



Region 10: the Pacific Northwest

Serving the people of Alaska, Idaho, Oregon, Washington and Native Tribes

[Recent Additions](#) | [Contact Us](#) **Search:** All EPA Region 10

You are here: [EPA Home](#) » [Region 10](#) » [Water Page](#) » [Sole Source Aquifers](#) » SSA

Region 10: the Pacific Northwest

About Region 10

A to Z Subject Index

Topics and Programs

Air
Cleanup
Compliance Help
Enforcement
Environmental Assessment
Toxic Substances
Waste & Recycling
Water

Regional Priorities

For Kids

Sole Source Aquifer Program

As of December, 1997, EPA has designated 68 sole source aquifers nationwide. Fourteen of these are in Region 10 (which consists of Alaska, Idaho, Oregon, and Washington). **There are currently NO sole source aquifers designated in Alaska.**

Pending petition(s)

[Lower Issaquah Valley Sole Source Aquifer System](#)

Designated Aquifers in the Pacific Northwest

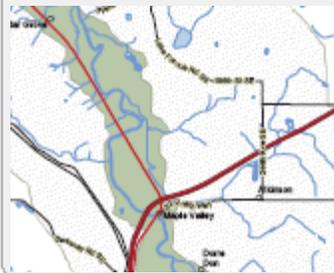
Sole Source Aquifer Name	State	FR Vol/No/Pg	FR Date
Spokane Valley-Rathdrum Prairie Aquifer	WA/ID	43/28/5566	02-09-78
Camano Island Aquifer	WA	47/66/14779	04-06-82
Whidbey Island Aquifer	WA	47/66/14779	04-06-82
Cross Valley Aquifer	WA	52/95/18606	05-18-87
Newberg Area Aquifer	WA	52/191/37215 52/214/42474	10-05-87 11-05-87
North Florence Dunal Aquifer	OR	52/194/37519	10-07-87
Cedar Valley Aquifer	WA	53/191/38779	10-03-88
Lewiston Basin Aquifer	WA/ID	53/191/38782	10-03-88
Eastern Snake River Plain Aquifer	ID/WY	56/194/50634	10-07-91
Central Pierce County Aquifer System	WA	59/1/224	01-03-94
Marrowstone Island Aquifer System	WA	59/105/28752	06-02-94

Sole Source Aquifer Protection Program Resources

- Commonly Asked Questions and Answers
- Project Review - Areas of Concern
- Memorandum of Understanding with other Federal Agencies
- Petitioners' Guidance

SSA Maps

Downloadable maps of Region 10 Sole Source Aquifers



Downloadable GIS-Format data of Region 10 Sole Source Aquifers

- Geographic Information System (GIS) Format Map Data for Region 10 Sole Source Aquifers (ArcGIS 9.3 Personal Geodatabase format)
- Metadata for GIS-Format Map Data for Region 10 Sole Source Aquifers

EPA Contact

Susan Ennes
206-553-6249
Ennes.Susan@epa.gov

Vashon-Maury Island Aquifer System	WA	59/127/34468	07-05-94
Guemes Island Aquifer System	WA	62/230/63545	12-01-97
Troutdale Aquifer System	WA	E6-14710	10-05-06

Note: Designation of the Eastern Columbia Plateau Aquifer System has been suspended indefinitely.

[↑Top of page](#)

Background

The Sole Source Aquifer (SSA) Protection Program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq), which states:

"If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice, no commitment for federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for federal assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer."

The Environmental Protection Agency (EPA) defines a sole or principal source aquifer as one which supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. EPA guidelines also stipulate that these areas can have no alternative drinking water source(s) which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. For convenience, all designated sole or principal source aquifers are usually referred to simply as "sole source aquifers."

[↑Top of page](#)

Petition for Designation

Although the agency has statutory authority to initiate SSA designations, EPA has a longstanding policy of only responding to petitions. Any person may apply for SSA designation. A "person" is any individual, corporation, company, association, partnership, state, municipality, or federal agency. A petitioner is responsible for providing EPA with hydrogeologic and drinking water usage data, and other technical and administrative information required for assessing designation criteria.

In 1987, EPA published the Sole Source Aquifer Designation Petitioner Guidance to assist those interested in preparing and submitting petitions to EPA regional offices. The document provides procedures and criteria for proposing aquifer boundaries, determining whether an aquifer is the sole or principal source of drinking water, and for evaluating alternative sources of drinking water.

In general, the designation decision process takes a minimum of six months from the time

that the petitioner submits a *complete* petition to EPA. The process may take considerably longer, depending on the technical complexity of the petition, and on the number of petitions that may be undergoing review within the EPA regional office at a particular time.

↑Top of page

Project Review Authority and Coordination

If an SSA designation is approved, proposed federal financially-assisted projects which have the potential to contaminate the aquifer are subject to EPA review. Proposed projects that are funded entirely by state, local, or private concerns are not subject to EPA review. Examples of federally funded projects which have been reviewed by EPA under the SSA protection program include:

- highway improvements and new road construction
- public water supply wells and transmission lines
- wastewater treatment facilities
- construction projects that involve disposal of storm water
- agricultural projects that involve management of animal waste
- projects funded through Community Development Block Grants

EPA has developed Memorandums of Understanding (MOU) with federal funding agencies to establish review responsibilities under the SSA protection program and to list categories of projects which should or should not be referred to EPA for review. MOUs help ensure that projects which pose serious threats to ground water quality "so as to create a significant hazard to public health" are referred to EPA. Region 10 has developed MOUs with a number of federal funding agencies including the Federal Highway Administration, the Department of Housing and Urban Development, and the U.S. Department of Agriculture - Rural Development. We are currently updating and renegotiating these MOUs and, as they are signed, they will be made available [We are currently updating and renegotiating these MOUs. all current information can be found on the Groundwater Protection Unit Homepage.](#)

Most projects referred to EPA for review meet all federal, state, and local ground water protection standards and are approved without any additional conditions being imposed. Occasionally, site or project-specific concerns for ground water quality protection lead to specific recommendations or additional pollution prevention requirements as a condition of funding. In rare cases, federal funding has been denied when the applicant has been either unwilling or unable to modify the project.

Whenever feasible, EPA coordinates the review of proposed projects with other offices within EPA and with various federal, state, or local agencies that have a responsibility for ground water quality protection. Relevant information from these sources is given full consideration in the sole source aquifer review process and helps EPA to understand local hydrogeologic conditions and specific project design concerns. Project review coordination also helps ensure that SSA protection measures support or enhance existing ground water protection efforts, rather than duplicate them.

↑Top of page

Public Awareness and Participation

SSA designations help increase public awareness on the nature and value of local ground water resources by demonstrating the link between an aquifer and a community's drinking water supply. Often, the realization that an area's drinking water originates from a vulnerable underground supply can lead to an increased willingness to protect it. The public also has an opportunity to participate in the SSA designation process by providing written comments to EPA or by participating in an EPA-sponsored public hearing prior to a

designation decision.

[↑Top of page](#)

Resource Characterization

Important information on the boundaries, hydrogeologic materials, and water use patterns of an area's aquifer must be documented by a petitioner seeking SSA designation. Following EPA's technical review of a petition, this information is summarized by the Agency in a technical support document that is made available for public review. Following designation, a Federal Register (FR) notice is published to announce and summarize the basis for EPA's decision.

[↑Top of page](#)

Limitations of the Program

Sole source aquifer designation provides only limited federal protection of ground water resources which serve as drinking water supplies. It is *not* a comprehensive ground water protection program. Protection of ground water resources can best be achieved through an integrated and coordinated combination of federal, state, and local efforts such as called for under the Comprehensive State Ground Water Protection Program (CSGWPP) approach. For example, local wellhead protection programs designed to protect the recharge areas of public water supply wells should work in concert with contaminant source control and pollution prevention efforts being managed at various levels of government. This coordination ensures that all ground water activities meet the same protection goal without duplication of time, effort, and resources.

Although designated aquifers have been determined to be the "sole or principal" source of drinking water for an area, this does not imply that they are more or less valuable or vulnerable to contamination than other aquifers which have not been designated by EPA. Many valuable and sensitive aquifers have not been designated simply because nobody has petitioned EPA for such status or because they did not qualify for designation due to drinking water consumption patterns over the entire aquifer area. Furthermore, ground water value and vulnerability can vary considerably both between and within designated aquifers. As a result, EPA does not endorse using SSA status as the sole or determining factor in making land use decisions that may impact ground water quality. Rather, site-specific hydrogeological assessments should be considered along with other factors such as project design, construction practices, and long-term management of the site.

[↑Top of page](#)

Contact

For more information on the Sole Source Aquifer Program in Region 10, contact:

[Susan Ennes](#)

206-553-6249

Ennes.Susan@epa.gov

Call toll-free from AK, ID, OR, and WA at 1-800-424-4EPA

[↑Top of page](#)

As of December, 1997, EPA has designated 68 sole source aquifers nationwide. Fourteen of these are in Region 10

Sole Source Aquifer Protection
Program Resources

■ [Commonly Asked Questions](#)

(which consists of Alaska, Idaho, Oregon, and Washington).
There are currently NO sole source aquifers designated in Alaska.

Pending petition(s)

[Lower Issaquah Valley Sole Source Aquifer System](#)

Designated Aquifers in the Pacific Northwest

Sole Source Aquifer Name	State	FR Vol/No/Pg	FR Date
Spokane Valley-Rathdrum Prairie Aquifer	WA/ID	43/28/5566	02-09-78
Camano Island Aquifer	WA	47/66/14779	04-06-82
Whidbey Island Aquifer	WA	47/66/14779	04-06-82
Cross Valley Aquifer	WA	52/95/18606	05-18-87
Newberg Area Aquifer	WA	52/191/37215 52/214/42474	10-05-87 11-05-87
North Florence Dunal Aquifer	OR	52/194/37519	10-07-87
Cedar Valley Aquifer	WA	53/191/38779	10-03-88
Lewiston Basin Aquifer	WA/ID	53/191/38782	10-03-88
Eastern Snake River Plain Aquifer	ID/WY	56/194/50634	10-07-91
Central Pierce County Aquifer System	WA	59/1/224	01-03-94
Marrowstone Island Aquifer System	WA	59/105/28752	06-02-94
Vashon-Maury Island Aquifer System	WA	59/127/34468	07-05-94
Guemes Island Aquifer System	WA	62/230/63545	12-01-97
Troutdale Aquifer System	WA	E6-14710	10-05-06

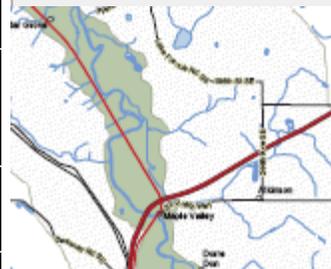
Note: Designation of the Eastern Columbia Plateau Aquifer System has been suspended indefinitely.

and Answers

- Project Review - Areas of Concern
- Memorandum of Understanding with other Federal Agencies
- Petitioners' Guidance

SSA Maps

Downloadable maps of Region 10 Sole Source Aquifers



Downloadable GIS-Format data of Region 10 Sole Source Aquifers

- Geographic Information System (GIS) Format Map Data for Region 10 Sole Source Aquifers (ArcGIS 9.3 Personal Geodatabase format)
- Metadata for GIS-Format Map Data for Region 10 Sole Source Aquifers

EPA Contact

Susan Ennes
 (206) 553-6249
ennes.susan@epa.gov

[↑Top of page](#)

Background

The Sole Source Aquifer (SSA) Protection Program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq), which states:

"If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice, no commitment for federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for federal assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer."

The Environmental Protection Agency (EPA) defines a sole or principal source aquifer as one which supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. EPA guidelines also stipulate that these areas can have no alternative drinking water source(s) which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. For convenience, all designated sole or principal source aquifers are usually referred to simply as "sole source aquifers."

[↑Top of page](#)

Petition for Designation

Although the agency has statutory authority to initiate SSA designations, EPA has a longstanding policy of only responding to petitions. Any person may apply for SSA designation. A "person" is any individual, corporation, company, association, partnership, state, municipality, or federal agency. A petitioner is responsible for providing EPA with hydrogeologic and drinking water usage data, and other technical and administrative information required for assessing designation criteria.

In 1987, EPA published the Sole Source Aquifer Designation Petitioner Guidance to assist those interested in preparing and submitting petitions to EPA regional offices. The document provides procedures and criteria for proposing aquifer boundaries, determining whether an aquifer is the sole or principal source of drinking water, and for evaluating alternative sources of drinking water.

In general, the designation decision process takes a minimum of six months from the time that the petitioner submits a *complete* petition to EPA. The process may take considerably longer, depending on the technical complexity of the petition, and on the number of petitions that may be undergoing review within the EPA regional office at a particular time.

[↑Top of page](#)

Project Review Authority and Coordination

If an SSA designation is approved, proposed federal financially-assisted projects which have the potential to contaminate the aquifer are subject to EPA review. Proposed projects that are funded entirely by state, local, or private concerns are not subject to EPA review. Examples of federally funded projects which have been reviewed by EPA under the SSA protection program include:

- highway improvements and new road construction

- public water supply wells and transmission lines
- wastewater treatment facilities
- construction projects that involve disposal of storm water
- agricultural projects that involve management of animal waste
- projects funded through Community Development Block Grants

EPA has developed Memorandums of Understanding (MOU) with federal funding agencies to establish review responsibilities under the SSA protection program and to list categories of projects which should or should not be referred to EPA for review. MOUs help ensure that projects which pose serious threats to ground water quality "so as to create a significant hazard to public health" are referred to EPA. Region 10 has developed MOUs with a number of federal funding agencies including the Federal Highway Administration, the Department of Housing and Urban Development, and the U.S. Department of Agriculture - Rural Development. We are currently updating and renegotiating these MOUs and, as they are signed, they will be made available [We are currently updating and renegotiating these MOUs, all current information can be found on the Groundwater Protection Unit Homepage.](#)

Most projects referred to EPA for review meet all federal, state, and local ground water protection standards and are approved without any additional conditions being imposed. Occasionally, site or project-specific concerns for ground water quality protection lead to specific recommendations or additional pollution prevention requirements as a condition of funding. In rare cases, federal funding has been denied when the applicant has been either unwilling or unable to modify the project.

Whenever feasible, EPA coordinates the review of proposed projects with other offices within EPA and with various federal, state, or local agencies that have a responsibility for ground water quality protection. Relevant information from these sources is given full consideration in the sole source aquifer review process and helps EPA to understand local hydrogeologic conditions and specific project design concerns. Project review coordination also helps ensure that SSA protection measures support or enhance existing ground water protection efforts, rather than duplicate them.

[↑Top of page](#)

Public Awareness and Participation

SSA designations help increase public awareness on the nature and value of local ground water resources by demonstrating the link between an aquifer and a community's drinking water supply. Often, the realization that an area's drinking water originates from a vulnerable underground supply can lead to an increased willingness to protect it. The public also has an opportunity to participate in the SSA designation process by providing written comments to EPA or by participating in an EPA-sponsored public hearing prior to a designation decision.

[↑Top of page](#)

Resource Characterization

Important information on the boundaries, hydrogeologic materials, and water use patterns of an area's aquifer must be documented by a petitioner seeking SSA designation. Following EPA's technical review of a petition, this information is summarized by the Agency in a technical support document that is made available for public review. Following designation, a Federal Register (FR) notice is published to announce and summarize the basis for EPA's decision.

[↑Top of page](#)

Limitations of the Program

Sole source aquifer designation provides only limited federal protection of ground water

resources which serve as drinking water supplies. It is *not* a comprehensive ground water protection program. Protection of ground water resources can best be achieved through an integrated and coordinated combination of federal, state, and local efforts such as called for under the Comprehensive State Ground Water Protection Program (CSGWPP) approach. For example, local wellhead protection programs designed to protect the recharge areas of public water supply wells should work in concert with contaminant source control and pollution prevention efforts being managed at various levels of government. This coordination ensures that all ground water activities meet the same protection goal without duplication of time, effort, and resources.

Although designated aquifers have been determined to be the "sole or principal" source of drinking water for an area, this does not imply that they are more or less valuable or vulnerable to contamination than other aquifers which have not been designated by EPA. Many valuable and sensitive aquifers have not been designated simply because nobody has petitioned EPA for such status or because they did not qualify for designation due to drinking water consumption patterns over the entire aquifer area. Furthermore, ground water value and vulnerability can vary considerably both between and within designated aquifers. As a result, EPA does not endorse using SSA status as the sole or determining factor in making land use decisions that may impact ground water quality. Rather, site-specific hydrogeological assessments should be considered along with other factors such as project design, construction practices, and long-term management of the site.

[↑ Top of page](#)

Contact

For more information on the Sole Source Aquifer Program in Region 10, contact:

[Susan Ennes](#)

206-553-6249

Ennes.Susan@epa.gov

Call toll-free from AK, ID, OR, and WA at 1-800-424-4EPA

[↑ Top of page](#)



[rxssa.htm](#)



[EPA-R10-SSA.mdb](#)

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

Last updated on Friday, February 19th, 2010.

URL: <http://yosemite.epa.gov/r10/water.nsf/Sole+Source+Aquifers/SSA>

[Print As-Is](#)