

NatureMapping's Seattle Audubon Field Trip Analysis (1995 – 2004)



Table of Contents

Introduction & History.....	3
Field Trip Designation.....	4
Maps.....	5
Additional Data.....	12
Analyses.....	13
Washington Comprehensive Wildlife Conservation Strategy.....	14
Species with No Observations.....	15
Intersecting Important Bird Areas and Seattle Audubon Field Trips.....	17
Conclusion.....	20

Appendix A: Comparison of Species Observed

Appendix B: Field Trip Names and Frequency

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Introduction & History

This report is dedicated to a very special person, my friend, Gussie Litwer.

Ken Jacobsen attended a *NatureMapping* workshop in 1994 and told Gussie Litwer, a Seattle Audubon volunteer that we should meet. Gussie and I agreed all of the observations from the Seattle Audubon field trips should be incorporated into the *NatureMapping* database.

Gussie began the process on the Audubon side of the house. She wrote letters to the field trip leaders, photocopied the field trip routes from the Del Lorme Atlas for the field trips leaders, photocopied their completed data sheets, assigned the species codes for every bird, and brought them to the University. I would give Gussie a block of Observer Identification numbers, one for each field trip. Gussie would add the correct county code and entered these data into the *NatureMapping* spreadsheet.

Gussie didn't want to ask too much of the field trip leaders, so she didn't ask them to fill out how many individual birds they saw or mark the maps and species observed for each stop along their route. However, over time, field trip leaders began asking if she needed the number of birds seen and some began adding that information to their sheets. Eventually, some leaders began breaking down their sightings based on where they saw them during their trip....exactly what I always wanted!

NatureMapping asks the public “what do you see and where do you see it” to get a statewide perspective of where the animals are located month-by-month. We overlay the species reported on the Washington Gap Analysis Project's maps to:

1. Assess the Gap maps
2. Identify species' range expansion/reduction
3. Gather winter bird locations for the development/analysis of winter bird distributions
4. Provide data back to NatureMappers, and
5. Use in county and local land planning

Although this has not been a focus of the initial use of Seattle Audubon's data and this report, regular trips to favorite locations create the possibility of looking at changes in species abundance.

Field Trip Designation

Gussie assigned different numbers to field trips that may be in similar areas, but finished in a different township/range/section. Many of the field trips had different stops throughout the trip, and Gussie would record “multiple stops” in the comments field. However, it was the final stop’s location that Gussie would use as the *NatureMapping* location for all of these data because she knew their end point, not all the stops along the way.

The Eastern Washington field trips began providing erroneous data when their data were displayed on the Gap maps because birding began at the Snoqualmie summit or Cle Elum and would end at Vantage or Ellensburg. When individual stop location information was added to the datasheets, that information was added and those field trips could be included with the other *NatureMapping* data displayed over the Gap maps and added to the *NatureMapping* web site.

Field trip “Points” versus “Routes”

If a field trip was considered localized, such as Lopez Island, Magnuson Park, etc. Gussie called it a Point, with most of the data falling within the same Township. A Route had a lot of known stops and crossed multiple Townships. I depended on Gussie to make the decision because she had been part of many of the field trips. If a map was not submitted and we were unsure of the route, the field trip would be designated as a Point.

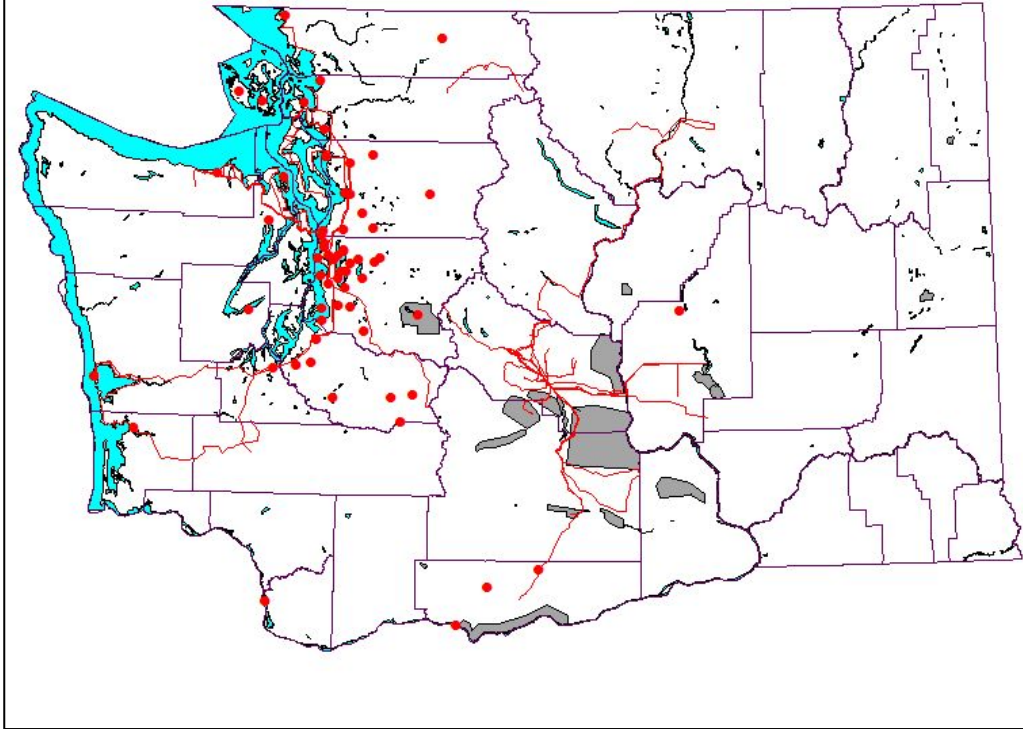
Important Bird Areas (IBA)

The IBA’s were based on the information provided in the Important Bird Areas of Washington. We used the description within the book to identify the actual area. The polygons outlining the IBA’s had to be within 51% of the area defined in the book. We did not have the time to find GIS landownership maps of these areas to be more precise. Areas such as Bottle Beach and Walla Walla Delta were close to the 51%, although the overall difference between the book and the polygons we created was 13%.

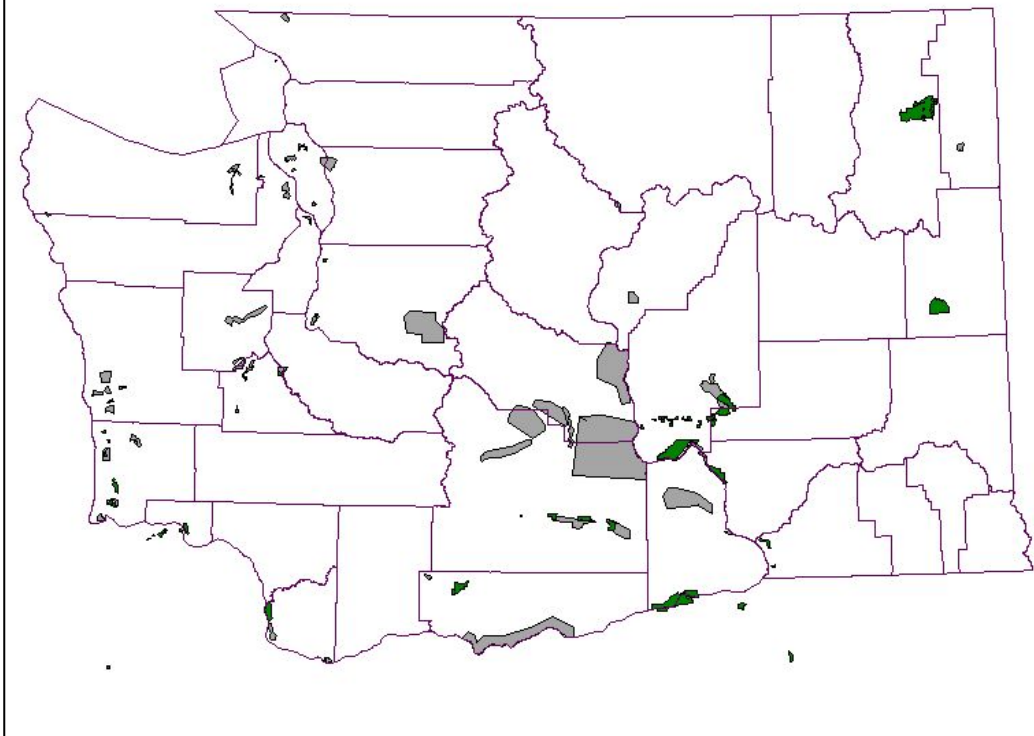
There are a total of 63 Points and 43 Routes including 28 Routes in Eastern Washington

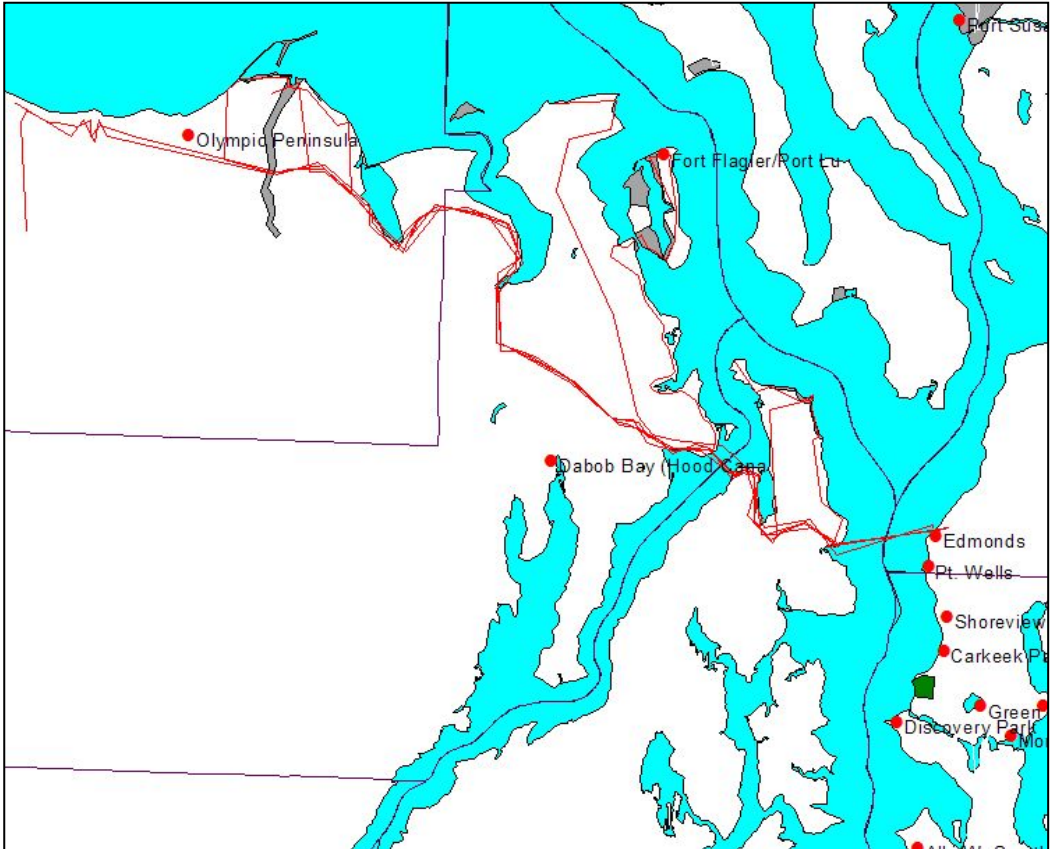
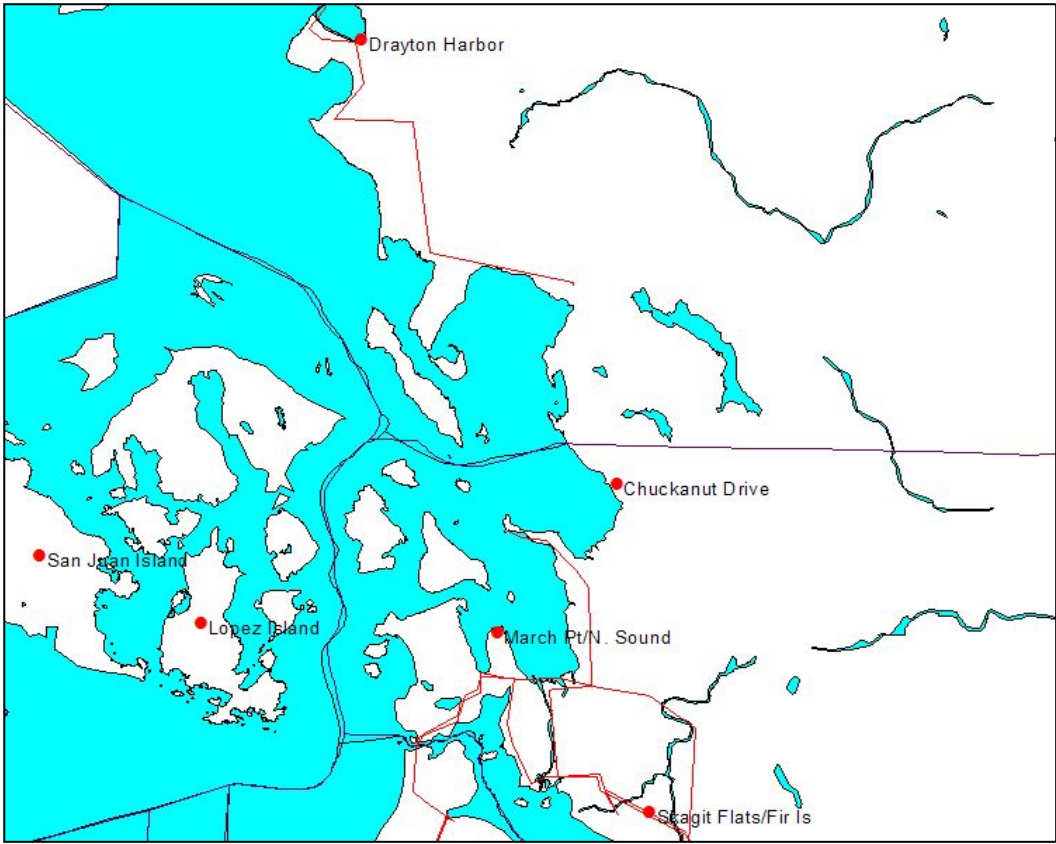
The following pages show all the Seattle Audubon Field Points (points) and Routes (lines) along with the US Fish and Wildlife Refuges (green) and Important Bird Areas (gray)

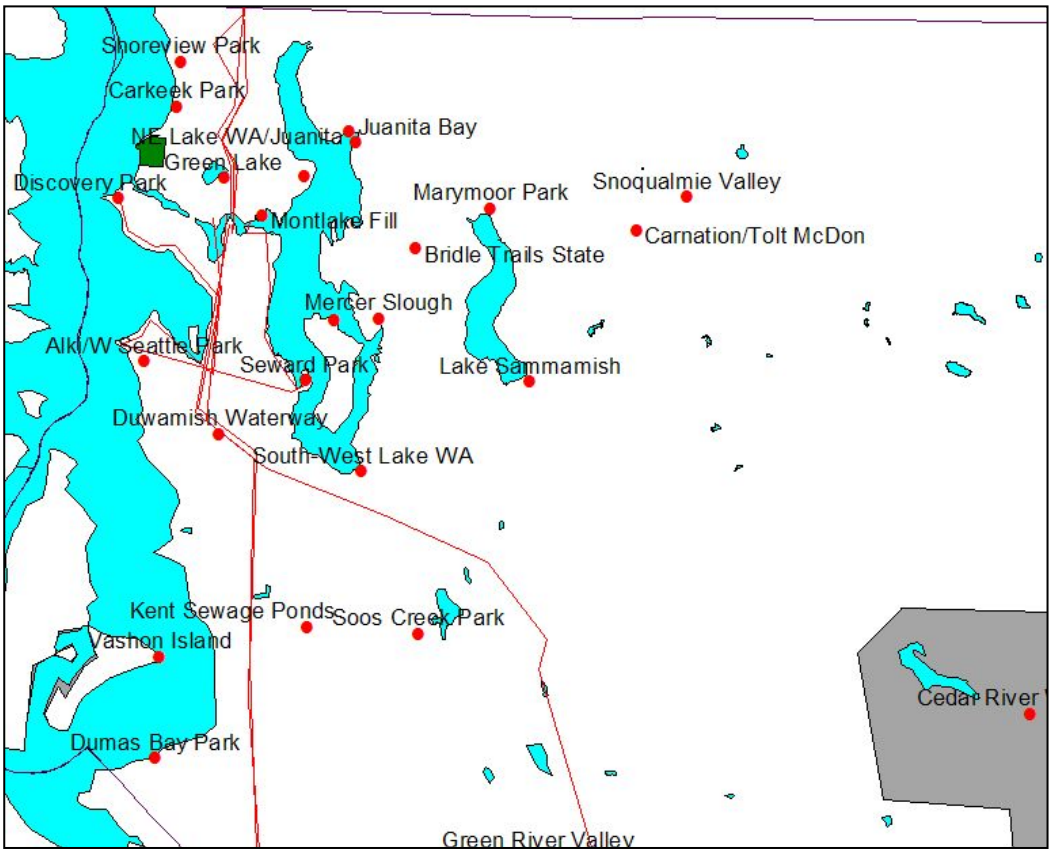
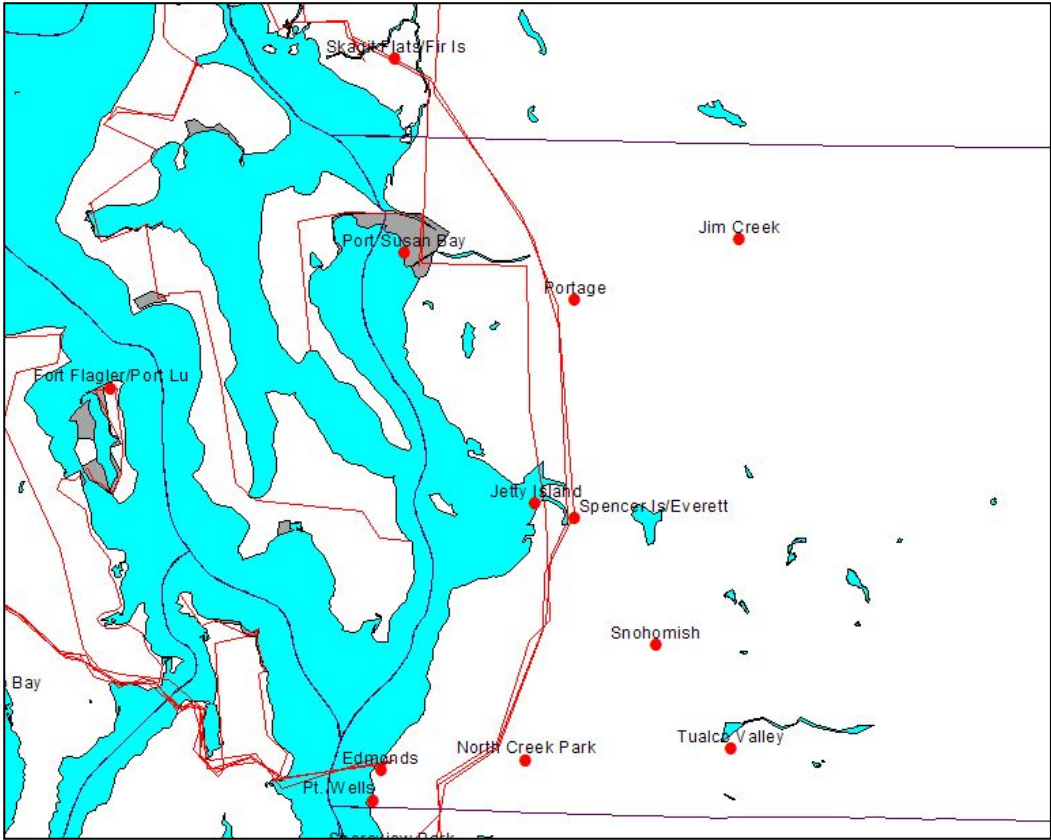
All Points, Routes, and IBA's

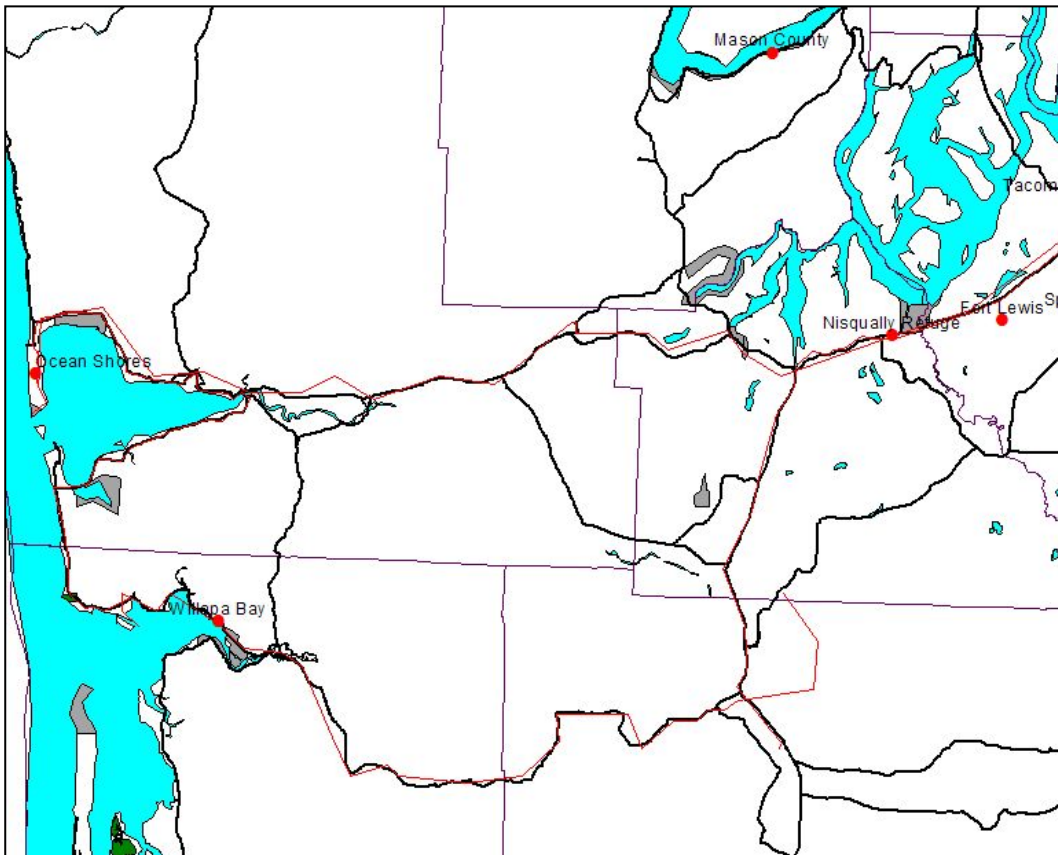
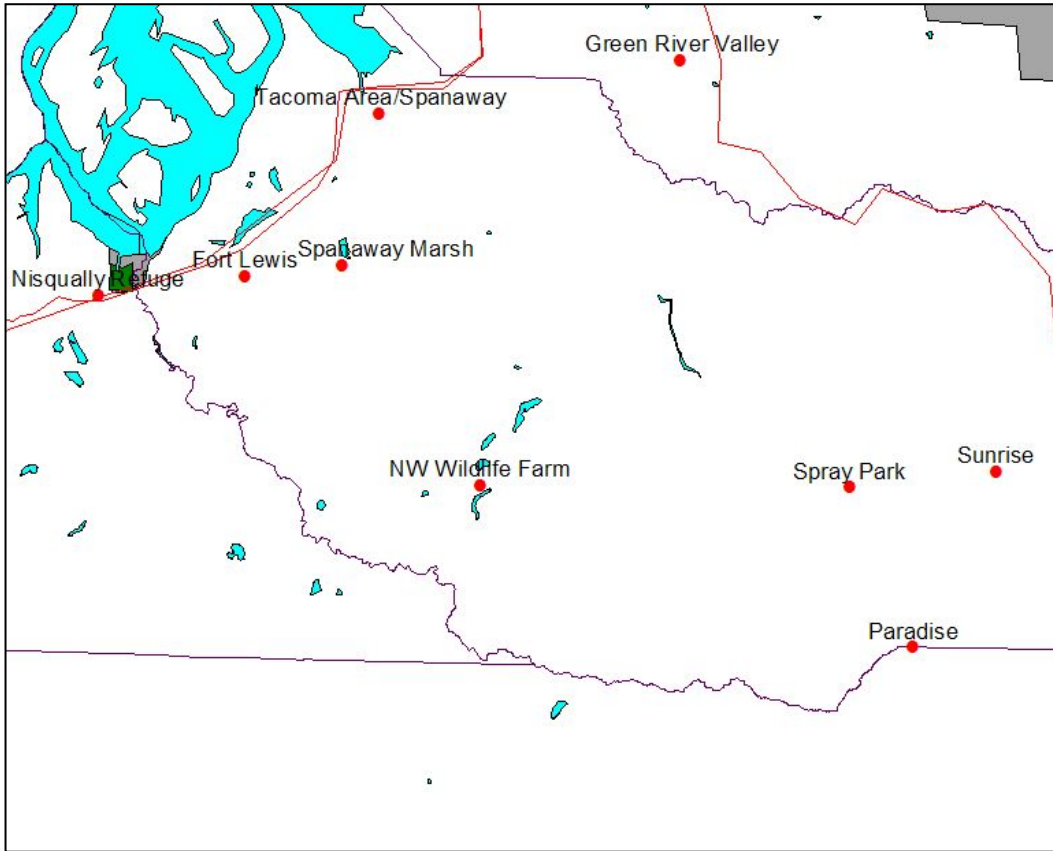


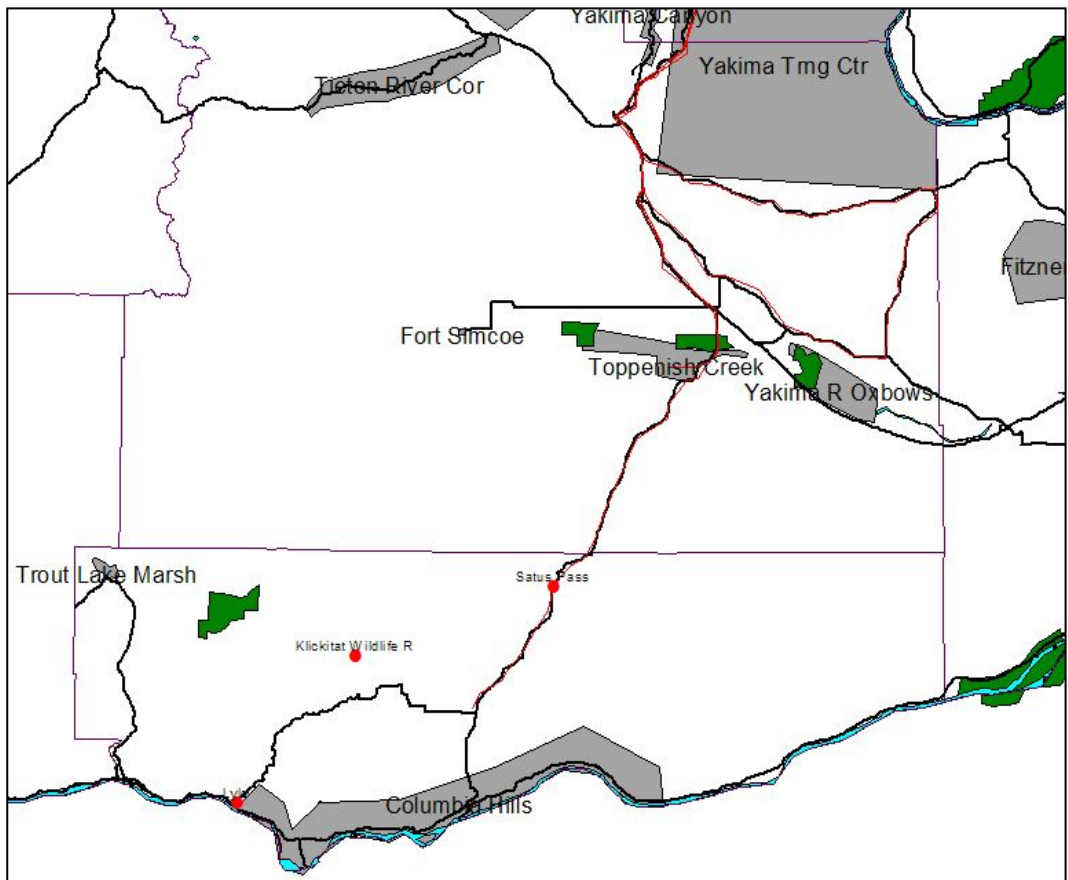
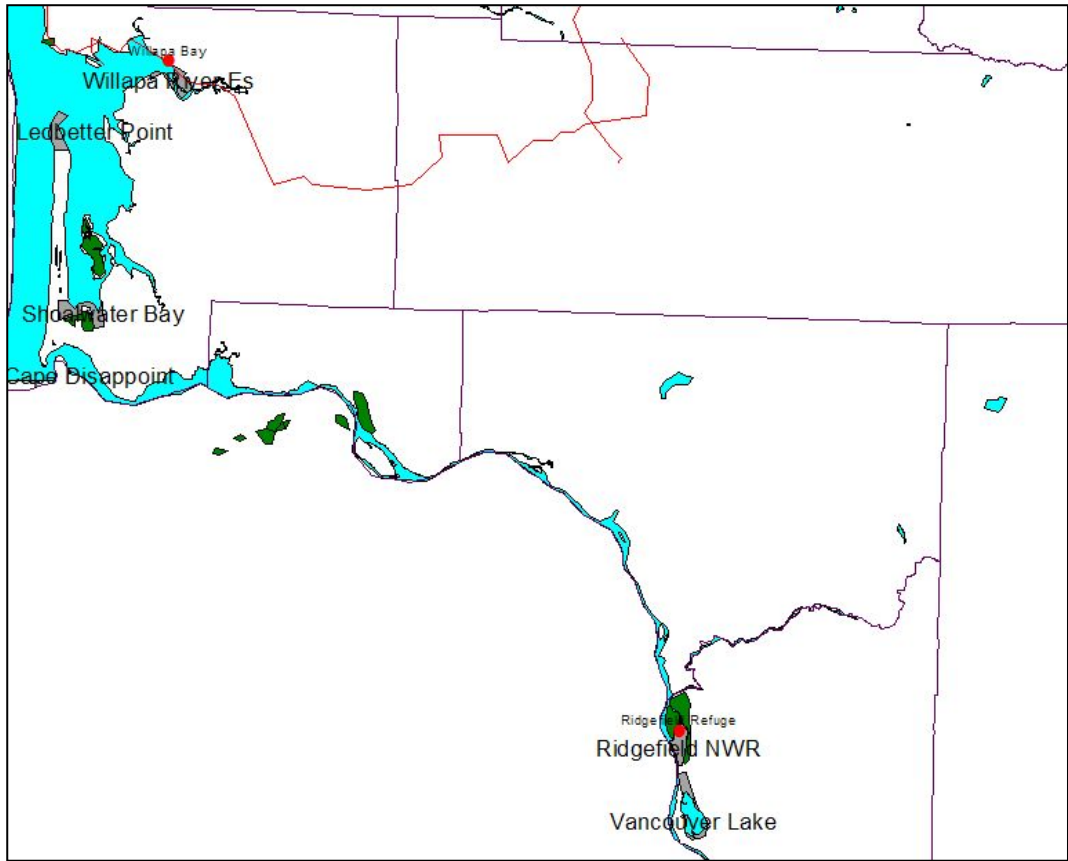
IBA's and USFWS Wildlife Refuges

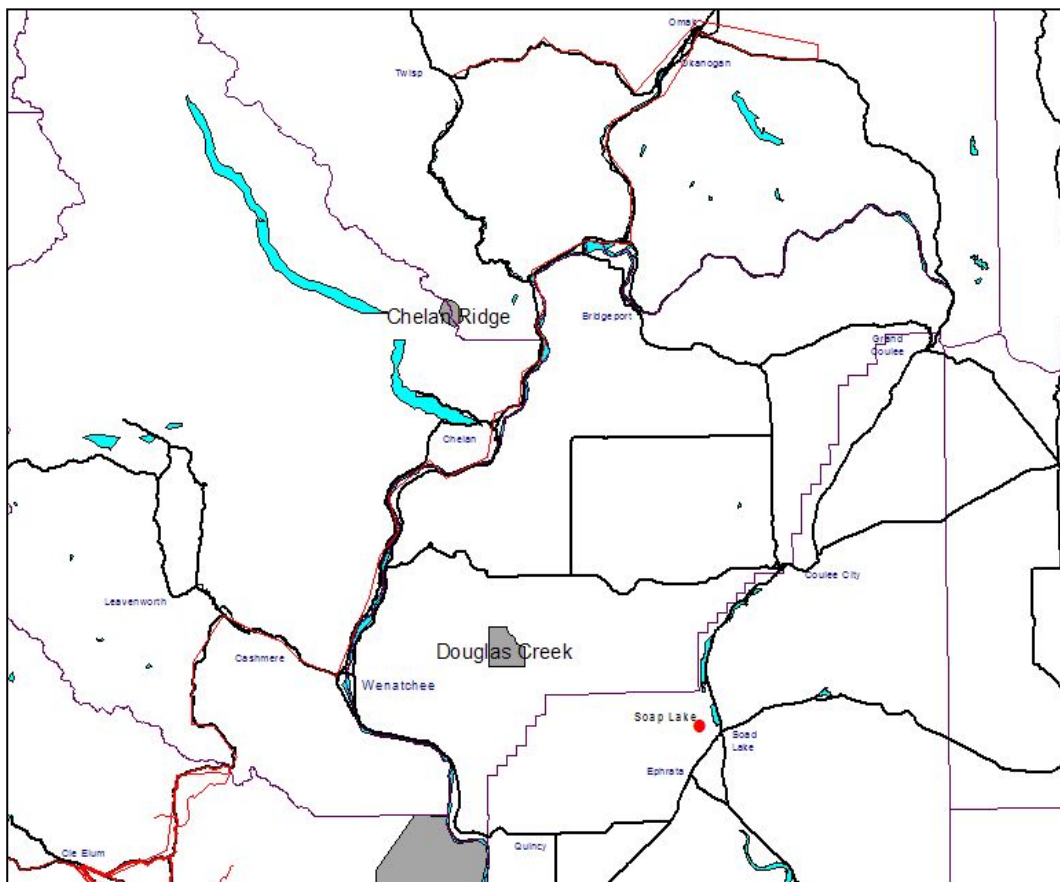
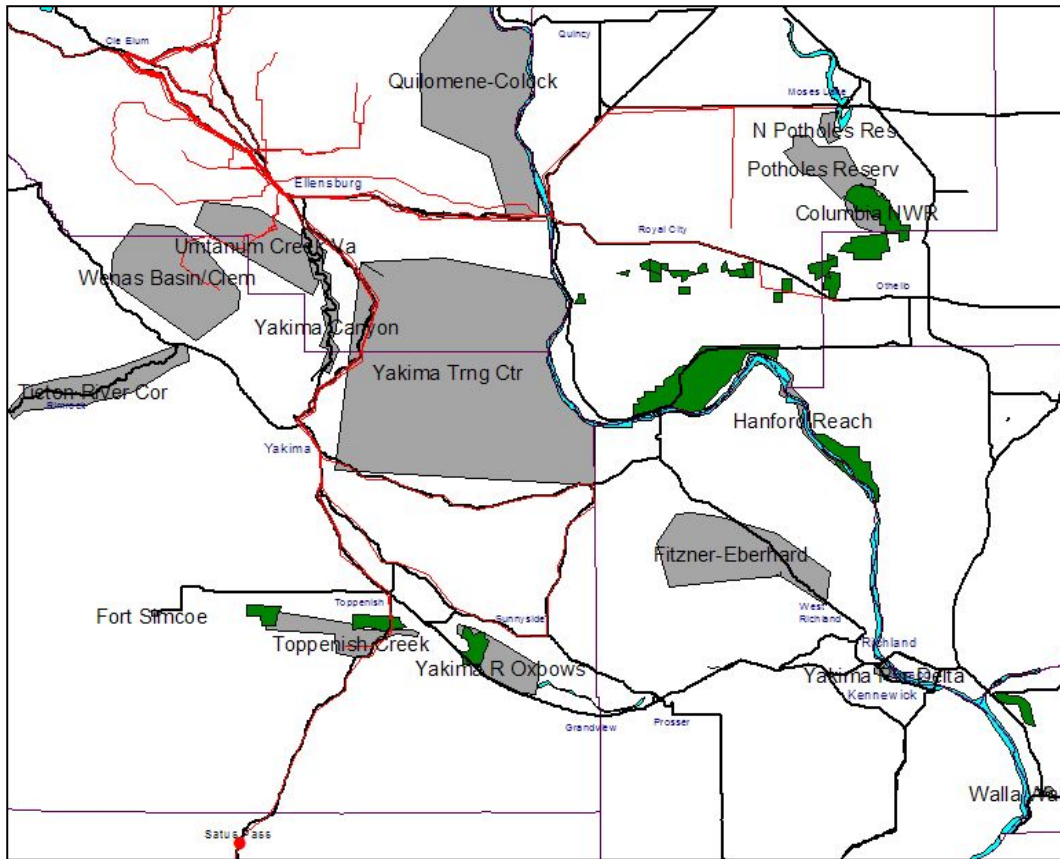


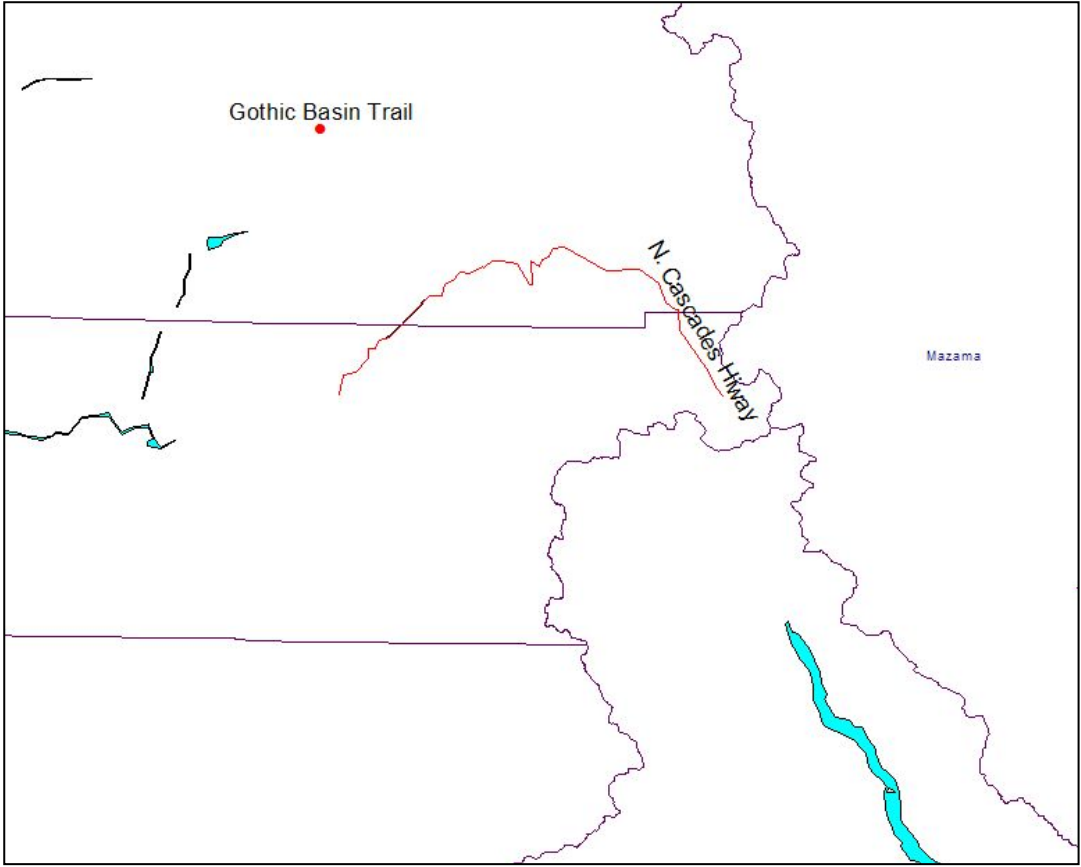






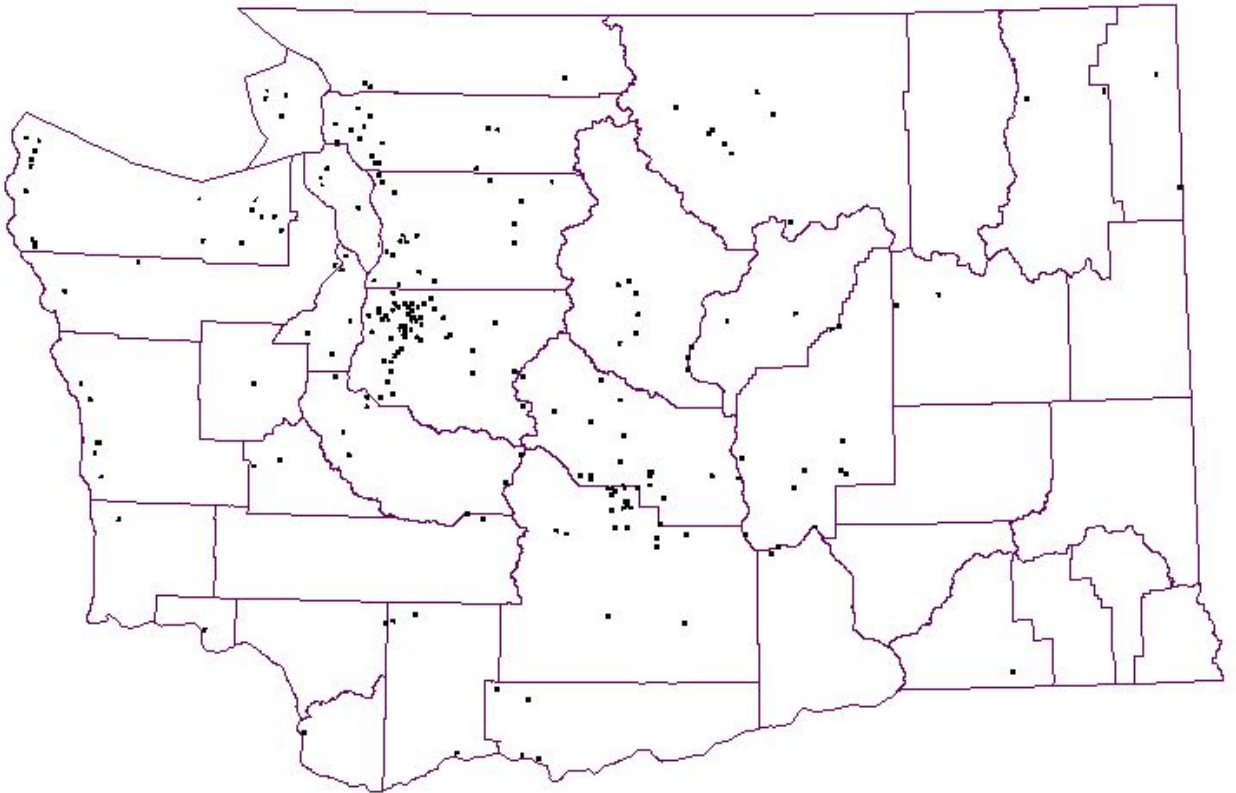






Additional Data

Michael Hobbs submitted 24,011 records spanning 1991-2000. He recorded 298 species. Because his dataset was so large and only included birds, I included this map and his data in this report.



Analyses

Records Submitted	<i>NatureMapping</i> Database	Seattle Audubon	Michael Hobbs
All records including other vertebrates	81,036 (for this analyses)	31,838	
Just birds	79,055	31,759	24,011
Total number of Field Trips (see below)		589	Did not calculate
Average # of species reported/trip		57	

Gussie's health began failing 2003, and she did not bring in as many field trip reports. Data submitted up to her death in December, 2004 are included in this report.

Seattle Audubon Field Trips by Year

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
29	79	83	77	71	60	71	51	42	26

Although there were 31 field trips that occurred only once, the top 5 reported fieldtrips were: Spencer Island/Everett (43 trips), Whidbey Island (35), Nisqually Wildlife Refuge (30), Montlake Fill (24), and Sequim area (22).

The Washington Department of Fish and Wildlife's (WDFW) species list was used for the Washington birds, although *NatureMapping* added Domestic chicken, duck, and goose to the list. WDFW's database is not as up-to-date as the Washington Ornithological Society's list. If you find discrepancies, please let me know.

Bird Species on WDFW's list	Number of species with no data in the <i>NatureMapping</i> database	Number of species with no data from Seattle Audubon
402	50	74

The Washington Comprehensive Wildlife Conservation Strategy

The Federal Government required each state to develop a Comprehensive Wildlife Conservation Strategy and submit their plan to U.S. Fish and Wildlife Service by October, 2005. All State Wildlife Grants funded by Congress are predicated on the completion and acceptance of state Comprehensive Wildlife Conservation Strategies (CWCS). Acceptance of the Washington CWCS by the U.S. Fish and Wildlife Service will satisfy the funding requirements of the current planning grants and establish eligibility for further funding of Washington wildlife's conservation program under the State Wildlife Grants program. A Steering Committee comprised of myself, Nina Carter for Washington Audubon, and other state and private organizations met 3-4 times during the initial development of the strategy.

The final Strategy identified 100 species that should be monitored...many are rare, threatened and endangered, but there are others on the list that are at-risk or very little data have been collected on them. Fifty-nine of these species are birds. WDFW staff made the selection of the species.

Appendix A consists of the WDFW species list with the number of records reported by Seattle Audubon, Michael Hobbs, and the records in the *NatureMapping* database. **Species highlighted in bold are on the "should be monitored" CWCS list. Species in blue do not have any records. Species in bold red do not have any records in the *NatureMapping* database and are on the "should be monitored" CWCS list.** These species are:

Upland sandpiper	Flammulated owl
Yellow-billed cuckoo	Oregon vesper sparrow
Streaked horned lark	Sharp-tailed grouse
Northern fulmar	

In following tables, the first table lists the 50 species that did not have records submitted. The second table lists the 24 species that Audubon did not record, but there are records in the *NatureMapping* database.

**Species with No Observations
Alphabetically by Common Name**

Aleutian Canada goose	Northern fulmar *
Black-billed cuckoo	Northern parula
Black-footed albatross	Oregon vesper sparrow *
Blackpoll warbler	Ovenbird
Boreal owl	Parakeet auklet
Broad-winged hawk	Pink-footed shearwater
Buller's shearwater	Pinyon jay
Cape May warbler	Pomarine jaeger
Flammulated owl *	Prothonotary warbler
Flesh-footed shearwater	Red-billed tropicbird
Fulvous whistling duck	Red-legged kittiwake
Hooded warbler	Rose-breasted grosbeak
Hudsonian godwit	Scott's oriole
Indigo bunting	Sharp-tailed grouse *
Ivory gull	Sharp-tailed sandpiper
Laughing gull	Short-tailed albatross
Laysan albatross	Shy albatross
Least tern	South polar skua
Leconte's sparrow	Streaked horned lark *
Little blue heron	Tennessee warbler
Long-tailed jaeger	Thick-billed murre
Magnificent frigatebird	Upland sandpiper *
McKay's bunting	White-rumped sandpiper
Mottled petrel	Xantus' murrelet
Mountain plover	Yellow-billed cuckoo *

* - CWCS list

**Additional Species not Reported by Seattle Audubon
Alphabetically by Common Name**

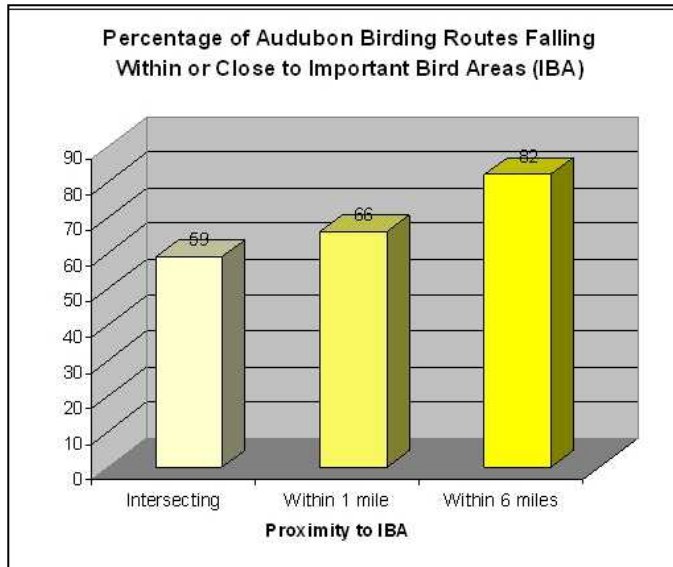
Black-and-white warbler	Leach's storm petrel
Black-throated sparrow	Least flycatcher
Brewer's sparrow	Little gull
Cassin's auklet *	Northern waterthrush
Cattle egret (checking on this)	Pine grosbeak
Chestnut-collared longspur	Sabine's gull
Clay-colored sparrow	Short-tailed shearwater
Common grackle (checking on this)	Stilt sandpiper
Common poorwill	Tropical kingbird
Eurasian dotterel	White-winged crossbill
Fork-tailed storm-petrel	
Hermit warbler	
Horned puffin	
Hungarian partridge	

* - CWCS list

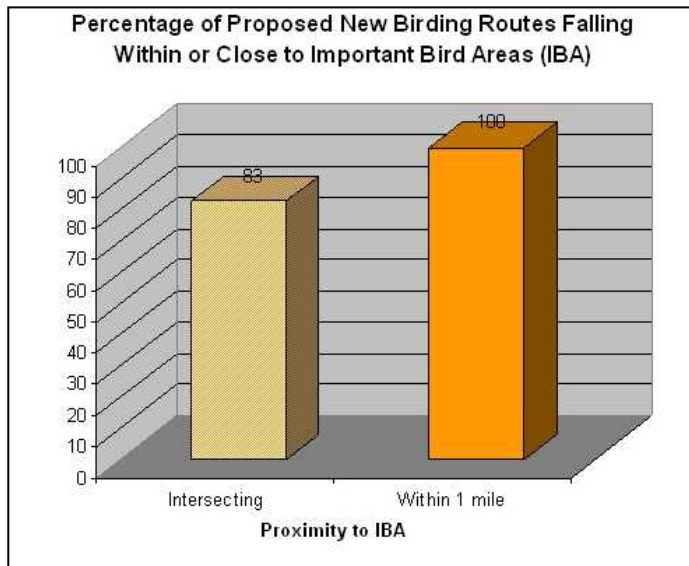
Although many of the species in these tables are pelagic, the absence or very few records makes me wonder if these species require monitoring and should be added to the CWCS list. Feedback from the Seattle Audubon's Science Committee regarding the status of these birds would be appreciated.

Intersecting Important Bird Areas and Seattle Audubon Field Trips

A Western Washington University student compared the field trip Points and Routes data with the IBA's for a GIS class project.



She calculated new routes that would increase the proximity to IBA's.



The following proposed route numbers were her numbering system. When I receive the GIS coverage for the proposed routes, it will be added to this report.

Driving Directions for Proposed New Field Trips

Route ID #2:

Going south on the Toppenish WR fieldtrip route or the Goldendale/Klickitat fieldtrip route, exit onto St Hwy 22 going southeast, Route 2 is the middle section of St Hwy 22 surrounding Toppenish Creek.

Going southeast on the Yakima Valley fieldtrip route, exit onto St. Hwy 223, then exit going southeast onto St. Hwy 22. Route 2 begins when you exit onto St. Hwy 22.

Route ID#3:

Going west on the Tenino-Tokeland fieldtrip route, exit onto US Hwy 101, continue south until hitting Shoalwater Bay. Route extends around the Bay.

Route ID #4:

Going west on the Tenino-Tokeland fieldtrip route, exit onto US Hwy 101, Route 4 starts at this exit and travels along the Willapa River Estuary.

Route ID #5:

Going south on the Goldendale/Klickitat fieldtrip route or the Yakima Valley route, exit onto US Hwy 12. **Route #1** starts when US Hwy 12 turns Southeast.

Going south on the Naches Peak fieldtrip route continue south on State Hwy 123, exit onto US Hwy 12 going east. The route ends when it intersects St Hwy 410.

Route ID #11:

Going south on the Bowerman Basin/Ocean fieldtrip route or the Chehalis Valley fieldtrip route, exit onto St. Hwy 16, then exit onto St. Hwy 302, and then onto St. Hwy 3, proceed to exit onto St. Hwy 106. Route 11 is almost all of St. Hwy 106.

Route ID #12:

Follow the directions to get to Route #13, however, Route #12 is the very beginning of Route #13 traveling along Eld Inlet/ Mud Bay.

Route ID #13:

Traveling along the Bowerman Basin/Ocean fieldtrip route, instead of exiting and traveling along St. Hwy 8, continue to follow St. Hwy 101. Route 12 ends where St. Hwy 101 intersects St. Hwy 108

Route ID #14:

Begin at the start of the Snoqualmie to Cle Elum fieldtrip route, instead of traveling east, travel west on I-90 traveling through the northern part of the Cedar River Watershed. From I-5 traveling north or south, exit onto I-90 until reaching the Cedar River Watershed.

Route ID #15:

Traveling south on the Wenas Creek fieldtrip route, the Potholes/Moses Lake route, the Goldendale/Klickitat route, the Yakima Valley route, the Toppenish WR route, the Ellensburg route, the Umtanum Rd. route or the Crag Creek Birdathon route, exit onto St. Hwy 821. Route 15 runs along the majority of St. Hwy 821 excluding the very southern stretch where it intersects I-82.

Traveling north on the Goldendale/Klickitat fieldtrip route, the Yakima Valley route or the Toppenish WR route, exit onto St. Hwy 821. Route 15 ends when it intersects with I-82.

Route ID #16:

Traveling south on the Chehalis Valley fieldtrip route, continue on I-5 until exiting onto St. Hwy 205. Continue onto St Hwy 14 until exiting on St. Hwy 141. Route 16 runs along the Trout Lake Marsh. Coming south on the Goldendale/Klickitat fieldtrip route, at the of US Hwy 97 exit onto St. Hwy 142. Turn west onto St. Hwy 14 and then north onto St. Hwy 141.

Route ID #26:

Going east on the Yakima Valley fieldtrip route, continue along St. Hwy 24, then turn southeast onto St. Hwy 240. Route 26 is the middle section of St. Hwy 240.

Going southeast on the Yakima Valley fieldtrip route, continue on I-82, then exit onto St. Hwy 244 and then onto St. Hwy 240.

Route ID #27:

Going east on the Yakima Valley fieldtrip route, continue along St. Hwy 24 until it intersects with St. Hwy 26. To complete the route from St. Hwy 24, exit onto St. Hwy 243 until it intersects with I-90.

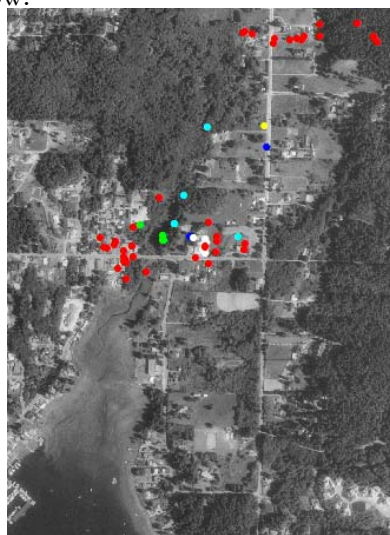
Going east on the Potholes/Moses Lake fieldtrip route or the Crab Creek Birdathon route, exit onto St. Hwy 243 and then continue east on St. Hwy 24 until it intersects with St. Hwy 26.

Conclusion

Although Gussie is gone, the relationship between *NatureMapping* and Seattle Audubon has been a worthwhile process that I hope continues. This report has helped identify species for which we need more data

A few more errors were detected while writing this report. Although minor, editing is still taking place on species code errors and some field trips. It seems one can always find another error. This process, however, has helped focus my editing attention on records from other NatureMappers for species that Audubon reported lower numbers. For example, the *NatureMapping* database has historic data beginning in 1902 mainly from the Washington Cooperative Fish and Wildlife Research Unit literature review project of breeding birds along the coast.. The 4 records within the database for the Stilt sandpiper were from this project. As I mentioned before, if you find any errors, please let me know.

Although not all, but much of Audubon data has to be “tagged” not to be included in the *NatureMapping* maps on the web site (www.fish.washington.edu/naturemapping) and those maps re-built. The possibilities of collecting future field data using the *NatureMapping* data collection sequence on a handheld computer with an attached GPS unit are exciting because these data can be immediately used by Audubon and then transmitted to *NatureMapping*. However, I do not expect every field trip leader will want to deal with data entry into the handheld.



Your data are being used in land planning. The Master Builders' Association appealed the Growth Management Board against Pierce County's efforts to down-zone one of their Biodiversity Management Areas for less development. It was denied thanks to the Gap historic data and current *NatureMapping* data that included your three field trips to Spanaway Marsh and vicinity.

If we can get data from other Audubon chapters organized in this fashion, the chapters will truly have data to support their efforts in conservation...especially with the overlap of field trips around the state.

There is more to do, such as comparing *NatureMapping* data with state and local parks locations.

Thanks to all of the field trip leaders that submitted data, Lorraine Hartmann and Linda Carroll for compiling and sending it to us Kirsten Tollefson for the new routes, and, David Lester, my *NatureMapping* volunteer for developing the IBA maps and assisting me with the analyses. *Gussie, if you only knew what you started...*