

APPENDIX F TREE SURVEY

This page intentionally blank.

INTRODUCTION

Prior to the commencement of construction activities associated with the Interstate 405 (I-405), Tukwila to Renton Improvement Project, the Washington State Department of Transportation (WSDOT) conducted tree surveys to quantitatively and qualitatively document existing tree abundance and composition in areas of proposed clearing or grading. The collected information will be used to support the analysis of project effects on large woody debris (LWD) recruitment to streams in and downstream of the study area. The methodology used to document existing tree presence in the study area was developed, in part, to be consistent with the September 1998 Northwest Indian Fisheries document entitled *TFW Effectiveness Monitoring and Evaluation Program-Riparian Stand Survey, Final Draft* and in a manner that can be repeated for other tree surveys that may be conducted in the future. The information provided in this report is based on fieldwork conducted by consultants on behalf of WSDOT on August 15, 16, and 17, 2007. Topics discussed in this report include the following:

- Tree survey protocol – extent of surveys
- Data collection methods
- Description of surveyed areas
- Results of tree surveys

TREE SURVEY PROTOCOL

Tree surveys were conducted in areas proposed for clearing and/or grading and occurring within 200 feet of streams (Tree Survey Area). The surveys were conducted within a defined area bounded by the following extents:

- Streams within the project footprint were depicted on small-scale field maps. 0 to 100 and 100 to 200 foot survey buffer lines were offset from approximately the ordinary high water mark (OHWM). The proposed clearing/grading limits were then overlaid onto the maps. The areas of intersection were identified with a unique pattern representing the survey areas.
- Survey areas did not extend across or into roadways or parking lots.
- Tree surveys were conducted only in areas where 0 to 100 foot and 100 to 200 foot buffers and clearing/grading limits overlapped.
- If the offset lines from separate stream reaches overlapped, independent surveys were conducted for each stream.

DATA COLLECTION METHODS

The following methods were adhered to at all tree survey locations:

- The Tree Survey Area and stream locations were confirmed using I-405 or State Route (SR) 167 mile post information, field mapping, and visual inspections of the stream.
- The “Field Conditions” portion of the data sheet was completed, including field staff names, dates, conditions, and comments (see Attachment A – Data Forms).
- The approximate extent of clearing impacts within the 100 to 200 foot buffer was defined and flagged using a range finder, tape measure, measuring wheel, GPS, and/or field mapping as appropriate for field conditions.
- Vegetation or snags with a diameter at breast height (dbh) greater than 6 inches within the Tree Survey Area were identified and recorded as follows:
 - A qualified biologist measured an individual tree’s dbh, identified the species, and recorded information about the tree on the data sheet.
 - The total number of trees/snags in the Tree Survey Area were classified by the following size ranges: 6 to 12 inches dbh, 12 to 18 inches dbh, 18 to 24 inches dbh, 24 to 30 inches dbh, 30 to 36 inches dbh, and greater than 36 inches dbh (actual dbh of trees greater than 36 inches was recorded).
 - If a tree had more than one stem below dbh, each of the individual stems greater than 6 inches dbh were counted as a separate tree
 - Downed woody debris with a dbh of greater than 6 inches was recorded within the 0 to 100 foot offset line, but not the 100 to 200 foot offset line. Downed woody debris was tallied as individual pieces and was not identified by species.
 - Photographs were taken from the 100 to 200 foot offset line facing the Tree Survey Area to document the trees and Tree Survey Area.
 - The diameters of recently cut tree stumps (over 6 inches in diameter) were measured and noted in the comment section.

When special circumstances arose in the field, additional field comments and photos were taken to document those circumstances.

Figure 1 provides an example of a field map depicting the extent of a single representative study area.