# Supplement 7.1. Introduction to Chapter 7 supplements

*N. Scott Urquhart, Retired, Department of Statistics, Colorado State University, Fort Collins, Colorado, USA.*

This supplement provides background information for data used in Chapter 7 and an overview of the subsequent Chapter 7 supplements.  The data for this manuscript was extracted from public data records maintained by the Oregon Department of Fish and Wildlife (ODFW).  Corrections and additions to the public data do occur from time to time.  So interested users could have exactly the same data on which the book chapter is based, the data, some computer programs, and some computational results are provided as supplements.

The objectives and methodology of the study giving rise to the data are documented on a succession of web pages describing ODFW's Oregon Plan Monitoring Program for Coastal Basins (<http://oregonstate.edu/dept/ODFW/freshwater/inventory/orplan/overview.htm>).   
Information specifically related to this data is accessible from:  
<http://oregonstate.edu/dept/ODFW/freshwater/inventory/orplan/orplnhab.htm>

*Data background and data sets:* Supplements 7.2 and 7.3 provide specific background information for data used in Chapter 7. Supplement 7.2 provides metadata underlying data used in Chapter 7 examples, and Supplement 7.3 provides brief descriptions of variables contained in the data set. Supplements 7.4 and 7.5 provide the ODFW habitat data files. Supplement 7.4 provides the original data set from which data were extracted for use in Chapter 7. This original data set contains 3,302 rows, including many sites not observed due to their not being in the target population, inaccessibility, etc. Supplement 7.5 provides the data analyzed for Chapter 7 examples. It contains 2,154 observations in the first five regions, with only surveyed sites included.

*SAS computations*: Supplements 7.6 and 7.7 provide SAS computation code I used for statistical models and examples presented in Chapter 7. Supplement 7.6 outlines SAS computations using a statistical model having only one slope [Equation (7.7)]. Supplement 7.7 outlines SAS computations using a statistical model having as many slopes as there are sites with observations in multiple years [Equation (7.12)].

*R computations*: Supplement 7.8 provides the R code I used to compute the local estimate of variance, as described in Chapter 7. The R code and specific R packages used here have been superseded by R package "spsurvey", as described in Chapters 7 and 14.

*Results*: Supplements 7.9 and 7.10 provide SAS output for analyses conducted for the Chapter 7 examples. Supplement 7.9 provides the SAS listing for the one slope model, including 382 pages of output. Supplement 7.10 provides the SAS listing for the many-slopes model. It includes 399 pages of output.