

Bonneville Power Administration
Geodetic Control Data Sheet

Station: WM040 (240)
 Project: Wallula-Smiths Harbor-McNary
 Section: NW 1/4 17 Township: 5 North Range: 30 East Meridian: Willamette
 County: Umatilla State: OR USGS Quad: Juniper, Oregon
 Surveyor: M R Heidecke Date Surveyed: July, 2001

Instrument:

The horizontal coordinates and orthometric elevation were established by GPS observations using six Trimble 4000 SSI dual frequency receivers with Compact L1/L2 antennae with ground plane.

Adjustment:

The Basis of Coordinates for this survey is the Oregon State Coordinate System, North Zone, NAD 83 (1998). The horizontal component of the least squares adjustment was constrained by holding NGS Stations B 340 (A), B 502 (B), PENDLETON (B), STANFIELD EAST BASE RESET (B), and BURDEN (B). The vertical component of the least squares adjustment was constrained by holding NGS Benchmarks B 340 (First Order Class II), B 502 (First Order Class II), BURDEN (Second Order Class II), V 203 (Second Order Class 0), G 640 (First Order Class I). The elevation for point 106, 201, 249, and 255 were determined by differential leveling from G 640, D 502, E 525 and F 431 respectively and held.

Horizontal Datum: NAD83 (1998) Linear Unit: International Feet
 Vertical Datum: NAVD88 Linear Unit: U.S. Survey Feet

Latitude: <u>N 45-55-05.82469</u>	Longitude: <u>W 119-05-21.66554</u>
US State Plane Coordinate System: <u>Oregon North Zone - 3601</u>	
Northing: <u>824,040.203</u>	Easting: <u>8,561,110.598</u>
Orthometric Elevation: <u>803.74</u>	Ellipsoid Height: <u>732.95</u>
Combined Factor: <u>0.99994529</u>	Convergence: <u>- 1-00-01</u>
Confidence: 95% Confidence ("1.96 Sigma") Values	
<u>Northing-0.009</u>	<u>Easting-0.007</u> <u>Elevation-0.106</u>

Monumentation: BPA 3/4-inch Aluminum Cap on 5/8-inch aluminum rod, flush with ground.
 Stamping: U.S.D.O.E. Bonneville Pwr. Adm., WM040 - FEC-01 - ATB - GPS

To-Reach Description:

Begin at Umatilla Post Office, Umatilla, OR. 97882. Drive east on Highway 730, 9.2 miles to intersection of State Highway #37 to right (south). Drive southeasterly on State Highway #37, 2.0 miles to intersection of Walls Road to right (west) and a private drive to left (east). Sign says "Philip and Ardele Hawman". Drive northeasterly on private drive 0.6 miles to the Hawman Ranch house. Continue northwesterly following field access roads along cultivated farm fields 0.4 miles to the station. Advise using hand held GPS equipment to find point. Witness post is a yellow carsonite marker inscribed with BPA logo, bearing and distance to station.

RECEIVED BY
 Umatilla County Surveyor
 Date: _____
 Rec'd By: _____
 No. 02-19-91
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