature - old-growth structure	Not Applicable	Not applicable	Not Relevant	>4	valley bottoms, Riparian corridors	Not available	Not Applicable	Landscape planning is very important for wide-ranging wolverines: adjacency of early and late seral structural stages is important to provide habitat features across all BEC (elevations); avoid development on both sides of a watershed at the same time and provide old forest connectivity between watersheds as travel corridors.	High