

Bonneville Power Administration  
Geodetic Control Data Sheet

Station: WM029 (229)  
Project: Wallula-Smiths Harbor-McNary  
Section: NW 1/4 28 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 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: N 45-58-26.97558	Longitude: W 118-56-57.49570	
US State Plane Coordinate System:	Oregon North Zone - 3601	
Northing: 845,065.214	Easting: 8,596,357.444	
Orthometric Elevation: 1434.13	Ellipsoid Height: 1363.85	
Combined Factor: 0.99992847	Convergence: - 1-05-59	
Confidence: 95% Confidence ("1.96 Sigma") Values		
Northing-0.011	Easting-0.008	Elevation-0.104

Monumentation: BPA 3/4-inch Aluminum Cap on 5/8-inch aluminum rod, 1.3 feet below ground.  
Stamping: U.S.D.O.E. Bonneville Pwr. Adm., WM029 - 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 2.3 miles to a fork that is 300 feet east of BPA 500kV transmission line. Drive left fork on a 10 foot wide semi-permanent wheat field and transmission line access road 1.4 miles to tower 44/6. Pack or ATV S40°E, 1800 feet cross country and wheat fields 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. 02-19-9