

Bonneville Power Administration
Geodetic Control Data Sheet

Station: WM 027 (227)
 Project: Wallula-Smiths Harbor-McNary
 Section: SE 1/4 15 Township: 6 North Range: 31 East Meridian: Willamette
 County: Umatilla State: OR USGS Quad: Juniper Canyon, 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 Washington State Coordinate System, South 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: U.S. Survey Feet
 Vertical Datum: NAVD88 Linear Unit: U.S. Survey Feet

Latitude: <u>N 45-59-56.54359</u>	Longitude: <u>W 118-55-02.59029</u>
US State Plane Coordinate System: <u>Washington South Zone - 4602</u>	
Northing: <u>246,794.698</u>	Easting: <u>2,042,595.262</u>
Orthometric Elevation: <u>1433.11</u>	Ellipsoid Height: <u>1362.88</u>
Combined Factor: <u>0.99990154</u>	Convergence: <u>- 1-08-59</u>
Confidence: 95% Confidence ("1.96 Sigma") Values	
<u>Northing-0.011</u>	<u>Easting-0.007</u> <u>Elevation-0.101</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., WM027 - FEC-01 - ATB - GPS

To-Reach Description:

Begin on Washington State Highway #12 at the Washington State Truck Weigh Station at Wallula Junction. Drive west on Washington State Highway #12, 0.1 miles to the intersection of Hatch Grade to the left (south). Drive southeasterly on Hatch Grade Road 1.5 miles to intersection of BPA Lower Monumental- McNary 500kV transmission line. Continue southeasterly on Hatch Grade Road 1.0 miles to intersection of Braden Ranch Road to right (south). Drive south on Braden Ranch Road 0.4 miles to intersection of a semi-permanent wheat field access road to the right (west). Drive southwesterly on the private wheat field access road 0.4 miles to a fork. Drive on right fork northwesterly 0.8 miles to a fork. The left fork is graded and graveled road. Drive the graveled road southwesterly 1.3 miles to a fork in the bottom of Spring Gulch. Drive the left fork parallel to Spring Gulch 0.6 miles to a fork. Drive the right fork northeasterly 0.2 miles to a fork. Drive the right fork northeasterly on a 24 foot wide gravel road 0.6 miles to the Braden Ranch HQ buildings. Passing thru the Braden Ranch HQ, continue southwesterly on a 15 foot wide gravel road 0.9 miles to a fork. Drive the right fork on a 15 foot wide gravel road (vacated Umatilla County Road #896) northwesterly 1.2 miles to the station. Pack or walk 150 feet east to a high point on a sage brush covered knoll to the station. 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. 02-19-01