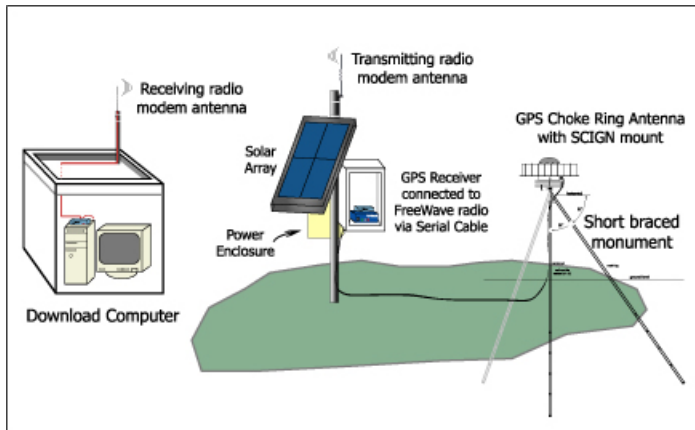


# Permanent GNSS/GPS Stations - Budgets

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## Permanent GNSS/GPS Stations - Budgets

**Please note** that this is an example of various costs related to a general NSF project. Note that the funding of the sections listed here are typically split between science programs at NSF, and the instruments and facilities. Please [Request Support](#) for a more detailed budget analysis, or for any questions you might have.



You can download the excel version of the [Sample Budget \(.xls\)](#).

### Sample Project Budget - Standard GPS Station with Dial-Up Relay and Radio Telemetry

**Statement of Work:** This budget includes the estimated costs associated with the installation of a standard DC-powered GPS station installed in the western United States. The assumed data telemetry consists of both phone and radio modems.

	Unit Cost	Number of Units	Total Cost
<b>GPS Receiver with Choke Ring Antenna</b>			
GPS Receiver System	10,000 - 15,000	1	10,000 - 15,000
GPS Receiver			
Choke Ring Antenna			
30m Antenna Cable			
Download/Power Cable			
North American AC Power Cord			
Power Supply			
Manual/CD/Release Notes			
128 Mb Flash memory for GPS receiver (if needed)	325.00	1	325.00
Huber-Shuner Lightning Protection	150.00	1	150.00
Pig tail (N-type to RSMA) or (N-type to N-type)	20.00	1	250.00
<b>Total Receiver and Antenna</b>			<b>10,475.00</b>
<b>Radio and Ancillary Hardware</b>			

900 MHz Spread Spectrum Transceiver (Endpoint)	1,200.00	1	1,200.00
30 meter radio antenna cable (low loss)	200.00	1	200.00
Yagi Antenna	125.00	1	125.00
Mast, Antenna Mounting Hardware	200.00	1	200.00
Huber-Shuner Lightning Protection	150.00	1	150.00
Pigtail (N-type to RSMA) or (N-type to N-type)	20.00	1	250.00
<b>Total Radio</b>			<b>1,875.00</b>
<b>Monumentation- Drilled Braced Monument</b>			
10 ft stainless steel legs	100.00	4	400.00
2 inch threaded adapter	25.00	1	25.00
Hilti epoxy	20.00	25	500.00
SCIGN Mount	550.00	1	550.00
SCIGN Dome	125.00	1	125.00
Miscellaneous	150.00	1	150.00
<b>Total Monumentation</b>			<b>1,750.00</b>
<b>Relay Hardware</b>			
Small Enclosure	300.00	1	300.00
900 MHz Spread Spectrum Transceiver (Master)	1,200.00	1	1,200.00
30 meter radio antenna cable (low loss)	200.00	1	200.00
Huber-Shuner Lightning Protection	150.00	1	150.00
Tripplite Surge/Line Protector	100.00	1	100.00
RS-232 Cable with null adapter	25.00	1	25.00
USRobotics V.Everything Modem	250.00	1	250.00
Pigtail (N-type to RSMA) or (N-type to N-type)	20.00	1	250.00
Miscellaneous (connectors, wiring, conduit, tools, etc)	100.00	1	100.00
<b>Total Relay Hardware</b>			<b>2,225.00</b>
<b>Solar Systems / Enclosures</b>			
MAPPS power system - 12 v, 4 batteries, 3 75-W panels, char	3,500.00	1	3,500.00
MAPPS receiver enclosure	400.00	1	400.00
Liquitite conduit (30 m @ \$3/m)	3.00	30	90.00
Miscellaneous (connectors, wiring, conduit, tools, etc)	200.00	10	2,000.00
Grounding rod, cable,	25.00	1	25.00

clamp			
<b>Total Solar Systems/Enclosures</b>			<b>6,015.00</b>
<b>Computer System</b>			
1 desk-top PC running RedHat Linux	1,500.00	1	1,500.00
APC UPS 280	200.00	1	200.00
Extra Serial Card	200.00	1	200.00
APC serial port protectors - 9pin	40.00	2	80.00
Enclosure	250.00	1	250.00
Miscellaneous (RS232 cables, connectors, etc)	100.00	1	100.00
<b>Total Computer System</b>			<b>2,330.00</b>
<b>Total Equipment</b>			<b>24,670.00</b>
<b>Purchased Services</b>			
Shipping (from vendor/to UNAVCO/to Site)	200.00	1	200.00
Shipping (UNAVCO/to site - batteries, enclosures, etc)	500.00	1	500.00
phone, fax, copier	200.00	1	200.00
<b>Total Purchased Services</b>			<b>900.00</b>
<b>Travel</b>			
Airfare (Round Trip - 3 trips: recon, installation, maintenance)	550.00	3	1,650.00
Lodging (approximate costs 21 nights: hotels and camping)	1,200.00	1	1,200.00
Per Diem: (govt. rate: \$50/day For 3 trips: 22 days)	50.00	22	1,100.00
Rental Car: (recon & maintenance only, car provided by PI for i	1,000.00	1	1,000.00
<b>Total Travel</b>			<b>4,950.00</b>
<b>Total Costs</b>			<b>30,520.00</b>

Send questions or comments to Support (support @ unavco.org)

Posted by: **Beth Bartel** - Thu, Feb 11, 2010 at 5:40 PM. This article has been viewed 12426 times.

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