## Appendix B: MAINTENANCE GUIDANCE FOR WILDLIFE TYPICALLY FOUND NEAR OR IN STORMWATER MANAGEMENT FACILITIES

Species	Locations	Season to Avoid	Maintenance	Other
Species	Found On-site	Maintenance	Tips	Information
Birds	(all confirmed near	r or on sites)		
American Goldfinch	Deciduous trees, shrubs, grasses.	Late spring/ summer		Leaf and ground, seed and insect feeder. 3 to 4 weeks till young on their own.
Barn Swallow	Near buildings, under structures, in cliffs.	Late spring/ summer	Nests can be removed before onset of egg laying. Once eggs, ille- gal to remove or destroy nests-	Aerial insect feeder. 5 -6 weeks from egg lay to young on their own.
Bewick's Wren	Small deciduous shrubs and snags.	Late spring /summer	Do not remove snags unless absolutely nec- essary	Leaf insect, seed and fruit feeder. 4 weeks from egg lay to young on their own.
Black- capped Chickadee	Shrubs, short deciduous tree snags	Summer	Do not remove snags unless absolutely nec- essary	Leaf, insect, seed and fruit feeder. 4-41/2 weeks from egg lay to young on their own.
Black-head- ed Grosbeak	Large deciduous shrubs	Summer	_	Leaf, insect, seed and fruit feeder. 3 1/2 to 4 weeks from egg lay to young on their own.
Band-tailed Pigeon	Forested areas	Early spring through summer	Often found on ground 5-7 days prior to being able to fly. This is a normal part of fledging process	_
Bushtit	Deciduous shrubs	Late spring/ summer	_	Leaf, insect, seed and fruit feeder. 3 1/2 to 4 weeks from egg lay to young on their own.
Cassin's Vireo	Small shrubs and trees	_	_	Bark insect, seed and fruit feeder. 3 1/2 to 4 weeks from egg lay to young on their own.

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Birds	(all confirmed near	r or on sites)		
Chestnut- backed Chickadee	Shrubs, short deciduous tree snags	Summer	_	Leaf, insect, seed and fruit feeder. 4-41/2 weeks from egg lay to young on their own.
Common Barn Owl	Tree cavities, inside structures, lofts, underside of bridges and overpasses	March through late summer	_	Consumes primarily rodents
Cooper's Hawk	Forested areas	Spring/ summer	_	Consumes primarily birds
Cowbird	Deciduous shrubs and ground	Late spring/ summer	_	Ground insect & seed feeder. 3 weeks from egg lay to young on their own. Lay eggs in other birds' nests.
Crow	Shrubs and trees	Late spring/ Summer	Do not interfere with young	Ground feeder. 6 1/2 to 7 1/2 weeks from egg lay to young on their own. Young often found on ground during fledging. They are cared for by extended family (parents and youngsters from prior years)
Dark-eyed Junco	Ground and steep banks	Spring/ summer	_	Ground seed and insect feeder. 3 to 4 weeks from egg lay to young on their own. Ground nester.
Downy Woodpecker	Short and tall snags.	Spring/ summer	Do not remove snags unless absolutely nec- essary	Bark insect feeder. 4 1/2 to 5 from egg lay to young on their own
Great Blue Heron	Tall deciduous trees, occasional- ly ground, shrub, ledges.	Late spring/ summer	_	Bank and water feeder. Eats fish, aquatic insects and small animals. 12 to 13 weeks from egg lay to young on their own

Species	Locations Found On-site	Season to Avoid Maintenance	Maintenance Tips	Other Information
Birds	(all confirmed near	or on sites)		
Great Horned Owl	Large trees-large stick nests typi- cal	January onward through mid summer	Owls frequently fledge prematurely. Can either be left alone on ground or placed back up on branch	Can be very territorial especially when young are on ground. Consumes mammals, birds, just about anything that moves
House Finch	Buildings, medium deciduous trees and shrubs.	Spring/ summer	_	Leaf and ground seed, sap and fruit feeder. 3 1/2 to 4 1/2 weeks from egg lay to young on their own
House Sparrow	Buildings, trees, cavities/crevices		Non-native (remove if possible)	Leaf and ground seed and insect feeder. 3 1/2 to 4 1/2 weeks from egg lay to young on their own
Kestrel	Snags or cliffs	Spring/ summer	Do not remove snags unless absolutely necessary.	Aerial and ground insect and small animal feeder. 6 1/2 to 8 weeks from egg lay to young on their own
Killdeer	Ground, gravelly areas - notorious for nesting is locations with high levels of activity (playgrounds, parking lots, next to roads and side walks)	Spring/summer	Best to rope off area around nest. Should be as large an area as possible but at least a 10 foot radius. Young are often mistakenly rescued because they appear helpless, but should absolutely be left alone.	Ground nester. Ground insect feeder. 7 weeks from egg lay to young on their own. Once they hatch they will leave the nest area within a day or so. Young are precotial (able to move about and feed on own at hatching). They leave nest within a day of hatching.
Lazuli bunting	Short shrubs and tangles	_		Leaf and ground seed and insect feeder. 3 to 3 1/2 weeks from egg lay to young on their own

Species	Locations Found On-site	Season to Avoid Maintenance	Maintenance Tips	Other Information
Birds	(all confirmed nea	r or on sites)		
Mallard	Banks and ground near water. Often nest away from water	Early spring to mid summer	Very important not to interfere with this process. Although the trip from nest to water is hazardous, attempting to interfere by capturing ducklings or ducklings and parent usually just makes a bad situation worse	Aquatic insect and plant feeder. 10 to 13 weeks from egg lay to young on their own. Young are precotial and will leave nest within 2-3 days of hatching. Mother will lead young to water at that time. Dumping of domestic ducks and geese into parks is a common illegal activity. In areas where there is an over-population, male ducks will sometimes attempt to copulate with individual females on mass leading to injuries.
Mourning Dove	Common to trees and ground feeder.	_	-	Seed and insect feeder.
Northern Flicker	Snags, cavities, poles/posts, banks and buildings.	Late spring/ summer	Do not remove snags unless absolutely necessary.	Bark and ground insect feeder. 5 to 6 weeks from egg lay to young on their own
Red-tailed Hawk	Deciduous trees and cliffs	Spring/ summer	_	Aerial rodent, reptile, insect and other bird feeder. 10 1/2 to 11 1/2 weeks from egg lay to young on their own
Red-winged Blackbird	Reeds/ cattails, rarely low trees near water	Late spring/ summer	_	Leaf, ground, and aerial insect and seed feeder. 3 to 3 1/2 weeks from egg lay to young on their own

Species	Locations Found On-site	Season to Avoid Maintenance	Maintenance Tips	Other Information
Birds	(all confirmed near	r or on sites)		
Robin	Coniferous medium and small trees	Early spring/ summer	_	Leaf and ground insect and fruit feeder. 3 1/2 to 4 1/2 weeks from egg lay to young on their own
Rock Dove	Anywhere	Anytime of year	Non-native-not pro- tected	-
Ruby- crowned Kinglet	Coniferous small trees	Late spring/ summer	_	Leaf and aerial insect, fruit, and sap feeder. 4 to 4 1/2 weeks from egg lay to young on their own
Rufous Hummingbird	Coniferous trees and vines	Late spring/ summer	_	Aerial nectar and insect feeder. 4 1/2 weeks from egg lay to young on their own
Savanna Sparrow	Ground depression	Late spring/ summer	_	Ground insect, snail and seed feeder. 2 1/2 to 3 1/2 weeks from egg lay to young on their own. Ground nester.
Scrub Jay	Short shrubs & trees	Early spring/ summer	_	Ground insect, berry and nut feeder. 5 weeks from egg lay to young on their own.
Song Sparrow	Ground and shrubs	Spring/ summer	_	Ground and leaf insect and seed feeder. 3 weeks from egg lay to young on their own
Starling	Buildings and deciduous trees.		Non-native species- not protected - remove when possible.	Ground and leaf insect, fruit and seed feeder. 4 1/2 to 5 weeks from egg lay to young on their own.

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Birds	(all confirmed nea	r or on sites)		
Stellers Jay	Forest habitat	Spring-summer	_	_
Towhee	Short shrubs and ground	Spring/ summer	_	Ground insect, fruit and seed feeder. 2 1/2 weeks from egg lay to young on their own. Ground nester.
Tree Swallow	Tree snags or cavities	Late spring/ summer	Do not remove snags unless absolutely necessary	Aerial insect and berry feeder. 5-6 weeks from egg lay to young on their own
Turkey Vulture	Tree snags, cliffs, caves or stumps	Late spring/ summer	_	Aerial and ground carrion feeder. 16 to 18 1/2 weeks from egg lay to young on their own
Varied Thrush	Small coniferous trees	Late spring/ summer	_	Ground and leaf insect and fruit feeder. 3 to 4 weeks from egg lay to young on their own
Vaux Swift	Hollow snags, chimneys	Late spring, summer, fall through mid October	Swifts nest and roost in chimneys	May roost in chimneys during fall migration (September and early October). Should avoid furnace/fires if swifts are nesting or roosting
Violet-green Swallow	Tree snags and cavities	Late spring/ summer	Do not remove snags unless absolutely necessary	Aerial insect feeder. 3-4 weeks from egg lay to young on their own
Warbling Vireo	Deciduous trees and shrubs	_		Leaf insect and berry feeder. 3 weeks from egg lay to young on their own
Western Screech Owl	Cavity nester	March through later summer	Owls frequently fledge prematurely. Can either be left alone on ground or placed back up on branch	Consumes rodents, insects, occasionally small birds

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Birds	(all confirmed ne	ar or on sites)		
Western Tanager	Evergreen trees, rarely deciduous	Late spring/ summer	_	Aerial and leaf insect and fruit feeder. 3 1/2 to 4 weeks from egg lay to young on their own
Western Wood Pewee	Small coniferous trees	-	_	Aerial insect feeder. 3 1/2 to 4 1/2 weeks from egg lay to young on their own
Wood Duck	Snags and small tree cavities	Spring/ summer	Do not remove snags unless absolutely nec- essary	Aquatic animal and seed feeder. 11 1/2 to 15 weeks from egg lay to young on their own
Yellow- rumped Warbler	Small and medium coniferous trees	_	_	Aerial and leaf insect and berry feeder. 3 to 3 1/2 weeks from egg lay to young on their own
Amphibiar Reptiles	(some confirmed	l, others potentially pr	resent)	
Bullfrog	Warm, sunny ponds and wet- lands	-	Remove whenever possible large sized frogs	Introduced Species. Two years or more from egg lay to adult
Long-toed Salamander	Ponded water, logs	Late winter to mid spring for eggs in shallow waters	Observe before maintenance January through June	Invertebrate feeder. 10 to 16 weeks from egg lay to metamor- phosis. Juveniles and adults underground
NW Salamander	Ponded water, logs	Early to mid spring for eggs in shallow waters	Observe before maintenance year round	Invertebrate feeder. 16 weeks minimum from egg lay to meta- morphosis. Some lar- vae stay in ponds. Juveniles and adults underground
Pacific Treefrog	Marsh, brush, disturbed areas, and shallow ponded water	Early spring to early summer for eggs in shallow waters	Observe before main- tenance year round	Invertebrate feeder (as adults) - diatoms as tadpoles. 6 to 12 weeks from egg lay to metamorphosis

Species	Locations Found On-site	Season to Avoid Maintenance	Maintenance Tips	Other Information
Amphibian Reptiles	(some confirmed	, others potentially pr	resent)	
Red-legged Frog	Forested wet- lands, well shad- ed ponds	Winter to early spring for eggs in shallow waters	Observe before maintenance year round	Invertebrate feeder (as adults) - diatoms and decaying vegeta- tion as tadpoles. 8 to 20 weeks from egg lay to metamorpho- sis. Need ponds year round
Roughskin Newt	Ponded water, decaying vegeta- tion, grasses	Mid spring to summer for eggs in shallow waters	Observe before main- tenance year round	Invertebrate feeder. 10 to 16 weeks from egg lay to metamor- phosis
Western Painted Turtles	Slow water areas	Summer to spring for eggs on land. In water year round	Western Pond and Western Painted Turtles are the only native turtles in Oregon. All other species are introduced and should be removed.	Vegetation, inverte- brate, and small fish feeder. Eggs laid on land in summer - do not emerge until fol- lowing spring.
Mammels	(observed and pr	redicted on-site)		
Bats	Building, tree and cave cavities and crevices	_	Provide and protect crevice areas when possible.	Aerial insect feeder. Roosts in colonies in summer. Hibernate in winter. 7 to 8 week gestation period ending in mid-June to mid-July. Young may not fledge until mid to late August.
Beaver	Banks near woody and brushy areas near water. Primarily den in banks in NW	_	Avoid nest and dam removal unless absolutely necessary	Aquatic and upland vegetation and bark feeder. Litter of 2-3 young. Young remain with parents for up to two years
Chipmunks	Ground, small coniferous trees and shrubs Ground or crevice nester.	Spring/ summer	_	Vegetation and insect feeder. Hibernate in winter. Active on sunny days. 4 to 6 week gestation peri- od with 5-7 young born in summer. Weaned in 6 weeks.

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Mammels	(observed and pred	licted on-site)		
Coyote	Various	Can breed at any time of year but mostly spring and summer	Do not approach animal.	Small mammal, carrion, insect and fruit feeder. Den s under rocks or in caves or banks. 2-4 pups a litter in the spring or early summer
Deer Mouse	Ground in coniferous forest and rockfall areas	Virtually year- round	_	Nocturnal. 3 week gestation bearing 3-4 young. Young dis- perse after 6 weeks. 2-4 litters between Feb to Nov
Ground Squirrels	Ground or rockpile	_	_	Feed on almost anything - green vegetation preferred. Dormant for half the year. <b>Burrower</b> .
Hares Rabbits	Brush and grass areas	Early spring/ summer	If nest is discovered, it should be left undisturbed. Parent most likely will NOT be seen.	Vegetation feeder. Active in morning and evening hours. 4 to 7 week gestation period. Ground/burrow nester. Brush rabbits nest above ground. Young are fed infrequently-usually only morning and evening and otherwise are left alone by mother.
Minks	In or near rivers, creeks and marshes	_	_	Aquatic and terrestrial animal feeder
Moles	Deciduous woody and brushy areas			Grub, insect and small invertebrate feeder. Breed in spring

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Mammels	(observed and pred	licted on-site)		
Mule Deer	Coniferous forests and meadow areas		Avoid interfering with fawns. Fawns will frequently be found alone while mother grazes nearby. Do not assume that a lone fawn is an orphan. Humans should vacate the area immediately to allow mother to reclaim youngmay take a few hours.	Vegetation feeder - mostly at twilight. Gestation over 4 months, usually two fawns born in late spring. Young are weaned in 3-4 months. Fawns fre- quently found alone while mother is graz- ing nearby
			Do not attempt to help injured adult deer. Attempts to do so can be more dangerous to the animal than leaving it alone. There is no rehabilitation for injured adult deer.	
Muskrat	Banks near small creeks, ponds and marshes	_	_	Aquatic plant, snail and amphibian feeder. Gestation period of 4 weeks. One liter of 3-9 young in spring and another in late summer (sometimes a third litter). Burrower.
Nutria	Marshy shores of ponds and streams or logs/debris piles in water	_	Non-native species- should be removed whenever possible.	Vegetation feeder. 4 to 4 1/2 month gestation producing 3-5 young. <b>Burrower.</b>
Opossums	Tree cavities, rock piles, under or in buildings	_	Non-native species- should be removed when possible.	Nocturnal. Insect, fruit, and other animal feeder. Breeds late winter to late fall. 2 week gestation period. Up to 7 young wean after 3 months. Good climber.

Species	Locations Found On-site	Season to Avoid Maintenance	Maintenance Tips	Other Information
Mammels	(observed and pred	licted on-site)		
Raccoons	Marshy areas around stream or pond. Can be found anywhere- even very urban areas	_	Avoid animals - especially those displaying odd behavior.	Nocturnal. Eats almost everything both aquatic and terrestrial. <b>Ground burrower.</b> Dens under logs, in crevices and pipes. Gestation period 6 weeks bearing 4 young. Wean by end of summer.
River Otter	Near or in large streams or wetlands	_	_	Small animal feeder. Dens located in banks
Pocket Gophers	Grasses and meadows	_	_	Root/tuber feeder. 3 weeks gestation peri- od producing 5-6 young. Active year round. <b>Burrower.</b>
Shrew	Dense vegetation and grasses	_	_	Insect feeder - throughout day. Nests in debris and groundcover
Skunk	Marshes and riparian areas	_	_	Insect and vegetation feeder. Shallow winter hibernation. Breeds early spring. Gestation is 8 1/2 weeks with 6 in a litter.
Tree Squirrels	Ground, trees, and shrubs			Nut and insect feeder. Dormant over winter. Gestation is 6 to 7 weeks, 3-5 young per liter and up to 2 lit- ters a summer. Tree nester. Fox squirrels and eastern grey squirrels are non- native. These are the most common squir- rels found in Portland and Vancouver

Species	Locations Found On-site	Season to Avoid Maintenance	Maintenance Tips	Other Information
Mammels	(observed and pred	licted on-site)		
Vole (tree or meadow mouse)	Meadows and marshes	_		Seed, nut and bark feeder. 2 to 3 week gestation with 4-6 young. 2 or more liters a year. Young are weaned in 3 weeks. Ground nester (usually under logs)
Weasel	Brush, thickets, log and rock piles	_	_	Small animal feeder. Breeding in mid-summer with 4-7 young in the spring. Weaned in 5-6 weeks
Wood Rat	Rocks, caves and crevices	_	_	Seed, berry and bark feeder. May feed on insects or carrion. Nocturnal. 3-4 young in 2 liters a season. Ground nester.

## Resources

The Birder's Handbook, Ehrlich, Dobkin and Wheye, 1988 Amphibians of Oregon, Washington and British Columbia, Corkran and Thoms, 1996 Mammals of the Northwest, Earl Larrison, 1976 Personal reviews by local experts: Char Corkran, Henry Nehls, Bob Sallinger