

**INTERGOVERNMENTAL AGREEMENT BETWEEN
PORTLAND WATER BUREAU
AND THE
USDA NATURAL RESOURCES CONSERVATION SERVICE
FOR
SNOTEL SITE MAINTENANCE**

This Cooperative Agreement is by and between City of Portland, Oregon Water Bureau, (hereinafter "Portland Water Bureau") and the United States Department of Agriculture, Natural Resources Conservation Service, (hereinafter "NRCS").

I. AUTHORITIES:

A. For NRCS:

1. Snow Survey Program, 16 U.S.C. 590a-f (CFDA No. 10.907);
2. Snow Survey and Water Supply Forecasting, 7 C.F.R. 612
3. 31 U.S.C. 6505, Intergovernmental Cooperation Act

B. For PORTLAND WATER BUREAU:

City Charter 2-105(a)(4), authorizing Intergovernmental Agreements

II. PURPOSE:

- A. NRCS installs, operates, and maintains an extensive, automated system (SNOWpack TELEmetry or SNOTEL) designed to collect snowpack and related climatic data in the Western United States and Alaska. In 1935, NRCS, then the Soil Conservation Service, established a formal cooperative Snow Survey and Water Supply Forecasting (SS-WSF) Program to conduct snow surveys and develop accurate and reliable water supply forecasts. The SS-WSF Program has grown into a network of more than 1,200 manually-measured snow courses and over 750 automated SNOTEL stations in 13 Western States, including Alaska. The Program provides stream flow forecasts for over 740 points in the West. The data, as well as related reports and forecasts, are made available—in near real time for the automated SNOTEL sites—to private industry; to Federal, State, and local government entities; and to private citizens through an extensive Internet delivery system and other distribution channels.
- B. In July, 1988, NRCS and the Portland Water Bureau entered into a NRCS SNOTEL Cooperative Agreement (NRCS Agreement number 68-0436-4-20; City of Portland Contract 31923) for the long term operation and maintenance of the following SNOTEL sites in the Bull Run Watershed:
1. Blazed Alder
 2. North Fork Reservoir
 3. South Fork Bull Run

The maintenance agreement expired in September, 2010 and both parties desire renewal. The NRCS Maintenance Agreement 68-0436-4-20 and City of Portland Contract 31923 are hereby terminated and replaced with the provisions set forth herein.

- C. Whereas NRCS and the Portland Water Bureau desire to obtain continuous long term climate data within the snow zone of the surrounding area and use this data for enhanced water supply forecasting capabilities, NRCS and Sponsor hereby enter into this Cooperative Agreement for SNOTEL Maintenance for the purpose of delineating the parties' respective roles and responsibilities in operating and maintaining the SNOTEL sites within the Bull Run Watershed as described in II.B. above. The table below summarizes the goals of this agreement.

SNOTEL SITE	Portland Water Bureau Financial Support
Blazer Alder	Annual SNOTEL Maintenance
North Fork Reservoir	Annual SNOTEL Maintenance
South Fork Bull Run	Annual SNOTEL Maintenance

III. AGREEMENT:

A. NRCS AGREES:

1. In consideration of the promises herein, including those described in III.B. to calibrate, operate, and maintain all "standard" SNOTEL site equipment, including sensors, to assure automatic measurement of snow water content, snow depth, cumulative precipitation, and air temperature. "Standard" SNOTEL site equipment is that described on Attachment E, incorporated herein by this reference. Non-standard SNOTEL site equipment may be substituted only upon written agreement of NRCS and Portland Water Bureau.
2. To transmit the data generated by the SNOTEL site digitally to the NRCS central computer in Portland, Oregon. The data will be provided to Portland Water Bureau through Internet Web Based Home Pages and FTP locations, or through the Oregon Data Collection (DCO) Office in Portland, Oregon (see Attachment S_SNOTEL data).
3. To provide Portland Water Bureau with site plan maps, snow sample collection notes and reference materials as requested.
4. To obtain, and keep in force, all necessary permits, land use agreements, rights-of-way, and access for all sites and provide copies to Portland Water Bureau. NRCS agrees to forward updates and renewals to Portland Water Bureau as requested.
5. To designate the following individual as the NRCS Principal Contact:

Jon Lea: Leader-Inventory and Assessment Team
 1201 NE Lloyd Blvd Suite 900
 Portland, OR 97232
<mailto:jon.lea@or.usda.gov>
 Phone: (503) 414-3267
 Fax: (503) 414-3277

6. To accept as reimbursement in full for NRCS' undertakings described in this Agreement, the consideration stated in Section III.B. below.

B. PORTLAND WATER BUREAU AGREES:

1. To reimburse NRCS \$3,000 per site for 3 sites per year for SNOTEL site maintenance. Annual payment will be due upon Portland Water Bureau's receipt of an NFC-63 "Bill for Collection" as shown in the following Cost Summary and Schedule.

Table 1 – Cost Summary and Schedule

Federal Fiscal Year (FY) Period*	Portland Water Bureau Fiscal Year (FY) Period**	Payment Made by Portland Water Bureau	MAINTENANCE FEE
FY 11	FY 2010-11	February 2011	\$ 9,000
FY 12	FY 2011-12	October 2011	\$ 9,000
FY 13	FY 2012-13	October 2012	\$ 9,000
FY 14	FY 2013-14	October 2013	\$ 9,000
FY 15	FY 2014-15	October 2014	\$ 9,000
TOTAL			\$45,000

* Federal Fiscal Year runs from October 1 of the prior year through September 30 of the next year.

**City of Portland Fiscal Year runs from July 1 through June 30.

Invoices shall be sent to the following address:

City of Portland Water Bureau
Finance Department
Attn: Accounts Payable
1120 SW 5th Avenue
Room 609
Portland, OR 97204

Invoices can also be sent electronically to WB.AccountsPayableSection@ci.portland.or.us

2. In the case of catastrophic event, such as fire, continuing vandalism and theft, or major component failure that might involve partial or complete damage or major replacement and which occurred other than as the result of NRCS' sole negligence, NRCS shall be under no obligation to repair or replace SNOTEL site equipment, and this Agreement shall terminate upon such event as to the affected site(s). Instead, Portland Water Bureau and NRCS will reevaluate the program and decide on a course of action.
3. To coordinate with NRCS and cooperate with NRCS as it obtains and maintains all necessary permits, rights-of-way, and access agreements for all sites. Copies, updates and renewals will be provided as needed to the NRCS to insure both parties are in possession of current permits and access
4. To use the computer protocol and procedures as outlined in Attachment S - SNOTEL data.
5. That NRCS shall have unlimited rights in the data generated pursuant to this Agreement as described in 48 C.F.R. Part 27.404-1.
6. To designate a Principal Contact for this agreement. The Principal Contact shall be:

Doug Bloem
City of Portland, Water Bureau
1120 SW Fifth Avenue Room 600
(503) 823-7458
Doug.Bloem@portlandoregon.gov

or other such person as may be designated by the Administrator of the Portland Water Bureau.

C. IT IS MUTALLY AGREED:

1. SNOTEL is a continuous, long term program designed to collect climatologic data from remote locations. A period of record greater than 10 years is essential for establishing accurate averages for water supply forecasting. It is the intent of both NRCS and Portland Water Bureau to cooperate in maintaining and upgrading the proposed system for as long as mutually deemed appropriate and cost effective.
2. It is the intent of the NRCS and Portland Water Bureau to fulfill their respective obligations under this Agreement. However, the Parties recognize that NRCS and Portland Water Bureau cannot make commitments in excess of appropriated funds authorized by law or administratively made available. If NRCS or Portland Water Bureau cannot fulfill its obligations because of lack of appropriated funds, this Agreement will automatically terminate upon receipt of written notification by NRCS or Portland Water Bureau certifying the lack of funding.
3. This agreement may be modified only by a written amendment to this Agreement upon consent of the State Conservationist, representing NRCS, and the authorized representative of Portland Water Bureau.
4. This Cooperative Agreement and attachments contain all understandings between the parties, and there are no other agreements, understandings, or representations other than those set forth or incorporated by reference herein.
5. The effective period of this Agreement shall be from the date of the last signature to September 30, 2015. This agreement may be terminated by either party upon ninety (90) days' written notice to the other party. NRCS shall have a reasonable time period following termination within which to remove the equipment described in this Agreement.
6. All informational materials and/or presentations developed in whole or part under this agreement shall acknowledge their development pursuant to the partnership of the NRCS and Portland Water Bureau. A copy of all such materials, if any, shall be provided to the NRCS, and other partners shall have the right to use, reproduce, and distribute copies of materials under this Agreement. The NRCS shall be recognized in writing as a co-sponsor of all events conducted with funding from this Agreement with a statement such as "Funding was provided by the USDA, Natural Resources Conservation Service", or similar content.
7. Each party shall be liable for the negligent acts or omissions of its own employees and agents in the course and scope of their employment.
8. By signing this Agreement, the Portland Water Bureau, and any recipient of benefits hereunder, assures the Department of Agriculture that the program or activities provided for under this Agreement will be conducted in compliance with all applicable Federal civil rights laws, rules, regulations, and policies.
9. The furnishing of financial and other assistance by NRCS is contingent upon funds appropriated by Congress, made administratively available, or authorized by law.
10. This contract is comprised of this Cooperative Agreement and the following Attachments:

Attachment B - Benefits of Annual Maintenance Fee
Attachment E - SNOTEL Site Equipment
Attachment S - SNOTEL Data Access

Non-Discrimination Statement

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisals, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W. Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

IN WITNESS WHEREOF, the parties hereto have executed this Cooperative Agreement on the dates indicated.

**U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION
SERVICE**

BY _____
RONALD ALVARADO
State Conservationist, Oregon
NRCS Authorized Representative
As designated by:
NRCS GM-130 400 B 11 E-400.11 MSD

DATE _____

NRCS CONTACTS

Billing Agency Financial Contact:
Gail A. Voge, Budget Analyst
1201 NE Lloyd Blvd Suite 900
Portland OR, 97232
503-414-3219
mailto:gail.voge@or.usda.gov

Jon Lea
Data Collection Office
Natural Resources Conservation Service
1201 NE Lloyd Blvd Suite 900
Portland, OR 97232
503-414-3267
mailto:jon.lea@or.usda.gov

PORTLAND WATER BUREAU

BY _____
David Shaff
Administrator
City of Portland Water Bureau

DATE _____

PORTLAND WATER BUREAU CONTACTS

Billing Contact:
City of Portland Water Bureau
Attn: Accounts Payable
1120 SW 5th Avenue, Room 609
Portland, OR 97204
503-823-7404
wb.accountspayablesection@ci.portland.or.us

Doug Bloem
City of Portland, Water Bureau
1120 SW Fifth Avenue Room 600
(503) 823-7458
Doug.Bloem@portlandoregon.gov

PORTLAND WATER BUREAU TAX ID NUMBER
93-6002236

PORTLAND WATER BUREAU DUNS NUMBER
797968682

APPROVED AS TO FORM:

APPROVED AS TO FORM

Linda Meng
City Attorney
City of Portland Water Bureau

NATURAL RESOURCES CONSERVATION SERVICE
SNOTEL ANNUAL MAINTENANCE AGREEMENT

**EXPLANATION OF BENEFITS
OF ANNUAL MAINTENANCE FEE**

August 2010

NRCS RESPONSIBILITIES:

Normal annual maintenance of a SNOTEL site by NRCS includes one annual site visit by overland travel during the summer to: drain and recharge precipitation gage, load test transducers, test batteries & solar panels for reliability and replace any defective components. Additionally, NRCS will test the radio communications, radio components and all climatic sensors and repair or replace if defective. During the annual visit, NRCS will repair any normal winter or minor vandal damage and perform general clean up and vegetation management. The annual maintenance fee also includes database management, quality control and electronics support from the NRCS Electronic Maintenance Facility.

Although SNOTEL is a reliable operating system, unforeseen problems can arise in the natural environment. Occasionally, equipment is damaged by wildlife, storms or vandalism. NRCS will make every effort to replace damaged equipment as soon as possible, following the detection or report of a problem to a SNOTEL sensor or equipment.

NOT NRCS RESPONSIBILITIES:

Unless pre-arranged and negotiated by signed agreement or supplements, NRCS is not responsible for required helicopter expenses for access to or installation of SNOTEL sites.

NRCS is not able to make unscheduled or emergency trips to a site to repair non-standard sensors. Maintenance of these sensors will be during regular summer visits or as the schedule allows.

In the case of catastrophic natural or human caused events such as fire, recurrent vandalism or theft, resulting in partial or complete equipment damage, the NRCS will not be held responsible. Instead, the Sponsor and the NRCS will reevaluate the program and decide on a course of action.

STANDARD SNOTEL SITE SENSORS:

The standard SNOTEL site equipment is summarized in Attachment E.

ATTACHMENT S
SNOTEL DATA ACCESS

Natural Resources Conservation Service
Cooperative Agreement

Daily and hourly report formats are made available via Internet homepages and FTP servers at the following addresses:

1. Oregon <http://www.or.nrcs.usda.gov/snow/index.html>
2. Washington <http://www.wa.nrcs.usda.gov/snow/>
3. <http://www.wcc.nrcs.usda.gov>
4. <ftp://ftp/wcc/nrcs.usda.gov>

During regular weekday business hours the Washington Water Supply Specialist may be contacted at:

360-428-7684 x 141

Email: scott.pattee@wa.nrcs.usda.gov

During regular weekday business hours the Oregon Water Supply Specialist may be contacted at:

Oregon 503-414-3272

Email: sheila.strachan@usda.gov

For additional information, the Oregon Data Collection Office may be reached at:

503-414-3267 <mailto:jon.lea@or.usda.gov>

503-414-3270 <mailto:melissa.webb@or.usda.gov>

ATTACHMENT E
STANDARD SNOTEL SITE EQUIPMENT
August 2010

184441

Equipment needed to collect and transmit automatic measurement of snow water content, snow depth, cumulative precipitation and air temperature.

OR NRCS Design Electronic Shelter House
Hobson Fabricating Rain Gage w/ windshield
Antenna Tower (x2) = Rohn 25G, 25AG3, SB25G5
Park Mechanical 4' x 6" Steel Snow pillows or equivalent
WaterSaver Hypalon 10' Snow Pillows or equivalent
Custom Instrument Anti-Freeze Blend 48.5% Propylene Glycol, 48.5% Denatured Ethanol, 3% TWEEN 20 dyed red
MCC 545 SNOTEL radio transceiver w/ cable
Campbell Scientific CR-10X datalogger with 2Mb memory
1 Extended Range Air Temp sensor with shield
Druck PMP 317 Pressure Transmitters
Judd Communications Ultrasonic Depth Sensor
Scala YAGI antenna MBY5
Solar panels (80W with mount) BP 380U or equivalent
Sunsaver 10 solar panel charge controller 320010SS1012
Solar panel batteries (PVX1080-T Solar Panel Batteries or equivalent)
NEMA Enclosure Type 3X or better 30" x 24" x 10"

Brand Names and Manufactures are included for description only and do not constitute an endorsement for specific products.