

FOR THE BIRDS

Recommendations to the Restoration Committee For Patterson Point Preserve

**Prepared February, 2015
Edited 2016**

By Leah Norwood

BACKGROUND

This document stems from a group of questions asked about the birds in PPP in relation to the restoration process. These questions were posed by both Victoria Wilke and others working in the preserve.

The result is a set of recommendations (below) to lessen the impact on the welfare of the birds during the restoration and to set the preserve up as a wildlife draw. Additionally, this document provides data about the birds in PPP and attempts to answer the questions asked.

RECOMMENDATIONS

- 1. At any given time, do not allow 50% or more of the preserve to be without ground cover.** This means that there should be 4-5" of ground cover, shrubs or thickets on the ground in 50% or more of the preserve at all times. As-of January, 2015 about 50% (or more) of the preserve is without ground cover.
- 2. Plant (or fill in) all areas that do not have 4-5" of ground cover.** This includes areas already designated as "planted" or any areas already cleared but without 4-5" of ground cover. Connect the "islands" of plants.
- 3. Watering in the Preserve.** Always water new plants. If drought conditions prevail, water in the preserve to encourage plant growth.
- 4. Do not clear an area in the preserve without planting immediately after clearing.** Size of areas cleared should be no larger than 3'X6' with ground cover on all sides of the cleared area (even if it is ivy or other non-natives). The new plants should be watered as-necessary to encourage growth. Once there is 4-5" of ground cover, another area can be cleared and planted. [Alternatively, go 6' away from the newly cleared area before clearing and planting another 3'X6' area that is surrounded by established ground cover.]

RECOMMENDATIONS (cont.)

- 5. No foot paths larger than 1-3' wide should be in the preserve.** The path to the beaches is 6-feet wide because of our easement requirements and for "turning the corner" with boats. Foot paths, on the other hand, do not need to be this large. Foot paths for adjacent property owners should be no larger than 3' across—preferably smaller. Foot paths for preserve maintenance should be no larger than 3' across.
- 6. Thickets should be at least 10'X10' with contiguous ground cover.**
 - Exceptions to contiguous ground cover include a thicket being on the main path or on foot paths (for adjacent property owners and for preserve maintenance); all other sides of the thicket should be surrounded by 4-5" of ground cover.



The thicket pictured to the left is across the main trail from the Kessler's "barn." It is a good size; it is better than no thicket at all. However, it's an "island" and needs ground cover around it (being on the path is fine for one side of the thicket). Again, connect the "islands" of plants.



The thicket pictured to the left is across the main trail from the "Keep it Tidy" tree over towards the swale farthest from the river (the river is in the far background). This is an excellent thicket in that it is NOT an island and is surrounded by ground cover. Replace the ivy with native ground cover, and it's perfect.

RESPECT THE WILDLIFE

NOTES ABOUT BIRDS IN PPP SINCE 2011

Pacific Wren: No longer in the preserve due to the disruption of clearing and loss of continuous habitat. (They're still all over Villa Grande.)

Brown Creeper: Only heard once in the preserve in the last year (2014). They've been seen, but an indicator of nesting is their song to establish nesting territory. LATER NOTE: A successful nest was found (adults feeding young at the nest) along the main path in 2015, and I am greatly relieved.

California Quail: While they still bring their young to the preserve, they need more brushy scrub such as the massive rose along the hedgerow or non-native blackberries for these birds to consider nesting. LATER NOTE: part of the rose has been destroyed by one of our members in 2015.

All Young Birds: All young birds require sufficient ground cover to hide in before they become proficient fliers. **To encourage birds to nest in the preserve: PROVIDE GROUND COVER.**

ANSWERS TO QUESTIONS ASKED

Why can't we work more months of the year in the preserve? How did we determine which months not to work?

- **Timing for NOT working in the preserve is during bird nesting season, March 1—September 1.** This is based on the 2011-2015 Sonoma County Breeding Bird Atlas (SCBBA) dates. There is no perfect time to avoid bird nesting activity. These dates allow:
 - Six months for people to work in the preserve &
 - Six months for the birds to nest in the preserve (along with human recreational use).
 - NOTES on bird species of interest regarding timing:
 - *California & Spotted Towhees* have third nests into October;
 - *Anna's Hummingbirds'* first nests are December-February;
 - *Killdeer & Spotted Sandpipers* nest April-July. Both species COULD nest on the gravel beach and/or the spit but will not nest there because of recreational use;

- *Band-tailed Pigeons & Mourning Doves* can nest in any month of the year.

What are flight corridors in the preserve?

- **Charts attached show areas where specific bird species are in the preserve. It's recommended to consider nest height or foraging levels as "flight corridors" (refer to the columns: NEST HEIGHT and Where in PPP? for this information).**
 - The term "flight corridor" is used to refer to bird migration.
 - The Russian River provides a flight corridor of sorts around the preserve.
 - The preserve itself provides a "fly over" or resting area for birds not following the river.

What areas are most used by birds in the preserve?

- **In order of most-to-least for general use: trees, water/shore, ground, shrubs**
- **In order of most-to-least for number of nesting species: shrubs, ground, trees, water/shore**
 - This is based on size of territory for individual species.
 - For example, the smaller the territory size of a species, the more nests there will be in the preserve.
 - *Song Sparrows, California & Spotted Towhees* have very small territories so we probably have from 2-5 different pairs of each nesting the preserve in any given season.
 - *Swainson's Thrushes*, on the other hand, have much larger territories so that we have only one pair nesting in the preserve in any given season, if we're lucky.
 - Note that three of the species mentioned above all nest on the ground or no higher than 12 feet.

How big should thickets be in the preserve?

- **General rule of thumb is about 10' X 10'**
- **NOTE: To be "better than nothing" thickets should be surrounded by ground cover; they should NOT be islands**
- **NOTE: The only exceptions to "islands" are if ONE SIDE of the thicket is on the edge of the main path to the beaches [the other 3 sides have ground cover] or if there is no more than 1-3 feet of "empty" ground on ONE side of the thicket (two sides at the very most during restoration).**
 - A caveat about paths in the preserve other than the main path: I don't know status on paths for adjacent property owners, but the fewer paths, the better.

What is the most sensitive bird habitat in the preserve?

- From 10 feet to the ground.

What is the most important bird/restoration area in the preserve?

- The ground: to provide 4-5" of ground cover everywhere in the preserve that is not a path.

Page 2

MAP OF PPP & CHART OF BIRDS THAT NEST NEAR OR IN PPP

Please refer to the 2013 & 2015 maps of restoration status in the preserve; then:

The following spreadsheet (or chart) is a list of the birds that nest Near or in PPP indicated by the highlighted column of that name.

The bird species that nest Near or in PPP are additionally grouped together in one of three highlighted categories:

Ground-related birds
Water-related birds &
Tree-related birds

This chart provides enough information to map an individual species or group of species to an area or areas in PPP.

This chart provides individual species information on its occurrence in Sonoma County.

This chart provides nesting information (where and when) for individual species.

See the appendix for other spreadsheets of all the birds in a 3-mile square around Villa Grande.

ANECDOTAL INFORMATION BASED ON DATA FROM THE SPREADSHEET



Chestnut-backed Chickadees nest in cavities. A pair had nested in one of the trees at the "T" in the trail to the beaches in PPP in 2012. After the young had fledged, I saw the parents, each with a tiny green bug in its beak, dive into the ivy that was then on the left side of the trail and come back up without the bug. I knew the young fledglings were hiding in the ivy and still being fed by their parents. After removing the ivy, we have not put in enough ground cover to protect young birds.

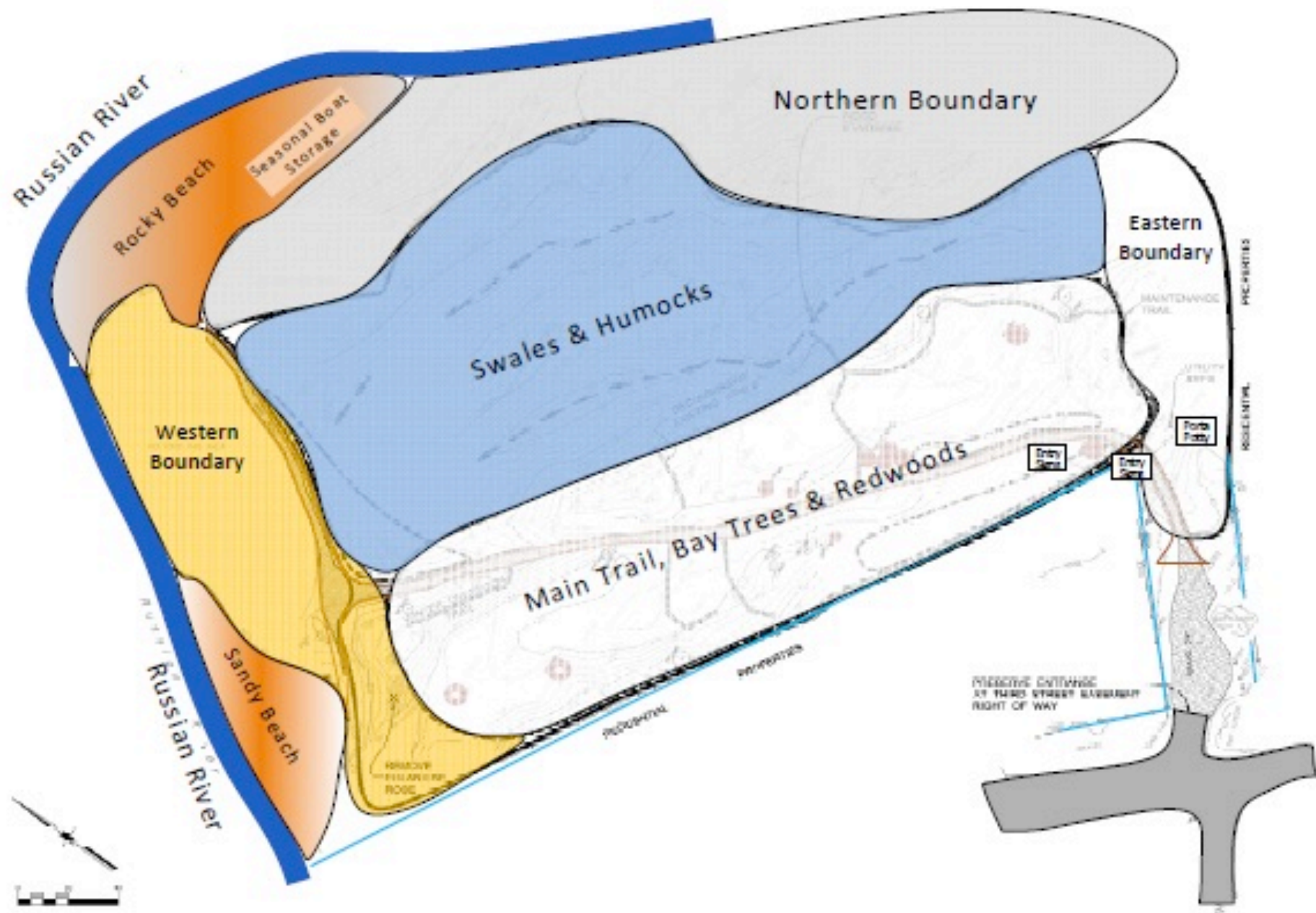


Swainson's Thrush only come to PPP during nesting season. Their song is ethereal. For the past several seasons, a male has been singing in the far Robin above east end of the swales near the river. Cryptically colored, they're difficult to spot, but you can see one or the other of the pair flying through the preserve at about 10 feet off the ground hunting for food for their young. (*Hermit Thrush* is shown—nearly identical to *Swainson's*.)



The American

is gathering nesting material in Villa Grande. I saw another Robin foraging in the preserve in one of the swales with as many worms in its beak as there is straw in the picture.



Birds that nest near or in PPP

GROUND-RELATED BIRDS							
SPECIES NAME	Where do they nest?	NEST	Gen'l Nesting Dates		Where in PPP?	When in SOCO?	PPP NESTER?
		HEIGHT	FROM	TO			
Spotted Towhee	Ground or bushes	0	4/15	8/1 & later	Ground & shrubs	All year	Near or in PPP
California Towhee	Low in bushes	0 - 12'	4/1	8/1 & later	Ground & shrubs	All year	Near or in PPP
Dark-eyed Junco	On the ground	0	3/10	8/1	Ground & shrubs	All year	Near or in PPP
California Quail	Ground	0	4/1	9/1	Trees & ground	All year	Near or in PPP
American Robin	Trees low to high	5 - 25'	4/1	8/15	Trees & ground	All year	Near or in PPP
Steller's Jay	Trees	10 - 30'	3/15	7/10	Trees & ground	All year	Near or in PPP
Western Scrub-Jay	Trees/shrubs	5 - 30'	3/10	7/10	Trees & ground	All year	Near or in PPP
American Crow	Trees	10 - 70'	3/15	7/1	Trees & ground	All year	Near or in PPP
Common Raven	Trees	High	3/15	7/1	Trees & ground	All year	Near or in PPP
European Starling	Cavities	Variable	4/1	8/1	Trees & ground	All year	Near or in PPP
Purple Finch	Trees	15 - 20'	4/1	7/1	Trees & ground	All year	Near or in PPP
House Finch	Anywhere	12 - 15'	3/15	8/1	Trees & ground	All year	Near or in PPP
Band-tailed Pigeon	Trees	15 - 40'	2/1	7/15	Trees & ground	All year	Near or in PPP
Mourning Dove	Anywhere	0 - 40'	Anytime	Anytime	Trees & ground	All year	Near or in PPP
Brewer's Blackbird	Anywhere	0 or 20 - 40'	3/15	7/10	Trees & ground	All year	Near or in PPP
Brown-headed Cowbird	Other birds' nests	Variable	4/15	7/15	Trees & ground	All year	Near or in PPP
WATER-RELATED BIRDS							
Black Phoebe	Vertical/sheltered	Low	4/1	7/15	Shoreline/Trees	All year	Near or in PPP
Green Heron	Dense thickets	5 - 30'	4/15	7/15	Shoreline/Trees	All year	Near or in PPP
Song Sparrow	Ground, streambanks	0 - 4'	3/1	8/1	Shoreline/Trees	All year	Near or in PPP
Wood Duck	Tree cavities	10 - 65'	4/15	7/15	Water & shore	All year	Near or in PPP
Common Merganser	Cavities/bank crevices	Variable	5/1	7/15	Water & shore	All year	Near or in PPP
Canada Goose	Cliffs ledges on ground	0 +	3/20	7/1	Water & Shore	All year	Near or in PPP
Mallard	Ground	0	3/1	9/1	Water & Shore	All year	Near or in PPP
Osprey	Tree tops	High	3/15	7/15	Water & Trees	All year	Near or in PPP
Belted Kingfisher	Dig burrough in bank	Variable	5/1	7/15	Water & Trees	All year	Near or in PPP
Swainson's Thrush	Low in trees/shrubs	2 - 10'	6/1	8/1	Shoreline/Trees	Only nest season	Near or in PPP
Cliff Swallow	Cliffs/other surfaces	Variable	3/20	7/15	Shoreline/Trees	Only nest season	Near or in PPP
Barn Swallow	Crevices/buildings	Variable	4/10	8/31	Shoreline/Trees	Only nest season	Near or in PPP
No. Rough-wing Swallow	Burrough/cavity	Variable	4/20	7/1	Water & Trees	Only nest season	Near or in PPP

TREE-RELATED BIRDS		NEST	G'enl Nesting Dates				
SPECIES	Where do they nest?	HEIGHT	FROM	TO	Where in PPP?	When in SOCO?	PPP NESTER?
Acorn Woodpecker	Tree cavities	12 - 30'	4/15	8/1	Trees	All year	Near or in PPP
Nuttall's Woodpecker	Tree cavities	3 - 35'	4/15	7/15	Trees	All year	Near or in PPP
Downy Woodpecker	Tree cavities	12 - 30'	4/15	8/1	Trees	All year	Near or in PPP
Hairy Woodpecker	Tree cavities	4 - 60'	5/1	7/31	Trees	All year	Near or in PPP
Pacific Wren	Crevices low down	1 - 6'	4/15	7/1	Trees	All year	Near or in PPP
Chestnut-back Chickadee	Cavity/nest boxes	2 - 20'	4/1	7/15	Trees	All year	Near or in PPP
Bewick's Wren	Cavity/crevice	0 - 20	4/1	8/1	Trees	All year	Near or in PPP
Brown Creeper	Cavities/under bark	1 - 50'	3/15	7/1	Trees	All year	Near or in PPP
Pine Siskin	Trees	10 - 40'	5/1	7/1	Trees	All year	Near or in PPP
Anna's Hummingbird	Ground/trees	4 - 25'	12/1	9/30	Trees & shrubs	All year	Near or in PPP
Bushtit	Tree/shrub	8 - 35'	3/10	7/1	Trees & shrubs	All year	Near or in PPP
Allen's Hummingbird	Low in tree/H2O	0 - 25+	2/15	6/1	Trees	Only nest season	Near or in PPP
Pacific-slope Flycatcher	Trees/structures	3 - 20'	4/15	7/10	Trees	Only nest season	Near or in PPP
Tree Swallow	Cavities	Variable	4/10	7/1	Trees & water	Only nest season	Near or in PPP
Violet-green Swallow	Cavities	Variable	4/10	7/1	Trees & Water	Only nest season	Near or in PPP
Black-headed Grosbeak	Trees	10 - 12'	4/15	8/1	Trees	Only nest season	Near or in PPP
Bullock's Oriole	Trees	20 - 30'	4/10	8/1	Trees	Only nest season	Near or in PPP
Orange-crowned Warbler	On the ground	0	4/1	7/10	Trees & shrubs	Only nest season	Near or in PPP
Wilson's Warbler	On the ground	0	4/15	8/1	Trees & shrubs	Only nest season	Near or in PPP

Workbook: VGBIRDS (EXCEL)

Worksheet: PPP BIRDS

Produced January, 2015

APPENDIX OF BIRD SPREADSHEETS (CHARTS)

How to Use the Bird Spreadsheets

SPREADSHEETS:

**All Birds in the Area or PPP: Nesters, Migrants, Winter Stop-overs
Species in Nest Height Order
Bird List in Order of Where in PPP**

HOW TO USE THE BIRD SPREADSHEETS

COLUMN 1: (SPECIES COLUMN)

The highlighted cells refer to

GROUND-RELATED BIRDS

WATER-RELATED BIRDS

TREE-RELATED BIRDS

This is a general categorization of bird species meant to easily “map” a bird species to a place or places within the preserve.

NOTE: For each of the three main headings of Water, Ground and Tree-Related Birds, there are **bold rectangles** that highlight when the species is in Sonoma County and whether the species nests in PPP or not.

NOTE: Vagrant species seen at any time during the year are not included in this bird species list. The list is based on birds seen during the current Breeding Bird Atlas (SCBBA) in a 3-square-mile block with Villa Grande at its center.

COLUMN 2:

Where do they nest?

This is a general description of where a particular species nests.

COLUMN 3:

NEST HEIGHT

This is the approximate placement in height of a species nest. (0 = Ground)

COLUMNS 4 & 5:

General Nesting Dates (From and To)

The dates a particular species generally nests between. N/A means the bird does not nest in our area at all.

COLUMN 6:

Where in PPP?

General description of where a particular species nests in PPP. If they don't nest in PPP, there is an N/A. Again, this is to map a species to a PPP area.

COLUMN 7:

When in SOCO?

When is a particular bird species in Sonoma County? Only general times are noted: All year; Only during nesting season; Only during migration or winter months.

HOW TO USE (cont.)

COLUMN 8:

PPP NESTER? This column performs more than one function.

1. Does a particular species nest in the greater Villa Grande area?

Near or in PPP = YES

Only in the area = YES

September – April = NO

2. If a species nests “here” where does it nest?

Near or in PPP means that sometime during nesting season, a bird nests in the vicinity of PPP.

Only in the area means that sometime during nesting season, a bird nests some place within a 3-square-mile area in or around Villa Grande (but not near or in the preserve).

3. If a species does NOT nest here, when is it here?

September—April is the general timeframe for migrating species or species that “over-winter” in our area. (Migrating shorebirds can arrive in July.)

September is the height of migration and can bring just about any bird from any part of the world to the preserve area.

Example: *Willow Flycatchers* can hang out in the willows on the preserve from mid-August to early October: they don't over-winter here, and they don't nest here. “September” is a general term for the start of migration.

April is also a migration month but is generally less active since many migrating species return at different times or via different routes than they took in September.

Example: *Rufous Hummingbirds* only migrate through Villa Grande on the way farther north to nest. This is in January—April, so you can see that “April” is a general term for species “returning” from migration.

September—April if a bird remains in our area after migration, it is considered to **over-winter** here. Many of these species arrive around Villa Grande and the preserve in October and don't return to their nesting areas until March or April.

Example: *Varied Thrushes* are all over Villa Grande from mid-October to mid-April. They don't nest here or even in Sonoma County, but they do nest in Humboldt County through Alaska. The birds in Villa Grande probably nest much farther north than Humboldt.

NOTE: Use all of the spreadsheets with a map of PPP that includes West & North Shoreline, Swales, Redwood Forest and Eastern Area.

All Birds in the Area or PPP: Nesters, Migrants, Winter Stop-overs

GROUND-RELATED BIRDS	Where do they nest?	NEST HEIGHT	Nesting Dates		Where in PPP?	When in SOCO?	PPP NESTER?
			FROM	TO			
Turkey Vulture	Ground in old stumps	0	5/1	7/15	Trees & ground	All year	Only in the area
Wild Turkey	Ground	0	4/15	8/15	Trees & ground	All year	Only in the area
Eurasian Collared Dove	Anywhere	10 – 40'	Anytime	Anytime	Trees & ground	All year	Only in the area
Northern Flicker	Tree cavities	6 – 20'	4/15	7/1	Trees & ground	All year	Only in the area
Hermit's Thrush	Low in trees	3 – 12'	4/15	7/15	Trees & ground	All year	Only in the area
White-crowned Sparrow	On the coast	0 – 4'	4/15	7/1	Trees & ground	All year	Only in the area
Spotted Towhee	Ground or bushes	0	4/15	8/1 & later	Ground & shrubs	All year	Near or in PPP
California Towhee	Low in bushes	0 – 12'	4/1	8/1 & later	Ground & shrubs	All year	Near or in PPP
Dark-eyed Junco	On the ground	0	3/10	8/1	Ground & shrubs	All year	Near or in PPP
California Quail	Ground	0	4/1	9/1	Trees & ground	All year	Near or in PPP
American Robin	Trees low to high	5 – 25'	4/1	8/15	Trees & ground	All year	Near or in PPP
Steller's Jay	Trees	10 – 30'	3/15	7/10	Trees & ground	All year	Near or in PPP
Western Scrub-Jay	Trees/shrubs	5 – 30'	3/10	7/10	Trees & ground	All year	Near or in PPP
American Crow	Trees	10 – 70'	3/15	7/1	Trees & ground	All year	Near or in PPP
Common Raven	Trees	High	3/15	7/1	Trees & ground	All year	Near or in PPP
European Starling	Cavities	Variable	4/1	8/1	Trees & ground	All year	Near or in PPP
Purple Finch	Trees	15 – 20'	4/1	7/1	Trees & ground	All year	Near or in PPP
House Finch	Anywhere	12 – 15'	3/15	8/1	Trees & ground	All year	Near or in PPP
Band-tailed Pigeon	Trees	15 – 40'	2/1	7/15	Trees & ground	All year	Near or in PPP
Mourning Dove	Anywhere	0 – 40'	Anytime	Anytime	Trees & ground	All year	Near or in PPP
Brewer's Blackbird	Anywhere	0 or 20 – 40'	3/15	7/10	Trees & ground	All year	Near or in PPP
Brown-headed Cowbird	Other birds' nests	Variable	4/15	7/15	Trees & ground	All year	Near or in PPP
Varied Thrush	N//A	N/A	N/A	N/A	Trees & ground	Migration/Winter	September – April
Fox sparrow	N//A	N/A	N/A	N/A	Trees & ground	Migration/Winter	September – April
White-throated Sparrow	N//A	N/A	N/A	N/A	Trees & ground	Migration/Winter	September – April
Golden-crowned Sparrow	N//A	N/A	N/A	N/A	Trees & ground	Migration/Winter	September – April

WATER-RELATED BIRDS		NEST	G'nl Nesting Dates				
SPECIES	Where do they nest?	HEIGHT	FROM	TO	Where in PPP?	When in SOCO?	PPP NESTER?
Killdeer	Ground; rocks/gravel	0	4/10	7/1	Beaches/Spit	All year	Only in the area
Spotted Sandpiper	Ground/rocks/grass	0	6/1	7/15	Beaches/Spit	All year	Only in the area
Western Gull	Coastal rocks	0	4/1	8/1	Water & shore	All year	Only in the area
Double-crested Cormorant	Trees, coastal rocks	0	4/15	8/1	Water & Trees	All year	Only in the area
Great Blue Heron	Trees downriver	20 – 60'	3/1	8/1	Water & Trees	All year	Only in the area
Great Egret	Tree colony Santa Rosa	10 – 40'	5/15	8/1	Water & Trees	All year	Only in the area
Snowy Egret	Tree colony Santa Rosa	5 – 10'	5/1	8/1	Water & Trees	All year	Only in the area
Black-crowned Night-Heron	Colonies or separately	10 – 40'	5/1	8/1	Water & Trees	All year	Only in the area
Pied-billed Grebe	Shallow marsh water	Floating	5/1	8/1	Water only	All year	Only in the area
American Coot	Shallow marsh water	Floating	5/1	8/15	Water only	All year	Only in the area
Black Phoebe	Vertical/sheltered	Low	4/1	7/15	Shoreline/Trees	All year	Near or in PPP
Green Heron	Dense thickets	5 – 30'	4/15	7/15	Shoreline/Trees	All year	Near or in PPP
Song Sparrow	Ground, streambanks	0 – 4'	3/1	8/1	Shoreline/Trees	All year	Near or in PPP
Wood Duck	Tree cavities	10 – 65'	4/15	7/15	Water & shore	All year	Near or in PPP
Common Merganser	Cavities/bank crevices	Variable	5/1	7/15	Water & shore	All year	Near or in PPP
Canada Goose	Cliffs ledges on ground	0 +	3/20	7/1	Water & Shore	All year	Near or in PPP
Mallard	Ground	0	3/1	9/1	Water & Shore	All year	Near or in PPP
Osprey	Tree tops	High	3/15	7/15	Water & Trees	All year	Near or in PPP
Belted Kingfisher	Dig burrough in bank	Variable	5/1	7/15	Water & Trees	All year	Near or in PPP
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Cliff Swallow	Cliffs/other surfaces	Variable	3/20	7/15	Shoreline/Trees	Only nest season	Near or in PPP
Barn Swallow	Crevices/buildings	Variable	4/10	8/31	Shoreline/Trees	Only nest season	Near or in PPP
Northern Rough-winged Swallow	Burrough/cavity	Variable	4/20	7/1	Water & Trees	Only nest season	Near or in PPP
Red-necked Phalarope	N//A	N/A	N/A	N/A	Water & shore	Migration/Winter	September – April
Mew Gull	N//A	N/A	N/A	N/A	Water & shore	Migration/Winter	September – April
Ring-billed Gull	N//A	N/A	N/A	N/A	Water & shore	Migration/Winter	September – April
Common Loon	N//A	N/A	N/A	N/A	Water only	Migration/Winter	September – April
Western Grebe	N//A	N/A	N/A	N/A	Water only	Migration/Winter	September – April
American White Pelican	N//A	N/A	N/A	N/A	Water only	Migration/Winter	September – April

Common Goldeneye	N//A	N/A	N/A	N/A	Water only	Migration/Winter	September – April
Bufflehead	N//A	N/A	N/A	N/A	Water only	Migration/Winter	September – April
Hooded Merganser	N//A	N/A	N/A	N/A	Water only	Migration/Winter	Sep-April PAGE 10
TREE-RELATED BIRDS		NEST	G' enl Nesting Dates				
SPECIES	Where do they nest?	HEIGHT	FROM	TO	Where in PPP?	When in SOCO?	PPP NESTER?
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Downy Woodpecker	Tree cavities	12 – 30'	4/15	8/1	Trees	All year	Near or in PPP
Hairy Woodpecker	Tree cavities	4 – 60'	5/1	7/31	Trees	All year	Near or in PPP
Pacific Wren	Crevice low down	1 – 6'	4/15	7/1	Trees	All year	Near or in PPP
Chestnut-backed Chickadee	Cavity/nest boxes	2 – 20'	4/1	7/15	Trees	All year	Near or in PPP
Bewick's Wren	Cavity/crevice	0 – 20	4/1	8/1	Trees	All year	Near or in PPP
Brown Creeper	Cavities/under bark	1 – 50'	3/15	7/1	Trees	All year	Near or in PPP
Pine Siskin	Trees	10 – 40'	5/1	7/1	Trees	All year	Near or in PPP
Anna's Hummingbird	Ground/trees	4 – 25'	12/1	9/30	Trees & shrubs	All year	Near or in PPP
Bushtit	Tree/shrub	8 – 35'	3/10	7/1	Trees & shrubs	All year	Near or in PPP
Allen's Hummingbird	Low in tree/H2O	0 – 25+	2/15	6/1	Trees	Only nest season	Near or in PPP
Pacific-slope Flycatcher	Trees/structures	3 – 20'	4/15	7/10	Trees	Only nest season	Near or in PPP
Tree Swallow	Cavities	Variable	4/10	7/1	Trees & water	Only nest season	Near or in PPP
Violet-green Swallow	Cavities	Variable	4/10	7/1	Trees & Water	Only nest season	Near or in PPP
Black-headed Grosbeak	Trees	10 – 12'	4/15	8/1	Trees	Only nest season	Near or in PPP
Bullock's Oriole	Trees	20 – 30'	4/10	8/1	Trees	Only nest season	Near or in PPP
Orange-crowned Warbler	On the ground	0	4/1	7/10	Trees & shrubs	Only nest season	Near or in PPP
Wilson's Warbler	On the ground	0	4/15	8/1	Trees & shrubs	Only nest season	Near or in PPP
Red-shouldered Hawk	Trees	35 – 65'	3/15	7/15	Trees	All year	Only in the area
Peregrine Falcon	Cliffs/eyries/tree snags	Variable	4/1	7/15	Trees	All year	Only in the area
Cooper's Hawk	Trees	25 – 50'	4/15	7/15	Trees	All year	Only in the area
Sharp-shinned Hawk	Trees inland	20 – 60'	5/1	7/15	Trees	All year	Only in the area
Bald Eagle	Trees, cliff	0 -180'	4/15	8/15	Trees	All year	Only in the area
Great-horned Owl	Uses hawk etc. nests	Variable	1/1	7/1	Trees	All year	Only in the area
Northern Spotted Owl	Hollows/crevice/cliff	Variable	4/15	7/28	Trees	All year	Only in the area
Barred Owl	Tree hollows	Variable	4/15	7/28	Trees	All year	Only in the area
Northern Saw-whet Owl	Tree cavities	15 – 60'	4/1	7/15	Trees	All year	Only in the area
Northern Pygmy Owl	Tree cavities	8 – 25'	5/1	7/10	Trees	All year	Only in the area

Red-breasted Sapsucker	Tree cavities	50 – 60'	6/1	7/15	Trees	All year	Only in the area
Pileated Woodpecker	Tree cavities	15 – 80'	4/15	7/15	Trees	All year	Only in the area
Pygmy Nuthatch	Cavities	20' +	4/1	7/15	Trees	All year	In Area PAGE 11
TREE-RELATED BIRDS		NEST	G'entl Nesting Dates				
SPECIES	Where do they nest?	HEIGHT	FROM	TO	Where in PPP?	When in SOCO?	PPP NESTER?
Golden-crowned Kinglet	Trees high up	6 - 60'	5/1	7/15	Trees	All year	Only in the area
Red-tailed Hawk	Trees/cliffs	0 - 120'	3/15	7/15	Trees	All year	Only in the area
Wrentit	Low in shrubs/trees	1 - 4'	4/15	8/1	Trees & shrubs	All year	Only in the area
Red-winged Blackbird	Tules/marshes	Low	4/1	7/1	Trees & shrubs	All year	Only in the area
Yellow-rumped Warbler	Trees inland	4 - 50'	6/1	7/15	Trees & shrubs	All year	Only in the area
American Goldfinch	Coast, inland, trees	4 - 30'	5/1	8/1	Trees & shrubs	All year	Only in the area
Vaux's Swift	Cavities/chimneys	Variable	5/25	7/22	Fly-overs	Only nest season	Only in the area
Olive-sided Flycatcher	Trees	5 - 70'	6/1	7/15	Trees	Only nest season	Only in the area
Cassin's Vireo	Trees	3 - 12' +	5/1	7/15	Trees	Only nest season	Only in the area
Warbling Vireo	Trees	10 - 30'	4/15	7/20	Trees	Only nest season	Only in the area
Yellow Warbler	Trees	2 - 60'	4/15	8/1	Trees	Only nest season	Only in the area
Western Tanager	In conifers	15 - 65'	5/15	7/15	Trees	Only nest season	Only in the area
Merlin	N//A	N/A	N/A	N/A	Trees	Migration/Winter	September - April
Rufous Hummingbird	N//A	N/A	N/A	N/A	Trees	Migration/Winter	September - April
Willow Flycatcher	N//A	N/A	N/A	N/A	Trees	Migration/Winter	September - April
Ruby-crowned Kinglet	N//A	N/A	N/A	N/A	Trees	Migration/Winter	September - April
Cedar Waxwing	N//A	N/A	N/A	N/A	Trees	Migration/Winter	September - April
Townsend's Warbler	N//A	N/A	N/A	N/A	Trees	Migration/Winter	September - April

Workbook: VGBIRDS (EXCEL)

Worksheet: VGBIRDS

Produced January, 2015

SPECIES IN NEST HEIGHT ORDER

SPECIES	Where do they nest?	NEST
		HEIGHT
Turkey Vulture	Ground in old stumps	0
Wild Turkey	Ground	0
Spotted Towhee	Ground or bushes	0
Dark-eyed Junco	On the ground	0
California Quail	Ground	0
Killdeer	Ground; rocks/gravel	0
Spotted Sandpiper	Ground/rocks/grass	0
Western Gull	Coastal rocks	0
Double-crested Cormorant	Trees, coastal rocks	0
Mallard	Ground	0
Orange-crowned Warbler	On the ground	0
Wilson's Warbler	On the ground	0
Canada Goose	Cliffs ledges on ground	0 +
White-crowned Sparrow	On the coast	0 - 4'
Song Sparrow	Ground, streambanks	0 - 4'
California Towhee	Low in bushes	0 - 12'
Bewick's Wren	Cavity/crevice	0 - 20
Brewer's Blackbird	Anywhere	0 or 20 - 40'
Allen's Hummingbird	Low in tree/H2O	0 - 25+
Mourning Dove	Anywhere	0 - 40'
Red-tailed Hawk	Trees/cliffs	0 - 120'
Bald Eagle	Trees, cliff	0 - 180'
Wrentit	Low in shrubs/trees	1 - 4'
Pacific Wren	Crevices low down	1 - 6'
Brown Creeper	Cavities/under bark	1 - 50'
Swainson's Thrush	Low in trees/shrubs	2 - 10'
Chestnut-backed Chickadee	Cavity/nest boxes	2 - 20'
Yellow Warbler	Trees	2 - 60'

SPECIES	Where do they nest?	NEST
		HEIGHT
Nuttall's Woodpecker	Tree cavities	3 - 35'
Anna's Hummingbird	Ground/trees	4 - 25'
American Goldfinch	Coast, inland, trees	4 - 30'
Yellow-rumped Warbler	Trees inland	4 - 50'
Hairy Woodpecker	Tree cavities	4 - 60'
Snowy Egret	Tree colony Santa Rosa	5 - 10'
American Robin	Trees low to high	5 - 25'
Western Scrub-Jay	Trees/shrubs	5 - 30'
Green Heron	Dense thickets	5 - 30'
Olive-sided Flycatcher	Trees	5 - 70'
Northern Flicker	Tree cavities	6 - 20'
Golden-crowned Kinglet	Trees high up	6 - 60'
Northern Pygmy Owl	Tree cavities	8 - 25'
Bushtit	Tree/shrub	8 - 35'
Black-headed Grosbeak	Trees	10 - 12'
Steller's Jay	Trees	10 - 30'
Warbling Vireo	Trees	10 - 30'
Eurasian Collared Dove	Anywhere	10 - 40'
Great Egret	Tree colony Santa Rosa	10 - 40'
Black-crowned Night-Heron	Colonies or separately	10 - 40'
Pine Siskin	Trees	10 - 40'
Wood Duck	Tree cavities	10 - 65'
American Crow	Trees	10 - 70'
House Finch	Anywhere	12 - 15'
Acorn Woodpecker	Tree cavities	12 - 30'
Downy Woodpecker	Tree cavities	12 - 30'
Purple Finch	Trees	15 - 20'
Band-tailed Pigeon	Trees	15 - 40'

Hermit's Thrush	Low in trees	3 - 12'
Cassin's Vireo	Trees	3 - 12' +
Pacific-slope Flycatcher	Trees/structures	3 - 20'

Northern Saw-whet Owl	Tree cavities	15 - 60'
Western Tanager	In conifers	15 - 65'
Pileated Woodpecker	Tree cavities	15 - 80'

		NEST
SPECIES	Where do they nest?	HEIGHT
Pygmy Nuthatch	Cavities	20' +
Bullock's Oriole	Trees	20 - 30'
Great Blue Heron	Trees downriver	20 - 60'
Sharp-shinned Hawk	Trees inland	20 - 60'
Cooper's Hawk	Trees	25 - 50'
Red-shouldered Hawk	Trees	35 - 65'
Red-breasted Sapsucker	Tree cavities	50 - 60'
Pied-billed Grebe	Shallow marsh water	Floating
American Coot	Shallow marsh water	Floating
Common Raven	Trees	High
Osprey	Tree tops	High
Black Phoebe	Vertical/sheltered	Low
Red-winged Blackbird	Tules/marshes	Low
Varied Thrush	N//A	N/A
Fox sparrow	N//A	N/A
White-throated Sparrow	N//A	N/A
Golden-crowned Sparrow	N//A	N/A
Red-necked Phalarope	N//A	N/A
Mew Gull	N//A	N/A
Ring-billed Gull	N//A	N/A
Common Loon	N//A	N/A
Western Grebe	N//A	N/A
American White Pelican	N//A	N/A
Common Goldeneye	N//A	N/A
Bufflehead	N//A	N/A
Hooded Merganser	N//A	N/A
Merlin	N//A	N/A
Rufous Hummingbird	N//A	N/A

		NEST
SPECIES	Where do they nest?	HEIGHT
European Starling	Cavities	Variable
Brown-headed Cowbird	Other birds' nests	Variable
Common Merganser	Cavities/bank crevices	Variable
Belted Kingfisher	Dig burrough in bank	Variable
Cliff Swallow	Cliffs/other surfaces	Variable
Barn Swallow	Crevices/buildings	Variable
Northern Rough-winged Swallow	Burrough/cavity	Variable
Peregrine Falcon	Cliffs/eyries/tree snags	Variable
Great-horned Owl	Uses hawk etc. nests	Variable
Northern Spotted Owl	Hollows/crevice/cliff	Variable
Barred Owl	Tree hollows	Variable
Vaux's Swift	Cavities/chimneys	Variable
Tree Swallow	Cavities	Variable
Violet-green Swallow	Cavities	Variable

Workbook: VGBIRDS (EXCEL)

Worksheet: SORT BY NEST HEIGHT

Produced January, 2015

Willow Flycatcher	N//A	N/A
Ruby-crowned Kinglet	N//A	N/A
Cedar Waxwing	N//A	N/A
Townsend's Warbler	N//A	N/A

BIRD LIST IN ORDER OF WHERE IN PPP				WHERE IN PPP?		
				Beaches/Spit		
Killdeer	Ground; rocks/gravel	4/10	7/1	Beaches/Spit	All year	Only in the area
Spotted Sandpiper	Ground/rocks/grass	6/1	7/15	Beaches/Spit	All year	Only in the area
				Fly-overs		
Vaux's Swift	Cavities/chimneys	5/25	7/22	Fly-overs	Only nest season	Only in the area
				Ground & shrubs		
Spotted Towhee	Ground or bushes	4/15	8/1 & later	Ground & shrubs	All year	Near or in PPP
California Towhee	Low in bushes	4/1	8/1 & later	Ground & shrubs	All year	Near or in PPP
Dark-eyed Junco	On the ground	3/10	8/1	Ground & shrubs	All year	Near or in PPP
				Shoreline/Trees		
Black Phoebe	Vertical surfaces	4/1	7/15	Shoreline/Trees	All year	Near or in PPP
Green Heron	Dense thickets	4/15	7/15	Shoreline/Trees	All year	Near or in PPP
Song Sparrow	Ground, streambanks	3/1	8/1	Shoreline/Trees	All year	Near or in PPP
Swainson's Thrush	Low in trees/shrubs	6/1	8/1	Shoreline/Trees	Only nest season	Near or in PPP
Cliff Swallow	Cliffs/other surfaces	3/20	7/15	Shoreline/Trees	Only nest season	Near or in PPP
Barn Swallow	Cliffs/structures	4/10	8/31	Shoreline/Trees	Only nest season	Near or in PPP
				Trees		
Red-shouldered Hawk	Trees	3/15	7/15	Trees	All year	Only in the area
Peregrine Falcon	Cliffs/eyries	4/1	7/15	Trees	All year	Only in the area
Cooper's Hawk	Trees	4/15	7/15	Trees	All year	Only in the area
Sharp-shinned Hawk	Trees inland	5/1	7/15	Trees	All year	Only in the area
Bald Eagle	Trees	4/15	8/15	Trees	All year	Only in the area
Great-horned Owl	Trees	1/1	7/1	Trees	All year	Only in the area
Northern Spotted Owl	Tree hollows/crevice/cliff	4/15	7/28	Trees	All year	Only in the area
Barred Owl	Tree hollows	4/15	7/28	Trees	All year	Only in the area
Northern Saw-whet Owl	Tree cavities	4/1	7/15	Trees	All year	Only in the area
Northern Pygmy Owl	Tree cavities	5/1	7/10	Trees	All year	Only in the area
Red-breasted Sapsucker	Tree cavities	6/1	7/15	Trees	All year	Only in the area

Pileated Woodpecker	Tree cavities	4/15	7/15	Trees	All year	Only in the area
Pygmy Nuthatch	Cavities	4/1	7/15	Trees	All year	Only in the area
Golden-crowned Kinglet	Trees high up	5/1	7/15	Trees	All year	Only in the area
Acorn Woodpecker	Tree cavities	4/15	8/1	Trees	All year	Near or in PPP
Nuttall's Woodpecker	Tree cavities	4/15	7/15	Trees	All year	Near or in PPP

				Trees		
Downy Woodpecker	Tree cavities	4/15	8/1	Trees	All year	Near or in PPP
Hairy Woodpecker	Tree cavities	5/1	7/31	Trees	All year	Near or in PPP
Pacific Wren	Crevice low down	4/15	7/1	Trees	All year	Near or in PPP
Chestnut-backed Chickadee	Cavity/nest boxes	4/1	7/15	Trees	All year	Near or in PPP
Bewick's Wren	Cavity/crevice	4/1	8/1	Trees	All year	Near or in PPP
Brown Creeper	Cavities/under bark	3/15	7/1	Trees	All year	Near or in PPP
Pine Siskin	Trees	5/1	7/1	Trees	All year	Near or in PPP
Olive-sided Flycatcher	Trees	6/1	7/15	Trees	Only nest season	Only in the area
Cassin's Vireo	Trees	5/1	7/15	Trees	Only nest season	Only in the area
Warbling Vireo	Trees	4/15	7/20	Trees	Only nest season	Only in the area
Yellow Warbler	Trees	4/15	8/1	Trees	Only nest season	Only in the area
Western Tanager	In conifers	5/15	7/15	Trees	Only nest season	Only in the area
Allen's Hummingbird	Low in tree/moist areas	2/15	6/1	Trees	Only nest season	Near or in PPP
Pacific-slope Flycatcher	Trees/people's houses	4/15	7/10	Trees	Only nest season	Near or in PPP
Black-headed Grosbeak	Trees	4/15	8/1	Trees	Only nest season	Near or in PPP
Bullock's Oriole	Trees	4/10	8/1	Trees	Only nest season	Near or in PPP
Merlin	N//A	N/A	N/A	Trees	Migration/Winter	September - April
Rufous Hummingbird	N//A	N/A	N/A	Trees	Migration/Winter	September - April
Willow Flycatcher	N//A	N/A	N/A	Trees	Migration/Winter	September - April
Ruby-crowned Kinglet	N//A	N/A	N/A	Trees	Migration/Winter	September - April
Cedar Waxwing	N//A	N/A	N/A	Trees	Migration/Winter	September - April
Townsend's Warbler	N//A	N/A	N/A	Trees	Migration/Winter	September - April
Red-tailed Hawk	Trees	3/15	7/15	Trees	All year	Only in the area
				Trees & ground		
Turkey Vulture	Ground in old stumps	5/1	7/15	Trees & ground	All year	Only in the area
Wild Turkey	Ground	4/15	8/15	Trees & ground	All year	Only in the area
Eurasian Collared Dove	Anywhere	Anytime	Anytime	Trees & ground	All year	Only in the area

Northern Flicker	Tree cavities	4/15	7/1	Trees & ground	All year	Only in the area
Hermit's Thrush	Low in trees	4/15	7/15	Trees & ground	All year	Only in the area
White-crowned Sparrow	On the coast	4/15	7/1	Trees & ground	All year	Only in the area
California Quail	Ground	4/1	9/1	Trees & ground	All year	Near or in PPP
American Robin	Trees low to high	4/1	8/15	Trees & ground	All year	Near or in PPP
Steller's Jay	Trees	3/15	7/10	Trees & ground	All year	Near or in PPP

				Trees & ground		
Western Scrub-Jay	Trees/shrubs	3/10	7/10	Trees & ground	All year	Near or in PPP
American Crow	Trees	3/15	7/1	Trees & ground	All year	Near or in PPP
Common Raven	Trees	3/15	7/1	Trees & ground	All year	Near or in PPP
European Starling	Cavities	4/1	8/1	Trees & ground	All year	Near or in PPP
Purple Finch	Trees	4/1	7/1	Trees & ground	All year	Near or in PPP
House Finch	Anywhere	3/15	8/1	Trees & ground	All year	Near or in PPP
Band-tailed Pigeon	Trees	2/1	7/15	Trees & ground	All year	Near or in PPP
Mourning Dove	Anywhere	Anytime	Anytime	Trees & ground	All year	Near or in PPP
Brewer's Blackbird	Anywhere	3/15	7/10	Trees & ground	All year	Near or in PPP
Brown-headed Cowbird	Other birds' nests	4/15	7/15	Trees & ground	All year	Near or in PPP
Varied Thrush	N//A	N/A	N/A	Trees & ground	Migration/Winter	September - April
Fox sparrow	N//A	N/A	N/A	Trees & ground	Migration/Winter	September - April
White-throated Sparrow	N//A	N/A	N/A	Trees & ground	Migration/Winter	September - April
Golden-crowned Sparrow	N//A	N/A	N/A	Trees & ground	Migration/Winter	September - April
				Trees & shrubs		
Wrentit	Low in shrubs/trees	4/15	8/1	Trees & shrubs	All year	Only in the area
Red-winged Blackbird	Needs drier tules	4/1	7/1	Trees & shrubs	All year	Only in the area
Yellow-rumped Warbler	Trees inland	6/1	7/15	Trees & shrubs	All year	Only in the area
American Goldfinch	Coast, inland, trees	5/1	8/1	Trees & shrubs	All year	Only in the area
Anna's Hummingbird	Ground/trees	12/1	9/30	Trees & shrubs	All year	Near or in PPP
Bushtit	Tree/shrub	3/10	7/1	Trees & shrubs	All year	Near or in PPP
Orange-crowned Warbler	On the ground	4/1	7/10	Trees & shrubs	Only nest season	Near or in PPP
Wilson's Warbler	On the ground	4/15	8/1	Trees & shrubs	Only nest season	Near or in PPP
				Trees & water		
Tree Swallow	Cavities	4/10	7/1	Trees & water	Only nest season	Near or in PPP
Violet-green Swallow	Cavities	4/10	7/1	Trees & water	Only nest season	Near or in PPP

				Water & shore		
Western Gull	Coastal rocks	4/1	8/1	Water & shore	All year	Only in the area
Wood Duck	Tree cavities	4/15	7/15	Water & shore	All year	Near or in PPP
Common Merganser	Cavities or bank crevices	5/1	7/15	Water & shore	All year	Near or in PPP
Canada Goose	Cliffs	3/20	7/1	Water & Shore	All year	Near or in PPP
Mallard	Ground	3/1	9/1	Water & Shore	All year	Near or in PPP
Red-necked Phalarope	N//A	N/A	N/A	Water & shore	Migration/Winter	September - April

				Water & shore		
Mew Gull	N//A	N/A	N/A	Water & shore	Migration/Winter	September - April
Ring-billed Gull	N//A	N/A	N/A	Water & shore	Migration/Winter	September - April
				Water & Trees		
Double-crested Cormorant	Trees, coastal rocks	4/15	8/1	Water & Trees	All year	Only in the area
Great Blue Heron	Trees downriver	3/1	8/1	Water & Trees	All year	Only in the area
Great Egret	Tree colony in Santa Rosa	5/15	8/1	Water & Trees	All year	Only in the area
Snowy Egret	Tree colony in Santa Rosa	5/1	8/1	Water & Trees	All year	Only in the area
Black-crowned Night-Heron	Colonies or separately	5/1	8/1	Water & Trees	All year	Only in the area
Osprey	Tree tops	3/15	7/15	Water & Trees	All year	Near or in PPP
Belted Kingfisher	Dig burrough in bank	5/1	7/15	Water & Trees	All year	Near or in PPP
Northern Rough-winged Swallow	Burrough/cavity	4/20	7/1	Water & Trees	Only nest season	Near or in PPP
				Water only		
Pied-billed Grebe	Shallow marsh water	5/1	8/1	Water only	All year	Only in the area
American Coot	Shallow marsh water	5/1	8/15	Water only	All year	Only in the area
Common Loon	N//A	N/A	N/A	Water only	Migration/Winter	September - April
Western Grebe	N//A	N/A	N/A	Water only	Migration/Winter	September - April
American White Pelican	N//A	N/A	N/A	Water only	Migration/Winter	September - April
Common Goldeneye	N//A	N/A	N/A	Water only	Migration/Winter	September - April
Bufflehead	N//A	N/A	N/A	Water only	Migration/Winter	September - April
Hooded Merganser	N//A	N/A	N/A	Water only	Migration/Winter	September - April

