

## WSRN Station Names

### What do those oddball codes mean?

Continuously Operating Reference Stations (CORS); whether they are included in the NGS CORS network, or are local, scientific, or for navigation systems typically have a standard 4-character alpha-numeric code. The 4-character code has been incorporated into international data files formats for transfer of static (or streamed) observation data (like Rinex).



*WSRN station "HAHD" (NGS CORS) near Howard Hansen Dam*

**Is this code mandatory and does the code need to be unique?** Pretty much, if the station operators want the data to be usable by others and for the static files to be recognizable in most processing software (unless a proprietary format is used). Unless a CORS is operated for purely local and internal use (e.g., some agriculture and private stations) the station needs a unique 4-character code. The scientific community has a great interest in each station having unique codes as they keep time series (some have been running for over two decades) from which they can do their ongoing scientific studies on plate tectonics, atmosphere, etc. It is very important to change a code if a station is moved, and to never use that code again. This is so that data from old stations do not get mixed up with new. If the ARP (antenna reference point) of the mount stays the same, receiver and antennas can be changed and keep an old name. Nearly every WSRN station provides data to CWU (PANGA), USGS (for their earthquake system), JPL, and other scientific institutions.

**Is there a master list of station codes, who keeps it, and who decides on what names can be used?** The station owners/operators can call a station anything they want, but they have to check to see if a code is already being used – anywhere in the world. There is no central registry, but we do due diligence on checking some of the lists of science stations around the world. The most complete list is hosted by SOPAC (Scripps Orbit and Permanent Array Center).

**How does the WSRN choose station codes?** Firstly, we try to find a code that sounds like the location, e.g., “BELI” is in Bellingham. But often codes that come close are already being used, so then we can get a bit creative. We name stations after prominent surveyors (both living and deceased), people who have worked hard to build/support the network, and sometimes the folks who built/sponsored a station insist on a name. Then other times, well, we might find a name that has significance for the locals or celebrates some aspect of the local community. Sometimes it boils down to “we worked our keisters off building this thing, we get to name it” ;)

**Here is list of WSRN stations (decoded):**

<b>ANAT</b> - Anatone WA	Straight forward location; at the WSDOT shop there
<b>ARLI</b> - Arlington WA	Arlington WA. Not to confuse with Arlington OR
<b>ARLN</b> - Arlington OR	At an ODOT shop. Not to be confused with Arlington WA
<b>BBAY</b> - Birch Bay WA	At a Birch Bay Water and Sewer Facility
<b>BCES</b> - Esquimalt BC	Defense facility on Vancouver Island, hosted by BC Gov.
<b>BDRY</b> - Boundary Dam WA	Way up by Metaline Falls
<b>BELI</b> - Bellingham WA	City of Bellingham facility
<b>BIGD</b> - Grand Coulee WA	Close to the town, but as there was too much bureaucracy involved in placing one on the grounds of the dam, a local internet provider (called BigDamNet at the time) graciously offered a nice building mount
<b>BILS</b> - Queets WA	Named for <a href="#">Bill Strange</a> , former chief geodesist at the NGS who passed away in 2009. Bill was a great resource in understanding elements of geodesy during the development of the WSRN.

**BLDG** - Dayton WA                      At the Dayton Elementary School in cooperation with the science faculty. Named after the school "Bulldog" mascot.



*Station "BILS" near Queets-Stillwater School*

**BLYN** - Blyn WA                      CWU/PANGA. Used only as a backup due to noisy data.

**BPKT** - Badger Pocket, WA              A science station for Central Washington University (CWU)

**BRN3** - Burnaby BC                      Operated by a network in Canada; used to be called "BRNB" but then they moved it (twice). Decommissioned July 2020 replaced with BBAY

**CATH** - Cathlamet WA                      WSDOT hosted

**CBLV** - Bellevue WA                      Hosted by the City of Bellevue.

**CBRN** - Carbonado, WA                      At the Carbonado Schools campus

**CCPW** - Dayton, WA                      Columbia County Public Works hosted. Decommissioned 2020, replaced with BLDG

**CDA A** - Hayden ID                      Hosted by Kootenai County near the airport, CDA A replaced KOOT (due to airport construction). Only about 300m NNW of the old station.

**CHCM** - Chimacum, WA                      CWU (PANGA) science site at the city schools compound.

**CHEL** - Chelan WA                      WSDOT hosted at one of their yards

**CHLW** - Chiliwack BC Replaced CWAK in June of 2017. Good hockey team eh?

**CLEM** - Cle Elum WA At the county maintenance facility in Cle Elum

**CNCR** - Concrete WA One of two Skagit County sites connected to the WSRN

**COLV** - Colville WA City of Colville hosted

**COAN** - Renton WA Named for the long-time Surveying Program Instructor at Renton Technical College, James A. Coan Jr. who sadly passed away in 2021

**COBI** - Bainbridge Island WA Hosted at a City of Bainbridge Island facility

**COUG** - Cougar WA Cowlitz County & WSDOT hosted. Refurbishing in 2017

**COUP** - Coupeville WA Island County hosted. An early station in the network before there were many receivers designed with network cards to connect. The helpful IT guru (Stan Bradshaw) there figured out settings for device servers to move the data securely without undue complexity – his solution has been used by other networks around the world.

**CPUD** - Wenatchee WA Chelan PUD hosted - Retired: see XANE

**CRBN** - Carbonado WA At the Carbonado School District office

**CPXF** - Pack Forest WA A science station and NGS CORS that predated any real-time networks in the state. Comms courtesy of Pierce County PC3N RTN.

**CROK** - Castle Rock WA Name has nothing to do with those weird sandals. City of Castle Rock and WSDOT hosted. Nearby latte stand serves some mean beans ☺

**CSKI** - Kent City WA City of Kent hosted. Named for Larry Cekalski: Larry Cekalski was born in Chicago and made his way to Washington in the late '70s. He started working in the City of Kent Survey Section in 1981 and has played a key role there ever

since. He was trained in the era of chain and Lietz T60s and warmed up to new technology only after it proved that it would not lie to him. Then he would embrace it with passion and dig in to the inner workings as the surveyor/scientist that he was. Larry was a primary beta tester of the WSRN in the Kent area and helped to develop the department standards we use today. He loved a good math puzzle, a good joke, and a good pizza all equally. He died Jan 30, 2008 after fighting cancer for 5 months.

**CULM** - Spada Lake WA. At the Snohomish PUD Culmback Dam

**CUSH** - Lake Cushman WA Tacoma Power (Tacoma Public Utilities) and WSDOT hosted at the scenic hydro dam.

**DEEJ** - Amanda Park WA WSDOT hosted. Named for Daniel Johnson, UW geophysics professor who died tragically with a colleague in a logging truck accident in 2005. Dan, "DJ" or "Deej" worked on the early GPS arrays that would later interface with the WSRN.

**DMND** - Diamond Lake CWU hosted. A challenging site; 6 years to complete.

**DVPT** - Davenport WA Mounted on the county jail; a very secure site

**ELSR** - Bremerton Airport WA CWU and WSDOT hosted. Named for Port Orchard surveyor Dave Elser, a well-respected surveyor, CAD wizard and tireless promoter of the profession. Dave lost his battle with cancer in 2004.

**ENUM** - Enumclaw WA King County hosted, at the dump.

**EPHR** - Ephrata WA WSDOT hosted, in town at the WSDOT yard.

**FARW** - Airway Heights WA Fairchild AFB

**GHCL** - Grays Harbor WA Hoisted by Grays Harbor Community College

**GLWD** - Glenwood, WA Holy backwoods Batman! That is a remote place. It took nearly a decade to get reliable comms connections. CWU and WADNR hosted.



*Outside the WADNR shop in Glenwood WA*

**GORG** - George, WA

Yep, in the City of George Washington

**GOLY** - Goldendale WA

At the Goldendale WSDOT shop. When we scouted a site at the Goldendale observatory (NGS CORS) there was no comms (and bureaucracy) option available (at the time) – then we saw a WSDOT shop down the hill and out in the open – bingo!

**GRCK** - Grouse Creek WA

One of the original 5 sites of the first subnet in eastern WA. CWU and WSDOT established the site and after a few years of challenging comms options it is a very reliable site.

**GRMD** - Grand Mound WA

A ways out of town at a treatment plant, this is hosted by Thurston County and CWU. Swarms of angry wasps menace us during visits. NGS CORS.

**HAHD** - Howard Hansen Dam WA

A very challenging install on an unnamed peak overlooking the dam (but with a stunning Mt. Rainier view). CWU set up solar power and a mount, then we have a complex relay of radio jumps that bounce down the hill and valley. Solar array blew over in a storm one winter, and after a long hike in propped it up with logs (later rebuilt). NGS CORS.

**INDP** - Grangeville ID

NGS CORS at the facilities of the National Forest Service.

**JKPR** - Jackson Prairie, WA

Jackson Prairie, hosted at a PSE facility

**JOBO** - Edison, WA                      Named for the great local surveyor [Joe Glidden](#) (known fondly on a popular surveying forum as “Jobo”) who passed away in 2013. Local farmers were pitching on a new station in the Edison area and graciously agreed to the name for the station.

**KENI** - Kennewick WA                      A City of Kennewick and Benton PUD collaboration

**KLSP** - Usk WA                              At the facilities of the Kalispel Tribe

**KLTS** - Kahlotus WA                      Another challenging install. Originally mounted on the only-school-in-town (then called KAHL). CWU later put a ground mount out by a county road shop. A series of linked radio jumps to the school (later replaced by county comms).

**KOOT** - Couer D' Alene ID                      Hosted by Kootenai County near the airport, KOOT was a real collaborative effort by local surveyors to construct the concrete mount. **Retired 04/0924**  
**Replaced with CDAA**

**LCRS** - Lacrosse WA                              A remote county shop at the far west of Whitman County.

**LINH** - Ellensburg WA                      On Lind Hall at CWU; a bunch of test antennas up there.

**LMID** - Toppenish WA                      Hosted by several partners at a city water plant. Named for [Leroy Middleton](#) a very much respected WA surveyor who passed away in 2012. Leroy’s classes and book helped many of us pass the riparian rights portion of the license exams.

**LRMS** - Lind WA                      At Lind-Ritzville Middle School

**LSIG** - Tolt Dam WA                              Near Tolt dam. Named for Larry “Obi Wan” Signani; surveyor, geodesist, educator, and geodetic conscience for the WSRN. If Larry does not approve of the station quality and until he verifies good coordinates a station does not fly.

**LTAH** - Latah WA                              Hosted by Spokane County, a very remote site that was part of the original E WA subnet. Jim McLefresh (Spokane County) researched some very creative means for getting comms out to the site like bouncing signals off mountain tops.







**P414** - Ridgefield WA PBO CORS but built with WSDOT help at the weigh station. A long struggle with comms (now OK) the station was upgraded to add Glonass by the WSRN & WSDOT.



*"P414" near Ridgefield*

**P415** - Raymond WA NGS CORS near Raymond

**P417** - Pe Ell WA PBO CORS Station

**P418** - Mossyrock WA PBO CORS Station

**P418** - Matlock WA PBO CORS Station

**P429** - Cascade Locks PBO CORS station. The station was upgraded to add Glonass by the WSRN & WSDOT. Replaced SKMA on the network when that station retired.

**P435** - Little River Road WA PBO CORS Station

**P437** - Bayview, WA PBO Station

**P442** - Darrington WA Once called DARI, this site was a PBO and Snohomish County collaboration; upgraded to Glonass by WSRN & WSDOT

**P444** - Ross Dam WA PBO and Seattle Public Utilities collaboration. Upgraded to add Glonass by SPU; a comms upgrade is in the works.

<b>P446</b> - Kelso WA	NGS CORS near Kelso. NGS CORS.
<b>P689</b> - Mt St. Helens WA	PBO site WSW of Mt. St. Helens
<b>P692</b> - Mt St. Helens WA	PBO site west of Mt. St. Helens
<b>P702</b> - Elk Rock WA	PBO site
<b>PACB</b> – Pacific Beach WA	Hosted by Grays Harbor County at one of their facilities.
<b>PABH</b> Pacific Beach WA	NGS CORS and CWU site, it is now part of the PBO array. No longer in solution; using PACB now instead. Only about a mile from the old station.
<b>PDTN</b> - Pendleton OR	Original site was called PNDL, but moved to a city shop and upgraded to add Glonass, it is now an NGS CORS.
<b>PDXA</b> - Portland Airport OR	Portland Airport site on a fire station
<b>PFLD</b> - Paine Field WA	Snohomish County hosted
<b>PKWD</b> - Packwood WA	WSDOT hosted at their yard outside town.
<b>PLMN</b> - Pullman WA	WSDOT hosted at their yard outside town.
<b>PNNL</b> - Washington Harbor WA	NGS CORS at the Pacific Northwest National Laboratory, co-located with a tide gauge.
<b>POME</b> - Pomeroy WA	WSDOT hosted at their yard outside town.
<b>PRDY</b> - Purdy WA	Contingency site. Hosted by Pierce County PC3N network.
<b>PRSR</b> - Prosser WA	Hosted by Benton County PUD.
<b>PTAA</b> - Port Angeles Airport WA	Hosted at the City airport. NGS CORS



*"PTAA", NGS CORS at Port Angeles airport*

**PTS**N - Paterson WA

WSDOT hosted at a local school

**PYLP** - Puyallup, WA

At the office of a local surveying firm

**QMAR** - Stevens Pass WA

At a WSDOT shop near the pass. Named for [Tony Qamar](#), UW seismologist who died a tragic auto accident along with colleague Dan Johnson (DEEJ) in 2005. Tony was visionary and established arrays of GPS and other scientific instruments across the state. Tony encouraged us to start the WSRN and established the first stations in the network.

**RICH** - Richland WA

City of Richland hosted. Retired and replaced with DANP

**RKD1** - Oroville, WA

A CWU site, and NGS CORS. Named for [Dr. Roy K. Dokka](#), scientist and educator, Roy established the network in Louisiana and was great resource in development of the WSRN. Roy passed away in 2011.

**RMRK** - Rimrock, WA

WSDOT hosted at their yard outside town.

**ROKY** - Graham, WA

At Rocky Ridge Elementary, named for their mascot: Rocky the racoon

**RPUB** - Republic WA

Hosted at the Ferry County courthouse, this was a challenging site to develop; rough comms, remote location (loooong drive out there). County folks were instrumental in its success.



**SKCO** - Stevenson, WA                      At the Skamania County courthouse (replaced SKMA)

**SKGT** - Mount Vernon WA                      Hosted by Skagit Water Utility

**SMAI** - West Seattle WA                      NGS CORS at an SPU reservoir. One of the original PRSN sites. For some reason in the early days some bureaucrat did not want the original name WSEA (because they did not want anyone to figure out where it might be located.... yep, that makes no sense) so one of the PRSN operators came up with a variation on his daughter's name. ;)

**SNDP** - Sandpoint ID                      In the center of the city.

**SNOQ** - Hyak WA                      WSDOT hosted at their snow shed. CWU installed, it sits up on a rock thumb next to the shed (you can see it from the highway). Even though snow can pile up on the rock over the top of the mount and dome, it performs year-round with few issues.

**SPKN** - Spokane WA                      Hosted by the city at their dump near the airport.

**SPRG** - Sprague WA                      WSDOT hosted at their yard outside town.

**SSHO** - North Seattle WA                      One of the original stations (pre-network) set up in conjunction with CWU and UW at an SPU reservoir. Like SMAI it got named after one of the WSRN operator's son. NGS CORS

**STHK** - Stehekin WA                      The forever station as in it is taking forever to build. The main challenge is that there are few options for internet connectivity up there. If anyone has an idea that might work, we might consider naming it after them ;)

**TACO** - Tacoma, WA                      Hosted by Apex Engineering at their office

**TDLS** - The Dalles OR                      ODOT hosted at their shop near town.

**TUMW** - Tumwater WA                      Hosted by the City of Tumwater

**TWSP** - Twisp, WA Replacement for the original station WNTH. Hosted by a local surveying firm that moved their offices to Twisp after fires in recent years.

**UFDA** - Poulsbo WA One of the original 4 stations in the PRSN hosted by Kitsap PUD. Site of the famous “flower pot” dome incident; the “KPUD” site once ran for a 4-year straight period without interruption until it was moved to another building and renamed to UFDA (“uffda” or “oofda”) to honor the Scandinavian heritage of the area.

**VCWA** - Vancouver WA Hosted by the City of Vancouver at a police station.

**VERN** - Mt. Vernon WA Established and hosted by Skagit County, it was originally called “OTIS” (as it was atop the elevator shaft structure on a county building), it was moved slightly to reduce multipath and renamed “VERN” after the town. Backup site.

**VRNT** - Vernita WA WSDOT hosted at their yard outside town.

**WALA** - Walla Walla WA WSDOT hosted at the airport outside town.

**WEBG** - Battleground WA WSDOT hosted at their yard outside town. The name has two meanings (by design). It sounds like “West Battleground” (the WSDOT shop is west of town, but the real name is to honor retired geodesist Georg Weber of the BKG (the German version of the NGS). Georg led the development of NTRIP, the communications protocol in your survey controller and used by networks worldwide.

**XANE** - Wenatchee WA It was Established by CWU and Chelan PUD, the site is near a water tank on a hill west of Wenatchee. For two consecutive years fires nearly engulfed the

antenna (only wires got singed) but the site continues to operate well.



**YAKI** - Yakima WA

Hosted by the City of Yakima

**YCS2** - Yelm, WA  
Schools District 2

At Fort Stevens Elementary, named for Yelm Community