

Washington State Department of Natural Resources  
Division of Geology and Earth Resources

Report of Investigations 35  
Digital Landslide Inventory for the Cowlitz County Urban Corridor, Washington  
version 1.0

by  
Karl W. Wegmann  
May 2006

**DISCLAIMER**

This inventory is intended to serve for general planning purposes only. Under no circumstances should this inventory and database be used for landslide characterization in lieu of site-specific studies by qualified professionals.

This product is provided 'as is' without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The Washington Department of Natural Resources and the authors of this product will not be liable to the user of this product for any activity involving the product with respect to the following: (a) lost profits, lost savings, or any other consequential damages; (b) the fitness of the product for a particular purpose; or (c) use of the product or results obtained from use of the product.

By using these data, you accept all the terms and conditions contained in the Washington State Department of Natural Resources Data License Agreement. Please also read the Use Constraints described in the metadata for each ESRI shapefile before using the data.

**REPORT CONTENTS**

This report consists of the following products:

1. Eleven (11) ESRI shapefiles, each of which consists of a set of several files with the same prefix (below) and different extensions
  - ccuc\_deep\_seated\_landslide\_locations
  - ccuc\_deep\_seated\_landslide\_scarps
  - ccuc\_deep\_seated\_landslides
  - ccuc\_landslide\_directions
  - ccuc\_potentially\_unstable\_slopes
  - ccuc\_report\_boundary
  - ccuc\_sag\_ponds
  - ccuc\_shallow\_landslide\_locations
  - ccuc\_shallow\_landslides
  - ccuc\_spring\_locations
  - ccuc\_study\_area
2. Metadata for each shapefile, in HTML format
3. Explanatory text, in PDF format (ri35.pdf)
4. Fourteen (14) 1:24,000-scale landslide inventory maps, each covering one 7.5-minute quadrangle, in PDF format
5. Digital landslide photograph collection
6. Washington State Department of Natural Resources Data License Agreement
7. This README.doc file

## DOWNLOADING

This report, as available for download from the Washington Division of Geology and Earth Resources website (<http://www.dnr.wa.gov/geology/pubs/ri35/>), is packaged in ZIP compressed file format, as follows:

### Single File—Complete report as one large ZIP file

- ri35\_complete.zip (453 MB) – ESRI shapefiles, metadata, explanatory text, landslide inventory maps, digital landslide photographs, and data license agreement

### Multiple Files—Complete report divided into several smaller ZIP files

- ri35\_shapefiles.zip (1.5 MB) – ESRI shapefiles, metadata, and data license agreement
- ri35\_text.zip (19.4 MB) – Explanatory text
- ri35\_maps.zip (165 MB) – Landslide inventory maps
- ri35\_photos.zip (267 MB) – Digital landslide photographs and data license agreement

Each ZIP file contains this README.doc file. Zipped files can be extracted using a variety of unzip programs. Below is a listing of some free or inexpensive unzip programs; this listing does not imply endorsement by the Washington State Department of Natural Resources of these companies or products. The Unix commands *unzip* and *uncompress* can also extract these files. Each file should be downloaded to your hard drive before it is unzipped.

PowerArchiver  
<http://www.powerarchiver.com/>

StuffIt  
<http://www.stuffit.com/>

UltimateZip (free for private use)  
<http://www.ultimatezip.com/>

WinZip  
<http://www.winzip.com/>

## PURCHASING ON CD-ROM

This report may also be purchased on CD-ROM from the Washington State Department of Printing General Store, at <http://www.prt.wa.gov/>.

## SHAPEFILE GEOGRAPHIC COORDINATE SYSTEM

Projection: Lambert Conformal Conic  
Coordinate system: Washington State Plane  
Zone: South (FIPS 4602)  
Datum: NAD83 HARN  
Units: Feet  
Spheroid: Geodetic Reference System (GRS80)  
Format: ESRI ArcInfo 8.0.2 shapefile

## USING THE SHAPEFILES

The ESRI shapefiles included in this report may be viewed using geographic information system (GIS) software. If you do not own GIS software, below is a listing of some GIS software packages capable of viewing this data set. This listing does not imply endorsement by the Washington State Department of Natural Resources of these

companies or products.

ESRI ArcExplorer (free)  
<http://www.esri.com/software/arcexplorer/>

PCI Geomatics Geomatica FreeView (free)  
<http://www.pcigeomatics.com/products/freeview.html>

GRASS (free)  
<http://grass.baylor.edu/>

MicroImages TNTlite (free)  
<http://www.microimages.com/tntlite/>

Intergraph GeoMedia Viewer (free)  
<http://www.intergraph.com/gviewer/>

ESRI ArcGIS  
<http://www.esri.com/software/arcgis/>

MapInfo Software  
<http://www.mapinfo.com/>

Intergraph GeoMedia  
<http://www.intergraph.com/geomedia/>

Caliper Maptitude  
<http://www.caliper.com/maptovu.htm>

### **USING THE DIGITAL PHOTOGRAPH COLLECTION**

This collection contains all of the digital photographs collected during the Cowlitz County Urban Corridor Landslide Inventory project. The digital photographs are arranged into individual folders, one for each U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle sheet in the project area. The photographs are numbered first by the field ID number of the landslide they depict (FIELD\_ID in the shapefile ccuc\_deep\_seated\_landslides.shp), followed by the date that the photograph was taken, and by a unique sequential number assigned by the digital camera. For example, photograph 601\_082102\_2973.JPG is of landslide number 601 (FIELD\_ID), which was photographed on August 21, 2002, and was recorded by the camera as the 2,973rd photograph taken.

Also included with this collection is a Microsoft Excel spreadsheet that provides summary information for each digital photograph, including the landslide FIELD\_ID and GIS\_ID numbers, USGS topographic quadrangle name, text description for photograph, and additional comments about the landslide. Note that descriptions are not provided for all photographs, and not all landslides have associated photographs. For landslides where more than five field photographs were taken, the author chose what he considered to be the five most-revealing and (or) relevant photographs and wrote text descriptions for these.