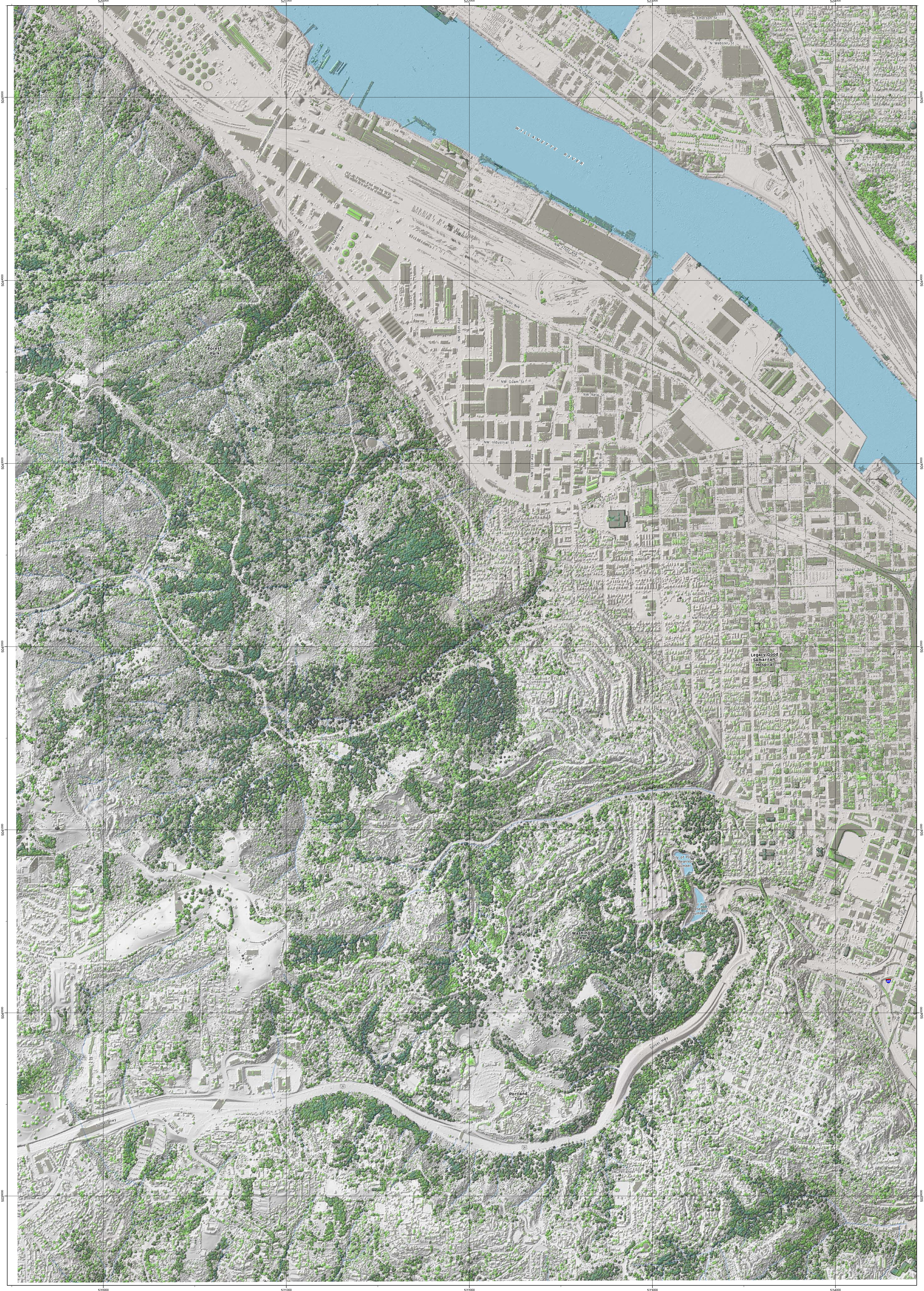
Lidar Imagery of the Southwest Quarter of the Portland 7.5' Quadrangle

BARE EARTH HILLSHADE IMAGE

HIGHEST HIT HILLSHADE IMAGE



STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
VICKI S. McCONNELL, STATE GEOLOGIST
www.OregonGeology.org

Lidar Imagery Series

LIS-2010-45122E6-Portland

Lidar Imagery of the Portland 7.5' Quadrangle, Multnomah and Washington Counties, Oregon

2010

0 660 1,320 2,640 3,960 5,280 feet

0 0.25 0.5 miles

0 500 1,000 meters

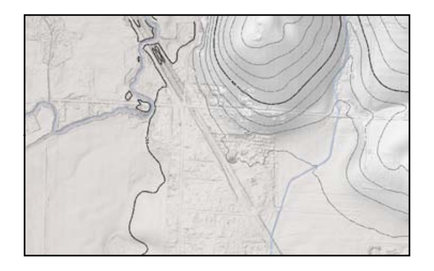
Cartography by Jed Roberts and Sarah Robinson, Oregon Department of Geology and Mineral Industries. Additional cartography and data processing by John English, Kaleena Hughes, Mathew Tilman, and Rudie Watzig, Oregon Department of Geology and Mineral Industries.

Data Source: Lidar data from DOGAMI and Puget Sound Lidar Consortium. Lidar flown 2005 and 2007.

Hydrology features digitized from lidar data by DOGAMI. Feature names from Google Maps, U.S. Bureau of Land Management, U.S. Geological Survey, and ESRI. Contours derived from bare earth elevation model smoothed by 60' x 60' averaging kernel. Map projection: Universal Transverse Mercator Zone 10 North, North American Datum 1983.

Scale: 1:8,000
1 inch = 667 feet
Contour interval: 20 feet
UTM grid: 1 kilometer
Water features

Bare Earth Image



High — Elevation — Low

The bare earth image is a representation of the earth's surface stripped of man-made objects and vegetation. This is achieved by post-processing lidar point data.

Highest Hit Image

High — Feature Height — Low

The highest hit image is a representation of the landscape at the time of the lidar flight. Unlike the bare earth image, this image shows features such as trees, buildings, and even cars.

Lidar Data Origins and Map Image Limitations

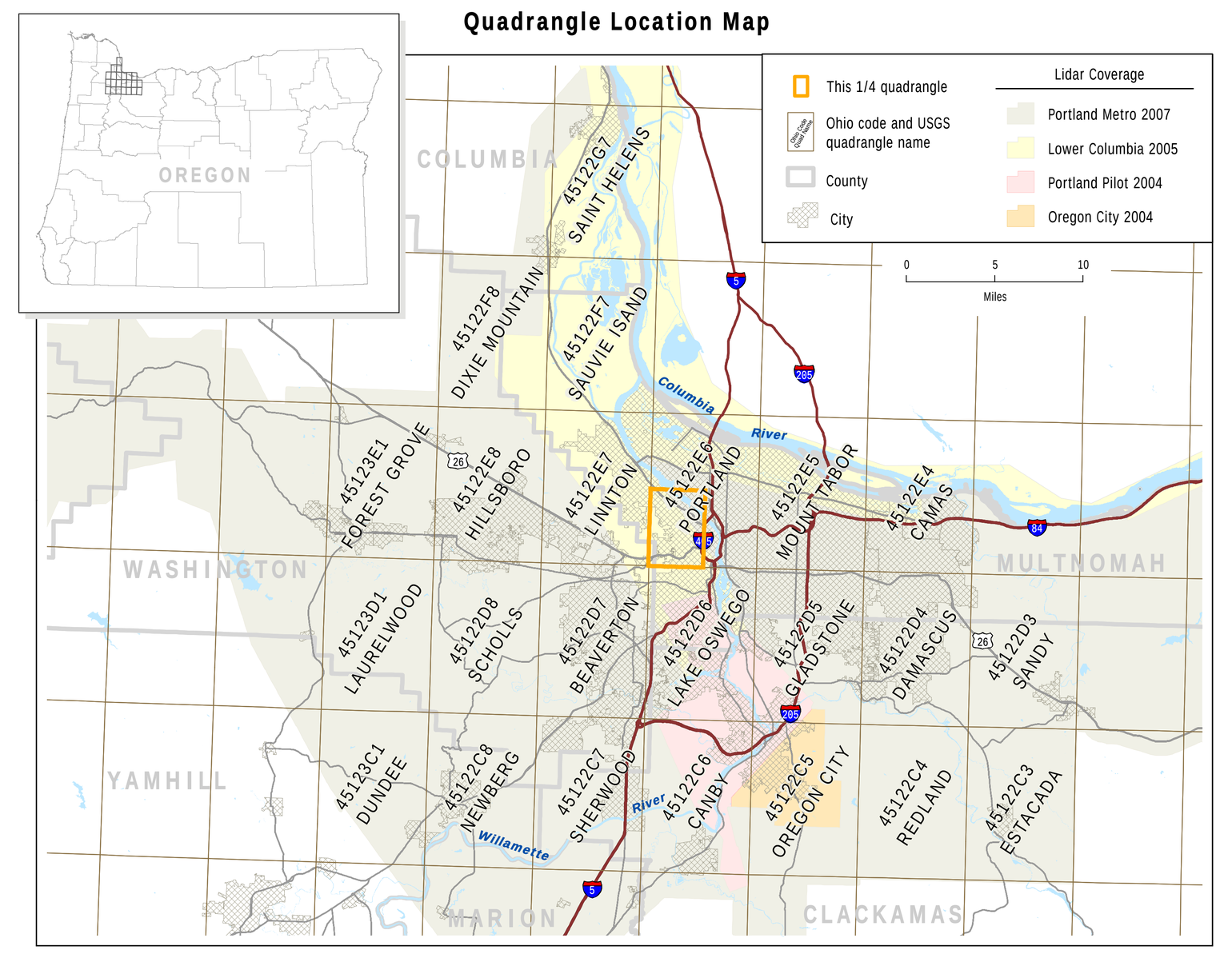
These maps were created using data derived from lidar (light detection and ranging) technology. A lidar measurement system collects huge quantities of three-dimensional point data where laser pulses have been reflected off opaque objects such as buildings, trees, bushes, and the ground surface.

The lidar all-returns point cloud data that are the original basis for these images were collected by Watershed Sciences Inc., TerraPoint, LLC, and Merrick and Company. The point cloud is a remotely sensed collection of three-dimensional point data that are systematically calibrated relative to GPS ground control points.

The services provided and map products produced by Watershed Sciences Inc. and TerraPoint, LLC were performed under the supervision of a State of Oregon registered and certified Registered Land Surveyor. The bare earth and highest hit digital elevation surface models (DEM) produced by the three companies and made available by DOGAMI as the Lidar Data Quadrangle (LDQ) series, are georeferenced raster grids (ESRI format) interpolated from the point cloud data.

The map images depicted here are examples by DOGAMI using GIS techniques to extract and emphasize selected features. These map images, the interpretative content displayed, and this lidar image series are for general information purposes and are not intended to indicate the authoritative location or definition of real property boundaries, the precise shape or contour of the earth, or the precise location of fixed works of humans. No warranty, expressed or implied, is made regarding the accuracy or utility of the information described and/or contained herein, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data. The Oregon Department of Geology and Mineral Industries shall not be held liable for improper or incorrect use of this information.

Quadrangle Location Map



For copies of this publication contact
Nature of the Northwest Information Center
800 NE Oregon Street #28, Ste. 965, Portland, Oregon 97232
telephone (971) 673-2331 http://www.naturenw.org