# **Tables for Atlas CD**

Various data sets are contained on this CD as downloadable files that may be viewed and queried by importing them into a standard spreadsheet or database program, such as MS Excel or MS Access, or even by viewing and sorting them in MS Word (press File-Open-[path with full file name]-Edit-SelectAll-Table-Convert-TextToTable).

Although we have made the data from this project accessible to anyone, all the time the authors spent administering this project, as well as time spent computerizing, organizing, and documenting the data, was uncompensated. Moreover, not every limitation of the data has been described. *For these reasons, we request that researchers who wish to publish statistical analyses of these data please contact us first to discuss the data and opportunities for joint authorship of resulting publications.* Furthermore, we again thank the Oregon Natural Heritage Program and the USEPA for sharing with us some of the following non-avian data sets. We also would appreciate hearing of any factual errors discovered in the MASTER.TXT file. Contact us at:

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The files are as follows:

File: MASTER.TXT

General Description: This is the database that appears in the species accounts on this CD. Fields (xx??, comma-delimited):

# File: PLACES.TXT

General Description: This tells you which towns or other major geographic features are in each hexagon, or conversely, which hexagon(s) is associated with a particular place. The data were derived by manually overlaying the hexagon grid on a 1:1,000,000 scale map of Oregon.

Fields (2, comma-delimited): HexagonID, Name of town or other major geographic feature Note: This includes only about 1000 of the most commonly-recognized towns and features. Some towns occur in multiple hexagons.

# File: ALLPLACE.TXT

General Description: This tells you all features in each hexagon or square that are shown on USGS topographic maps, and conversely, which hexagon(s) and square(s) are associated with a particular feature. The data were obtained from the 1995 USGS "GNIS" database. The geographic coordinates of each feature given in that database were overlaid by computer with the digital grid of hexagons and squares.

Fields (6, comma-delimited): Name of geographic feature Type of feature HexagonID InSquare (X= feature is located in the square) Latitude of feature

Longitude of feature

Note: This includes over 51,000 features. Many (like named streams) cross several hexagons, but usually are listed only in one hexagon. For updates and more information on rules that USGS used to assign one set of coordinates to each feature, see <a href="http://mapping.usgs.gov/www/gnis/">http://mapping.usgs.gov/www/gnis/</a>

# File: COUNTIES.TXT

General Description: This tells you which hexagons are contained in a particular county, or conversely, which counties intersect or include a particular hexagon. The data were derived by manually overlaying the hexagon grid on a 1:1,000,000 scale map of Oregon.

Fields (2, comma-delimited): HexagonID, County Name

Note: Many counties occur in multiple hexagons

# File: TRS.TXT

General Description: This lists the township, range, and section of each hexagon, and thus allows you to convert township-range-section to hexagonID. The data were obtained by overlaying a digital map of township-range-section with the digital grid of hexagons.

Fields (6, comma-delimited): HexagonID, Township#, TownshipN/S, Range#, RangeE/W, Section # Note: Some hexagons straddle multiple Sections.

#### File: REGIONS.TXT

General Description: For each hexagon, this tells you what percent of each ecoregion the hexagon comprises. The ecoregions are those used by the Oregon Natural Heritage Program, which provided the digital map. To derive the percentages, that map was overlaid with the hexagon digital map. Fields (11, comma-delimited):

# HexagonID

Percent of the hexagon located in Blue, Ochoco, & Wallowa Mts. ecoregion Percent of the hexagon located in Basin & Range ecoregion Percent of the hexagon located in Columbia Basin ecoregion Percent of the hexagon located in Coast & Coast Range ecoregion Percent of the hexagon located in East Cascades & Modoc Plateau ecoregion Percent of the hexagon located in High Lava Plains ecoregion Percent of the hexagon located in Klamath Mts. ecoregion Percent of the hexagon located in Owyhee Uplands ecoregion Percent of the hexagon located in West Cascades & Cascade Crest ecoregion Percent of the hexagon located in West Cascades & Cascade Crest ecoregion

Note: Some hexagons straddle multiple ecoregions.

## File: LATLONGS.TXT

General Description: This contains the latitudinal and longitudinal coordinates of the southeast (xx??) corner of each square and the southeast (xx??) apex of each hexagon. These are provided for users who wish to plot the hexagons and squares on their own maps, and do not have access to GIS software that allows digital projection of the hexagon and square grids contained in the file, xxx??? Fields (5 comma-delimited):

HexagonID Latitude of hexagon Longitude of hexagon Latitude of square (when present) Longitude of square (when present)

#### File: HEXDATA.TXT

General Description: This summarizes, by hexagon, indicators of observer effort and various calculations of species richness. Richness values were computed from the master database (MASTER.TXT). Fields (11, comma-delimited):

HexagonID Percent of the hexagon located in Oregon (excluding ocean) Number of species found (total) Number of species found with status POSSIBLE Number of species found with status CONFIRMED Number of species found that were predicted Number of species predicted but not found Number of species found that were not predicted Number of species observations that were duplicated Number of species that also were found in square

Note: "Predicted" species were those that had a strong (score of 3 or 4 on 4-point scale) association with any mapped habitat in the hexagon. Species whose occurrence was only historic (pre-1995) were excluded from tallies.

## File: SQDATA.TXT

General Description: This summarizes, by square, indicators of observer effort and various calculations of species richness. Richness values were computed from the master database (MASTER.TXT). Fields (9, comma-delimited):

HexagonID

Number of species found (total) Number of species found with status POSSIBLE Number of species found with status PROBABLE Number of species found with status CONFIRMED Number of species found that were predicted Number of species found that were not predicted Number of species predicted but not found Number of species observations that were duplicated

Note: "Predicted" species were those that had a strong (score of 3 or 4 on 4-point scale) association with any mapped habitat in the square. Species whose occurrence was only historic (pre-1995) were excluded from tallies.

#### File: EFFORTHX.TXT

Fields (16, comma-delimited):

HexagonID

Percent of the hexagon located in Oregon (excluding ocean)

- Hexagon cumulative linear distance of mapped roads (EPA calculation)
- Hexagon acres in Oregon

Hexagon number of atlasing hours

Hexagon number of observers

Hexagon number of years covered

Hexagon status 1 ownership (acres)

Hexagon status 1+2 ownership (acres)

Hexagon status 1+2+3 ownership (acres)

Hexagon status 1+2+3+4 ownership (acres)

Hexagon status 1 ownership (%)

Hexagon status 1+2 ownership (%)

Hexagon status 1+2+3 ownership (%)

Hexagon status 1+2+3+4 ownership (%)

Hexagon cumulative linear distance of mapped roads (EPA calculation)

Note: The above ownership status levels are defined as follows (from Kagan et al. 1999):

Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management. Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.
Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.
Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

# EFFORTSQ.TXT

Fields (4, comma-delimited):

HexagonID Square number of atlasing hours Square number of observers Square number of years covered

## File: SPECIES.TXT

General Description: This summarizes, by hexagon and square, frequency and other statistical characteristics of each species' distribution. Values were computed from the master database (MASTER.TXT). Fields (23, comma-delimited): Species Sequencing Code Species Full Name Species 4-letter Abbreviation Number of hexagons in which species found (total) Number of squares in which species found (total) Number of hexagons with status POSSIBLE Number of hexagons with status PROBABLE Number of hexagons with status CONFIRMED Number of squares with status POSSIBLE Number of squares with status PROBABLE Number of squares with status CONFIRMED Number of hexagons where predicted (based on habitat) AND found Number of squares where predicted (based on habitat) AND found Number of hexagons where predicted (based on habitat) but not found Number of squares where predicted (based on habitat) but not found Number of hexagons where found but not predicted (based on habitat) to be present Number of squares where found but not predicted (based on habitat) to be present Number of squares where species also found in hexagon Number of hexagons with duplicate records of the species Number of squares with duplicate records of the species Mean number of atlasing hours among hexagons where found Mean number of atlas observers among hexagons where found Mean number of atlas years among hexagons where found Note: "Predicted" species were those that had a strong (score of 3 or 4 on 4-point scale) association with

any mapped habitat in the hexagon or square. Species whose occurrence was only historic (pre-1995) were excluded from tallies.

File: FIND SPP.TXT

General Description: This lists species that were not found in each hexagon or square, but which were predicted to occur there based on (a) our knowledge of the species' habitat preferences (see WHRSTATE.TXT), (b) the types of habitats thought to be present (from ONHP data, HAB HEX.TXT), and (c) the coarse geographic range of the species in Oregon. These species should be searched for in their respective squares and hexagons in the future.

Fields (5, comma-delimited):

HexagonID

Sequencing Code of Species Predicted but not found

Full Name of Species Predicted but not found

Four-letter Abbreviation of Species Predicted but not found

Was not found in square (S)

Was not found in either hexagon or square (H).

Note: "Predicted" species were those that had a strong (score of 3 or 4 on 4-point scale) association with any mapped habitat in the hexagon or square.

File: HAB\_HEX.TXT

General Description: This summarizes data on land cover types in each hexagon, as represented by two separate sources of statewide land cover digital data previously derived from aerial imagery (TM and AVHRR imagery). One data set (ONHP) was provided by the Oregon Natural Heritage Program (Level 2 Gap Analysis) and includes 61 land cover types wherever they occurred in patches of at least 247 acres. See Methods section of this CD for further description of this data set. The other (AVHRR) data set was provided by the USEPA and USGS, and includes 14 land cover types based generally on their predominance within 1 sq km grid units. It also contains some indexes EPA computed to quantify the pattern of the land cover types within the hexagons.

Fields (82, comma-delimited):

HexagonID

ONHP land cover types (area in each type):

32= Sitka Spruce-W. Hemlock Maritime Forest

33= Mountain Hemlock Montane Forest

34= True Fir-Hemlock Montane Forest

37= Shasta Red Fir-Mountain Hemlock Forest

39= Whitebark-Lodgepole Pine Montane Forest

40= Ponderosa Pine-dominant Mixed Conifer Forest

41= Northeast Mixed Conifer Forest

42= Jeffery Pine Forest/Woodland

43= Conifer Woodland on Serpentine Bedrock

44= Lodgepole Pine Forest/Woodland

45= Subalpine Fir-Lodgepole Pine Montane Conifer

46= Coastal Lodgepole Forest

49= Douglas Fir-W. Hemlock-W. Red Cedar Forest

50= Douglas Fir-Port Orford Cedar Forest

51= Douglas Fir-Mixed Deciduous Forest

52= Douglas Fir-White Fir/Tanoak-Madrone Mixed Forest

53= Douglas Fir/White Oak Forest

54= Ponderosa Pine Forest/Woodland

56= Douglas Fir dominant - Mixed Conifer Forest

57= Ponderosa Pine/White Oak Forest & Woodland

58= Ponderosa Pine-W. Juniper Woodland

59= Ponderosa-Lodgepole Pine on Pumice

61= W. Juniper Woodland

6364= Red Alder-Big Leaf Maple Forest

(formerly Red Alder Forest (63) & Red Alder-Big Leaf Maple Forest (64))

66= Aspen Groves

67= Mixed Conifer/Mixed Deciduous Forest

72= Siskiyou Mtns Mixed Deciduous Forest

75= White Oak Forest

77= South Coast Mixed Forest

85= Siskiyou Mtns Shrubland on Serpentine Bedrock

87= Willow-Hawthorn Shrubland

89= Manzanita-dominant Shrubland

90= Mountain Mahogany Shrubland

91= Sagebrush Steppe

93= Low-Dwarf Sagebrush

95= Salt Desert Scrub Shrubland

96= Big Sagebrush Shrubland

97= Bitterbrush-Big Sagebrush Shrubland

103= Northeast Canyon Grass & Shrubland

105= Subalpine Grassland

106= Grassland & Conifers Interspersed

110= Subalpine Scattered Trees & Shrubs

112= Northeast Modified Grassland

113= Coastal Headland Grass & Shrubland

114= Wet Montane Meadow 121= Recently Cutover/Burnt Forest 122= Seasonally Wet Playa 124= Urban/Residential 125= Cropland/Pasture/Orchard 127= Lava/Pumice 128= Coastal Dunes & Ponds 129= Alpine Rock & Snowfield 130= Open Water 136201= Streamside/Wetland Shrubland (formerly NWI (136) and Gap Palustrine Shrubland (201)) 137202= Coastal Salt Marsh & Exposed Tidal Flat (formerly NWI (137) and Gap Estuarine Emergent Wetland (202)) 138203= Freshwater Marsh (formerly NWI (138) and Gap Palustrine Emergent Wetland (203)) 135200= Streamside Forest (formerly NWI (135) and Gap Palustrine Forested Wetland (200)) Number of land cover types (per hexagon) AVHRR land cover types & computed variables: Cropland/pasture mixture (proportion) Grassland/cropland mixture (proportion) Woodland/cropland mixture (proportion) Grass dominated (proportion) Shrub dominated rangeland (proportion) Mixed (grass/shrub) rangeland (proportion) Deciduous forest (proportion) Conifer forest (proportion) Mixed (deciduous/conifer) forest (proportion) Water bodies (proportion) Coastal wetlands (proportion) Barren or sparsely vegetated (proportion) Alpine tundra (proportion) Urban area (proportion) Number of detailed land cover classes (range 1-160) per hexagon Number of different patches larger than about 4 sq. km. Fractal metric based on patches larger than about 4 sq. km. Dominance metric for hexagon based on patches larger than about 4 sq. km. Contagion metric for hexagon based on patches larger than about 4 sq. km. Other: Cumulative linear distance of streams mapped in each hexagon (EPA calculation) Elevation (mean) (EPA calculation)

Elevation standard deviation (EPA calculation) Inland water acreage (from ONHP ownership/management database)

## File: HAB SQ.TXT

General Description: This summarizes data on land cover types in the squares, as represented by the ONHP land cover. The values are the percent of the square occupied by that cover type. Several hexagons do not contain squares, and for a few others data are missing. Fields (50, comma-delimited):

## HexagonID

ONHP land cover types (area in each type):

32= Sitka Spruce-W. Hemlock Maritime Forest

33= Mountain Hemlock Montane Forest

34= True Fir-Hemlock Montane Forest

37= Shasta Red Fir-Mountain Hemlock Forest

40= Ponderosa Pine-dominant Mixed Conifer Forest

41= Northeast Mixed Conifer Forest

42= Jeffery Pine Forest/Woodland

43= Conifer Woodland on Serpentine Bedrock

44= Lodgepole Pine Forest/Woodland

45= Subalpine Fir-Lodgepole Pine Montane Conifer

49= Douglas Fir-W. Hemlock-W. Red Cedar Forest

50= Douglas Fir-Port Orford Cedar Forest

52= Douglas Fir-White Fir/Tanoak-Madrone Mixed Forest

53= Douglas Fir/White Oak Forest

54= Ponderosa Pine Forest/Woodland

56= Douglas Fir dominant - Mixed Conifer Forest

57= Ponderosa Pine/White Oak Forest & Woodland

58= Ponderosa Pine-W. Juniper Woodland

59= Ponderosa-Lodgepole Pine on Pumice

61= W. Juniper Woodland

6364= Red Alder-Big Leaf Maple Forest

(formerly Red Alder Forest (63) & Red Alder-Big Leaf Maple Forest (64))

67= Mixed Conifer/Mixed Deciduous Forest

72= Siskiyou Mtns Mixed Deciduous Forest

75= White Oak Forest

85= Siskiyou Mtns Shrubland on Serpentine Bedrock

89= Manzanita-dominant Shrubland

91= Sagebrush Steppe

93= Low-Dwarf Sagebrush

95= Salt Desert Scrub Shrubland

96= Big Sagebrush Shrubland

97= Bitterbrush-Big Sagebrush Shrubland

103= Northeast Canyon Grass & Shrubland

105= Subalpine Grassland

106= Grassland & Conifers Interspersed

110= Subalpine Scattered Trees & Shrubs

112= Northeast Modified Grassland

121= Recently Cutover/Burnt Forest

122= Seasonally Wet Playa

124= Urban/Residential

125= Cropland/Pasture/Orchard

127= Lava/Pumice

128= Coastal Dunes & Ponds

129= Alpine Rock & Snowfield

130= Open Water

136201= Streamside/Wetland Shrubland

(formerly NWI (136) and Gap Palustrine Shrubland (201))

137202= Coastal Salt Marsh & Exposed Tidal Flat

(formerly NWI (137) and Gap Estuarine Emergent Wetland (202))

138203= Freshwater Marsh

(formerly NWI (138) and Gap Palustrine Emergent Wetland (203))

135200= Streamside Forest

(formerly NWI (135) and Gap Palustrine Forested Wetland (200))

Number of land cover types (per square)

Note: Data from the following squares should not be used due to imprecise location: 24523, 24649, 25147, 25743, 25855, 25970, 25972, 26085, 27068, 27173, 27391, and 27490.

File: WHRSTATE.TXT

General Description: Indicates which of 61 habitats (mainly the ONHP classes) are likely to be used by each breeding bird species, and the relative degree of association of the species with that habitat type. Developed by Paul Adamus with input from members of the Breeding Bird Atlas steering committee.

Fields (64, comma-delimited):

Sequencing Code of Species

Four-letter Abbreviation of Species

Full Name of Species

Species association score with each habitat type (1 = least, 2 = , 3 = , 4 = highest):

32= Sitka Spruce-W. Hemlock Maritime Forest

33= Mountain Hemlock Montane Forest

34= True Fir-Hemlock Montane Forest

37= Shasta Red Fir-Mountain Hemlock Forest

39= Whitebark-Lodgepole Pine Montane Forest

40= Ponderosa Pine-dominant Mixed Conifer Forest

41= Northeast Mixed Conifer Forest

42= Jeffery Pine Forest/Woodland

43= Conifer Woodland on Serpentine Bedrock

44= Lodgepole Pine Forest/Woodland

45= Subalpine Fir-Lodgepole Pine Montane Conifer

46= Coastal Lodgepole Forest

49= Douglas Fir-W. Hemlock-W. Red Cedar Forest

50= Douglas Fir-Port Orford Cedar Forest

51= Douglas Fir-Mixed Deciduous Forest

52= Douglas Fir-White Fir/Tanoak-Madrone Mixed Forest

53= Douglas Fir/White Oak Forest

54= Ponderosa Pine Forest/Woodland

56= Douglas Fir dominant - Mixed Conifer Forest

57= Ponderosa Pine/White Oak Forest & Woodland

58= Ponderosa Pine-W. Juniper Woodland

59= Ponderosa-Lodgepole Pine on Pumice

61= W. Juniper Woodland

63= Red Alder

65= Streamside Cottonwood/Alder

66= Aspen Groves

67= Mixed Conifer/Mixed Deciduous Forest

68= Streamside Cottonwood

72= Siskiyou Mtns Mixed Deciduous Forest

75= White Oak Forest

77= South Coast Mixed Forest

85= Siskiyou Mtns Shrubland on Serpentine Bedrock

89= Manzanita-dominant Shrubland

90= Mountain Mahogany Shrubland

91= Sagebrush Steppe

93= Low-Dwarf Sagebrush

95= Salt Desert Scrub Shrubland

96= Big Sagebrush Shrubland

97= Bitterbrush-Big Sagebrush Shrubland

103= Northeast Canyon Grass & Shrubland

105= Subalpine Grassland

106= Grassland & Fir-Ponderosa Interspersed

110= Subalpine Scattered Trees & Shrubs

112= Northeast Modified Grassland

113= Coastal Headland Grass & Shrubland

114= Wet Montane Meadow

121= Edges of Recently Cutover/Burnt Forest

122= Seasonally Wet Playa

124= Urban/Residential

125= Edges of Cropland/Pasture/Orchard

126= Exposed Tidal Flat

127= Lava/Pumice with Widely Scattered Trees/Shrubs

128= Coastal Dunes & Ponds with Widely Scattered Shrubs/Trees

129= Alpine Rock & Snowfield with Widely Scattered Shrubs

130= Lake/Pond Shoreline & Islands

135= Western Oregon Riverine Woodland

136= Streamside/Wetland Shrubland

137= Tidal Salt Marsh

138= Edges of Freshwater Marsh

300= Coastal Rocky Island/Ledge

301= Stream & River Channels & Banks

File: HEXPRISM.TXT

General Description: Contains data from application of the 2000 PRISM model by the Oregon Climate Service, describing monthly extreme temperatures (in degrees Centigrade) and precipitation, by hexagons. Fields (72, comma-delimited):

HexagonID

April Minimum Temperature, spatial minimum April Minimum Temperature, spatial maximum April Minimum Temperature, spatial range April Minimum Temperature, spatial average April Minimum Temperature, spatial standard deviation April Minimum Temperature, spatial median April Maximum Temperature, spatial minimum April Maximum Temperature, spatial maximum April Maximum Temperature, spatial range April Maximum Temperature, spatial average April Maximum Temperature, spatial standard deviation April Maximum Temperature, spatial median May Minimum Temperature, spatial minimum May Minimum Temperature, spatial maximum May Minimum Temperature, spatial range May Minimum Temperature, spatial average May Minimum Temperature, spatial standard deviation May Minimum Temperature, spatial median May Maximum Temperature, spatial minimum May Maximum Temperature, spatial maximum May Maximum Temperature, spatial range May Maximum Temperature, spatial average May Maximum Temperature, spatial standard deviation May Maximum Temperature, spatial median June Minimum Temperature, spatial minimum June Minimum Temperature, spatial maximum June Minimum Temperature, spatial range June Minimum Temperature, spatial average June Minimum Temperature, spatial standard deviation June Minimum Temperature, spatial median June Maximum Temperature, spatial minimum June Maximum Temperature, spatial maximum June Maximum Temperature, spatial range June Maximum Temperature, spatial average June Maximum Temperature, spatial standard deviation June Maximum Temperature, spatial median July Minimum Temperature, spatial minimum July Minimum Temperature, spatial maximum July Minimum Temperature, spatial range July Minimum Temperature, spatial average

July Minimum Temperature, spatial standard deviation July Minimum Temperature, spatial median July Maximum Temperature, spatial minimum July Maximum Temperature, spatial maximum July Maximum Temperature, spatial range July Maximum Temperature, spatial average July Maximum Temperature, spatial standard deviation July Maximum Temperature, spatial median April Precipitation, spatial minimum April Precipitation, spatial maximum April Precipitation, spatial range April Precipitation, spatial average April Precipitation, spatial standard deviation April Precipitation, spatial median May Precipitation, spatial minimum May Precipitation, spatial maximum May Precipitation, spatial range May Precipitation, spatial average May Precipitation, spatial standard deviation May Precipitation, spatial median June Precipitation, spatial minimum June Precipitation, spatial maximum June Precipitation, spatial range June Precipitation, spatial average June Precipitation, spatial standard deviation June Precipitation, spatial median July Precipitation, spatial minimum July Precipitation, spatial maximum July Precipitation, spatial range July Precipitation, spatial average July Precipitation, spatial standard deviation July Precipitation, spatial median

File: SQPRISM.TXT

General Description: Contains data from application of the 2000 PRISM model by the Oregon Climate Service, describing monthly extreme temperatures (in Centigrade) and precipitation, by squares. Fields (13, comma-delimited):

HexagonID April Temperature, Minimum April Temperature, Maximum May Temperature, Minimum May Temperature, Maximam June Temperature, Maximum July Temperature, Maximum July Temperature, Maximum April Precipitation May Precipitation June Precipitation June Precipitation

Note: Data from the following squares should not be used due to imprecise location: 24523, 24649, 25147, 25743, 25855, 25970, 25972, 26085, 27068, 27173, 27391, and 27490.

File: HXREALWX.TXT

General Description: Contains temperature, precipitation, and other weather data obtained from various sources, and measured at weather stations within the hexagons. When no weather station was present in a

hexagon, data from the nearest weather station were used. Database contains many missing values (cell is left blank).

## Fields (32, comma-delimited):

Hexagon ID Minimum Temperature (12-month average); Average of 1994-1999 Maximum Temperature (12-month average); Average of 1994-1999 Mean Temperature (12-month average); Average of 1994-1999 Precipitation (12-month calendar year sum); Average of 1994-1999 Precipitation (12-month water year sum; Oct-Sept.); Average of 1994-1999; Growing Degree Days (calendar year sum); Average of 1994-1999; Snow Water Equivalent (calendar year average); Average of 1994-1999 April Minimum Temperature (monthly average); Average of 1994-1999 April Maximum Temperature (monthly average); Average of 1994-1999 April Mean Temperature (monthly average); Average of 1994-1999 April Precipitation (monthly sum); Average of 1994-1999 April Growing Degree Days (monthly sum); Average of 1994-1999 April Snow Water Equivalent (monthly average); Average of 1994-1999 May Minimum Temperature (monthly average); Average of 1994-1999 May Maximum Temperature (monthly average); Average of 1994-1999 May Mean Temperature (monthly average); Average of 1994-1999 May Precipitation (monthly sum); Average of 1994-1999 May Growing Degree Days (monthly sum); Average of 1994-1999 May Snow Water Equivalent (monthly average); Average of 1994-1999 June Minimum Temperature (monthly average); Average of 1994-1999 June Maximum Temperature (monthly average); Average of 1994-1999 June Mean Temperature (monthly average); Average of 1994-1999 June Precipitation (monthly sum); Average of 1994-1999 June Growing Degree Days (monthly sum); Average of 1994-1999 June Snow Water Equivalent (monthly average); Average of 1994-1999 July Minimum Temperature (monthly average); Average of 1994-1999 July Maximum Temperature (monthly average); Average of 1994-1999 July Mean Temperature (monthly average); Average of 1994-1999 July Precipitation (monthly sum); Average of 1994-1999 July Growing Degree Days (monthly sum); Average of 1994-1999 July Snow Water Equivalent (monthly average); Average of 1994-1999

# File: DROUGHTI.TXT

General Description: Contains Palmer Hydrological Drought Index (PDHI) for the years 1994-1999. Values were not specific to individual hexagons, but were transferred from a coarser-scale map and had to be allocated to hexagons.

Fields (10, comma-delimited):

HexagonID Mean annual PDHI (mean of the 6 years) Maximum annual Minimum annual Mean April-June Maximum April-June Mean July-August Maximum July-August Minimum July-August

## File: WVBIRDS.XLS

General Description: This Excel-format file consists of 3 spreadsheets. The Habitat Scores spreadsheet indicates which of 31habitats in the Willamette River Basin are likely to be used by each breeding bird species, and it scores each habitat class on a scale of 0-10 depending on likely suitability. The "Rules"

database indicates how the habitat score for a species should be changed if a habitat adjoins water, developed areas, or other features. Assembled by Paul Adamus with partial support and input from the USEPA, and peer-reviewed by 3 local birders. See WHRWV.DOC for full description. Fields: The columns are labeled on each spreadsheet.

# File: WVDEMOG.TXT

General Description: Provides information on demographic characteristics of each bird species that breeds in the Willamette Valley, if such data were found in a review of published literature (most from the Pacific Northwest). This may include home range size, minimum patch size requirements, number of eggs, broods per year, etc. Literature searched by Paula Graf and assembled by Paul Adamus with partial support from the USEPA. See DEMOGWV.DOC for full description of codes in the data fields listed below. Fields (13, comma-delimited):

Sequencing Code of Species Full Name of Species Demographic Variable Value Type (mean, min, max, etc.) Value Age of birds studied Sex of birds studied Location where studied Keason when studied Habitat where studied Citation Reference Comment

## File: WHRWV.DOC

Description: Text file in MS Word explaining the WVBIRDS.TXT database.

File: DEMOGWV.DOC

Description: Text file in MS Word explaining the WVDEMOG.TXT database.