

CITY OF BAINBRIDGE ISLAND CITY COUNCIL AGENDA BILL



PROCESS INFORMATION

Subject: Sole Source Aquifer Designation	Date: October 14, 2009
Agenda Item: New Business	Bill No.: 09-120
Proposed By: Public Works/Lance Newkirk	Referral(s): Land Use Committee

BUDGET INFORMATION

Depart/Fund: N/A	Munis Contract # : N/A
Expenditure Req: N/A	Budgeted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Budget Amend. Req? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

STANDING COMMITTEE INFORMATION

Referring Committee: Land Use Committee	Recommendation: Approve
Date of Referral: 09/01/09	Vote : N/A
	Minority Report <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

DESCRIPTION/SUMMARY

Action Item:

That the City Council decide course of action in regards to citizens' petition to the Environmental Protection Agency (EPA) for a Sole Source Aquifer (SSA) designation.

History:

On August 5, 2009, Island citizens submitted a petition for an SSA designation to the EPA. On August 18, 2009, the City Water Resources staff briefed the Land Use Committee on what SSA designation would mean for the City of Bainbridge Island. On September 1, 2009, by committee request, City Water Resources staff presented the following options in moving forward to secure an SSA designation.

- 1) Submit its own SSA designation petition, or
- 2) Support the original petition for SSA designation, or
- 3) If original petition for SSA is denied, submit a subsequent petition

The process of assembling a petition for SSA designation can be a lengthy and work intensive process involving review and analysis of hydro-geotechnical data, market research on alternative water sources, and document preparation (see attached EPA petitioner guidance). This work is already completed by the original petitioners.

Continued on Page 2

RECOMMENDED ACTION

Motion:

I move that the City Council support the original petition for SSA designation.

DESCRIPTION/SUMMARY – Page 2 (Continued)

SSA designation is not part of the 2009-2010 workplan or budget. Therefore, if the City were to pursue option one and submit its own petition, it would require that work currently on the workplan such as ground water well level measurements to support the USGS ground water model or Water Quality and Flow Monitoring Program efforts be suspended or removed from the workplan.

The SSA program was designed for protection of groundwater water quality, not quantity. SSA designation provides limited federal protection of ground water resources, only providing EPA review for federally-funded projects that have the potential to impact ground water quality. Further, EPA does not have the authority to stop projects, only withhold federal funds if water quality protection measures are not met. Proposed projects that are funded entirely by state, local, or private concerns are not subject to EPA review.

There is no preference given to sole source aquifers within any federal or state funding program. Therefore, the designation does not open the City up to new revenue sources at this time.

Given all the above, City Water Resources staff recommend supporting the original petition for SSA designation. Staff can review the original petition for errors and offer support throughout the review process. Possible support may constitute coordinating with EPA on behalf of petitioners or providing technical data via the public request for information process. This level of effort can be assimilated into the current workplan at little to no expense to current work or budget.

Schedule/Next Activities:

No further City Council actions in regards to this issue are anticipated in 2009.

Budget:

N/A

Location:

Islandwide

Excerpt from EPA's online petitioner guidance found at:

<http://www.epa.gov/region02/water/aquifer/petition/chap-3.htm>

Chapter 3

PHASE I - PETITION PREPARATION

3.1. Purpose

The purpose of this chapter is to aid the petitioner in preparing a complete petition. Section 3.2 includes the steps which should be taken to determine whether the aquifer is the sole or principal source of drinking water and to delineate boundaries of the various areas included in the petition. Section 3.3 outlines the information that the petitioner should provide to EPA after completing the steps in Section 3.2. Section 3.4 gives instructions for submitting petitions.

3.2. Steps to Determine Sole or Principal Source and to Delineate Boundaries of Petitioned Areas

The petitioner should complete the following steps to determine whether the aquifer is the sole or principal source of drinking water. The petitioner also should delineate the boundaries of the various areas included in the petition. Exhibit 3-1 is a schematic representation of how the various areas relate to one another.

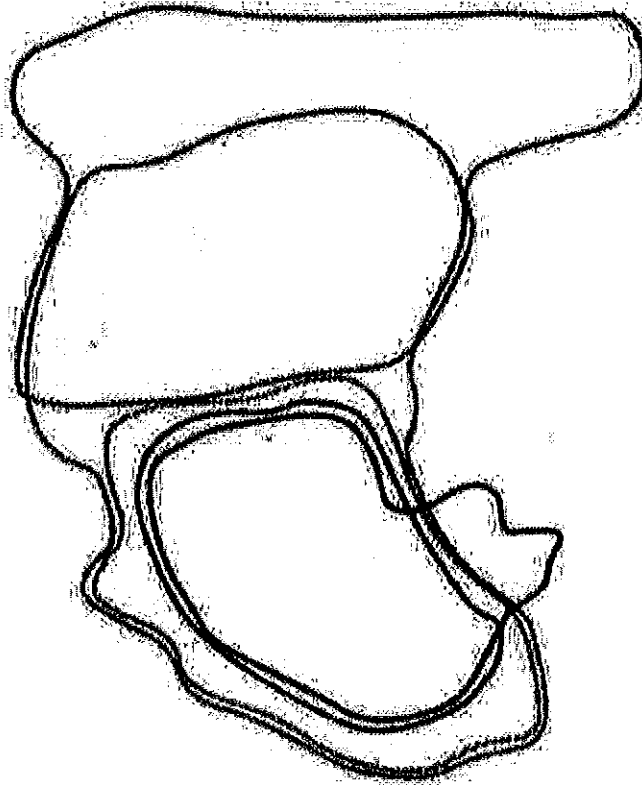
3.2.1. Delineate the Aquifer Boundaries

A petitioner may request designation for part of an aquifer, an entire aquifer or an aquifer system. This follows from the definition of an aquifer as a geological formation, group of formations or part of a formation capable of yielding a significant amount of water to a well or spring. A petitioner can petition for part of an aquifer if that portion is hydrogeologically separated from the rest of the aquifer. A petitioner can petition for an aquifer system to the extent that all aquifers in the system are hydrogeologically connected. The aquifer should be capable of supplying a well with approximately 150 gallons of water per day.

3.2.2. Delineate the Boundaries of the Aquifer Service Area

This area is the area for which the petitioned aquifer must be the sole or principal source of drinking water. The aquifer service area is the area above the aquifer, previously determined; it also includes the area where the entire population served by the aquifer lives. Areas that are above the aquifer but are not served by the aquifer should be included in the aquifer service area.

Exhibit 3-1: Areas Related To Sole Source Aquifers



- Aquifer: Geological formation, group of formations or part of a formation which is capable of yielding a significant amount of water to a well or spring.
- Aquifer recharge area: The area where the aquifer and underlying rock are able to receive and store water from precipitation and surface water.
- Designated area: (Surface water above the aquifer and its recharge area) boundaries are coincident with those of recharge area.
- Designated aquifer area: (Surface water above the aquifer and its recharge area) boundaries are coincident with those of recharge area.
- Aquifer service area: Area within which federal, state, and local agencies will be concerned with the designated area and all of the portions of the aquifer service area.

3.2.3. Determine Whether the Aquifer is the Sole or Principal Source of Drinking Water

"Sole or principal" means that the aquifer is needed to supply 50% or more of the drinking water for the aquifer service area, and that the volume of water which could be supplied by alternative sources is insufficient to replace the petitioned aquifer should it become contaminated.

An alternative source of drinking water is any surface water or ground water near the aquifer service area which is currently used, or has the potential to be used, as a drinking water supply. "Near" is defined as within a distance which is normal to the local area for tapping into a water source. In addition, any source for which steps have been taken to use the water from the source should be considered "near." These steps include such things as having an application pending for right of use or a commitment of funding for constructing a pipeline or treatment plant.

The petitioner should complete the following steps to determine if the petitioned aquifer is the sole or principal source of drinking water for the aquifer service area.

Step 1 - Identify all current sources of drinking water which supply water to the aquifer service area.

Step 2 - Complete the "Current Drinking Water Sources" matrix. Determine the average daily volume of drinking water supplied to the aquifer service area by each source identified above and by the petitioned aquifer. The average daily volume should be adjusted for seasonal variations. Then determine the percent of the total volume of drinking water supplied by each source. Complete the "Current Drinking Water Sources" matrix (Exhibit 3-2) with these percentages.

The total for all sources must equal 100 percent. If the petitioned aquifer supplies 50% or more of the drinking water, proceed to step 3. If it does not, the aquifer is not a sole or principal source of drinking water, and the petition process should be discontinued.

Step 3 - Identify all potential alternative sources of drinking water which could supply drinking water to the aquifer service area. A potential source is any surface water or ground water near the aquifer service area which could potentially be used as a source of drinking water. "Near" is defined as being within a distance normal to the local area for tapping into a water source. For example, if several surrounding communities of the same size have 2-3 mile pipelines leading to rivers or reservoirs, "near" would be defined as 2-3 miles. Any source for which steps have been taken for use, such as an application for right of use or a commitment of funds, should be considered "near."

EXHIBIT 3-2

CURRENT DRINKING WATER SOURCES FOR THE AQUIFER SERVICE AREA

Source/Use	Public Water Supply (Community & Non-Community)	Private and Other	Total
Petitioned Aquifer	50%	-----	50%

Other Aquifers	-----	25%	25%
Surface Water	25%	-----	25%
Transported from Outside	-----	-----	-----
Total	75%	25%	100% (This must equal 100%)

Step 4 - For each potential source identified above, determine the legal availability of the water and any institutional constraints to using the source for drinking water in the aquifer service area. Institutional constraints are legal or administrative restrictions that preclude replacement water delivery and may not be alleviated through administrative procedures or market transactions. Such constraints limit access to alternative water sources and may involve legal, administrative, or other controls over water use.

EPA has placed potential institutional constraints into three categories:

a. Probably Binding constraints -- which include treaties, agreements among states, and decisions by the U.S. Supreme Court that are not capable of being revised through market transactions or simple administrative processes.

b. Constraints which may possibly be binding -- such as when market transactions or simple administrative processes may not be able to provide an alternative source of water (e.g., limits on the source or amount of water that are created by State law).

c. Constraints unlikely to be binding -- when market transactions or simple administrative processes usually can ensure access to an alternative source of water.

Step 5 - Eliminate from consideration all potential sources from which water is not legally available or on which there are other institutional constraints, that is, those which fall into categories a and b above.

Step 6 - Determine if the remaining potential sources, and current sources which can provide additional water, are capable of providing sufficient drinking water to replace the aquifer. Complete the "Alternative Drinking Water Sources" matrix, Exhibit 3-3, as follows:

- Determine the current average daily volume of drinking water supplied by the petitioned aquifer; this should be the same figure used in Step 2. Complete line A, "Petitioned Aquifer Supply."

- Estimate the potential daily supply of each potential source and any increment from each current source. The petitioner may:
- Contact the U.S. Geological Survey or State water resources agency for water quantity data on streams, lakes and aquifers. These data should be in gallons per day. For some streams, the U.S. Geological Survey can provide information on flows and other characteristics from which gross estimates can be calculated
- Contact an expert who is familiar with the geographic area and has a background in hydrology and hydraulics, to develop a report on the estimated daily supply of the alternative source.
- For each source, complete "Estimated Daily Supply."
- Add the Estimated Daily Supply of all potential sources and increments from current sources, except for the petitioned aquifer. Complete line E, "Total."
- Compare the Total Estimated Daily Supply (E), determined above, to the Petitioned Aquifer Supply (A). If (E) is equal to or greater than (A), proceed to the next step. If (E) is less than (A), there is no need to further evaluate the potential sources, since the criterion for sole or principal source has been met, i.e., the volume of water supplied by alternative sources is insufficient to replace the petitioned aquifer.

EXHIBIT 3-3

ALTERNATIVE DRINKING WATER SOURCES

SOURCE ESTIMATED	ESTIMATED DAILY SUPPLY
(A) PETITIONED AQUIFER SUPPLY	_____
(B)	_____
(C)	_____
(D)	_____
	(E) Total _____

Step 7 - For all remaining potential sources, determine whether it is economically feasible for the sources to deliver water of the same or better quality sources to deliver water of the same or better quality than that of the petitioned aquifer. It is assumed that there would be no significant cost associated with using additional water from current sources.

The economic feasibility of using the potential sources should be evaluated in terms of whether use of the sources would present an unusual economic burden to the community. There are two ways the economic burden can be assessed. The first is to compare the cost of using the sources to the water

use costs paid in nearby communities with approximately the same income level as the population in the aquifer service area.

The second, more quantitative method, is to determine the annual system cost to a typical user after incorporating the potential sources. If this cost exceeds 0.4 to 0.6% of the mean household income in the area, use of the sources can be considered to be economically infeasible.

Determining whether use of the potential water sources is economically infeasible will require that a rough estimate of the costs of the potential water systems be generated. These costs should then be compared to household income to determine the relative "burden" of a new water system should the aquifer have to be replaced.

Following is a list of the major replacement cost items, categorized according to the type of cost incurred: capital costs, operation and maintenance (O&M) costs, and others. Approximations of these costs will suffice for the purposes of determining economic feasibility:

-- Capital Costs:

Well field development;
Raw water intake structures (wells);
Water treatment facility;
Pumping stations;
Storage;
Transmission system;
Rights-of-way;
Land;
Relocation of utilities;

-- O&M Costs:

Labor, equipment;
Utilities;

Parts / inventory;
Administration;
Monitoring / analysis;

-- Other Costs:

Architectural and engineering fees; and
Legal and administrative fees.

There are ample sources of information that may be used for estimating costs. These include Federal and State agencies, architectural and engineering consulting firms (A/E firms), trade associations, and local water utilities (ACT Systems, Inc., 1977, 1979; Temple, Barker and Sloane, Inc., 1982; AWWA, 1981). Costs can vary somewhat from one region of the country to another. For purposes of determining economic feasibility, only a general estimate is needed and, initially, there is no need to undertake a detailed cost estimation study.

Various EPA reports on water supply and waste water treatment are also a good source of information on costs (e.g., Culp, et.al., 1978). The results of such studies are presented in the form of tables and cost curves, subdivided into construction costs and O&M costs. This data can be updated simply to allow for inflation and geographical variations by energy and labor costs.

Another useful data source is the NWWA Nationwide Water Well Drilling Cost Survey (NWWA, 1979). The results of this survey are summarized in the form of tables giving drilling, as well as casing costs, as a function of well diameter, hydrogeologic conditions and other factors. Although this survey dates back to 1979, it is the most recent available from NWWA. The data in the survey should be escalated to account for inflation. Cost indices published quarterly by Engineering News Record give a very recent indication of construction, operation, labor and other costs.

Step 8 - The potential sources which the petitioner has determined are capable of providing drinking water of the same or better quality as the petitioned aquifer at a reasonable cost should now be considered alternative sources.

Step 9 - Complete the matrix, "Alternative Drinking Water Sources" again, using any additional supplies from current sources of drinking water and each source which has been determined to be an alternative source using steps 1-8 above.

Step 10 - If the Total Estimated Daily Supply (E) is greater than or equal to the Petitioned Aquifer Supply (A), the petitioned aquifer cannot be a sole or principal source. This is because the volume of water which could be supplied by alternative sources is sufficient to replace the petitioned aquifer. Exhibit 3-4 gives an example of this case.

Exhibit 3-5 gives an example of alternative sources which supply less than (A), the petitioned aquifer, indicating that the petitioned aquifer would be a principal source.

3.2.4. Delineate Designated and Project Review Area Boundaries

In steps 11 and 12, the petitioner should propose the boundaries of the area for which designation is desired and the boundaries of the area within which the petitioner wants Federal financially assisted projects to be reviewed. The designated area boundary determination is critical since this area may subsequently be used to determine the boundaries within which a CAPA may be located.

Step 11 - Delineate the boundaries of the proposed designated area. The designated area includes the surface area above the aquifer and its recharge area(s). The recharge area is the surface expression of the area where the bulk of precipitation or surface water replenishes the aquifer. The petitioner should determine the boundaries of the recharge area in order to delineate the boundaries of the designated area.

Step 12 - Delineate the boundaries of the proposed project review area. The project review area is the area in which Federal financially assisted projects will be reviewed by EPA, which includes all of the designated area and could include all or a portion of the streamflow source area(s). If a stream or river contributes to aquifer recharge, the streamflow source area should be included in the petition. The boundaries of the project review area should be sufficiently large to ensure adequate protection of the ground water.

**EXHIBIT 3-4 ALTERNATIVE DRINKING WATER SOURCES
PETITIONED AQUIFER NOT A PRINCIPAL SOURCE**

(A) PETITIONED AQUIFER SUPPLY 1,250,000 g.p.d.

SOURCE ESTIMATED	DAILY SUPPLY
(B) INCREMENT FROM CURRENT	250,000
(C) ALTERNATIVE	350,000
(D) ALTERNATIVE	650,000
	(E) Total 1,250,000
Result: Petitioned aquifer is not a principal source, because alternative sources can supply a volume of drinking water which is greater than or equal to that of the petitioned aquifer.	

EXHIBIT 3-5

**ALTERNATIVE DRINKING WATER SOURCES MATRIX
PETITIONED AQUIFER A PRINCIPAL SOURCE**

SOURCE	ESTIMATED DAILY SUPPLY
(A) PETITIONED AQUIFER SUPPLY	1,250,000 g.p.d.
(B) INCREMENT FROM CURRENT	200,000
(C) ALTERNATIVE	50,000
(D) ALTERNATIVE	100,000
	(E) Total 350,000
Result: Petitioned aquifer would be a principal source, because alternative sources can supply less than the volume of drinking water supplied by the petitioned aquifer.	

3.3. Petition Contents

After completing the necessary steps to determine whether the aquifer is a sole or principal source and to delineate boundaries, the petitioner should provide EPA with the information which was used to make these determinations. This section describes the information the petitioner should include in the petition to EPA.

Definitions of terms used in this section are found in Appendix A. Sources of technical information are listed in Appendix C. In some cases, professional help may be required to collect or assess the technical data.

3.3.1. Petitioner Identifying Information

This portion of the petition provides basic identifying information about the petitioner. The suggested format for presenting this information is shown in Exhibit 3-6. The information requested is as follows:

- Aquifer - name(s) of the aquifer as it is locally known and its general location, such as county and state.
- Petitioner - person or organization submitting the petition.
- Responsible person
- If the petitioner is an individual, the responsible person is the individual.

- If the petitioner is an organization or any other entity, the responsible person is the head of the organization or entity which is ultimately responsible for the petition.
- Contact - an individual who can clarify the petition contents and supply additional information during petition processing.

EXHIBIT 3-6 Suggested Petitioner Identifying Information Format

Aquifer	Name
	Location
Petitioner	Name
	Address
	City, State, ZIP
	Phone Number
Responsible Person	Name
Contact	Name
	Phone Number

3.3.2. Narrative

The purpose of this narrative is to provide general information about the aquifer and the surrounding area and to assist the EPA reviewer in understanding the more detailed hydrogeological and other technical data in subsequent sections. The brief narrative (two to three type written pages) should include:

- General location of the aquifer (State, county, township).
- Ground water dependency in the location described above and on the particular aquifer for which designation is requested.
- Availability of drinking water supplies other than the aquifer in question.
- Reasons for interest in Sole Source Aquifer designation, for example:

- Raising public consciousness about protecting ground water through Sole Source Aquifer designation.
- Interest in the Sole Source Aquifer Demonstration Program.
- Initiation of an EPA review of a planned Federal financially assisted project that might contaminate the aquifer.
- Why the aquifer is vulnerable to contamination - should include any known cases of contamination that are evidence of the aquifer's vulnerability to contamination.
- Quality of the ground water from the aquifer.
- Relationship of the petitioner to the purveyor of the water supply in the aquifer service area.

3.3.3. Sole or Principal Source Data

The information in this section should be provided in order to demonstrate that the aquifer is the sole or principal source of drinking water for the aquifer service area. In order to make this decision, EPA should have information that indicates that the petitioned aquifer is needed to supply 50% or more of the drinking water used in the aquifer service area and that there are no reasonably available alternative sources to the aquifer. The following information is requested.

- Aquifer Service Area - a description and map clearly delineating the boundaries of the area above the aquifer and including any area that may not be above the aquifer but which is supplied with drinking water from the petitioned Sole Source Aquifer.
- Population - two figures should be provided: (1) the entire population of the aquifer service area, regardless of its source of drinking water, and (2) the population within the aquifer service area that is actually served by the proposed Sole Source Aquifer.
- Sources of drinking water/public water supply systems that currently supply water to the aquifer service area - these sources have been identified in Section 3.2.3, Step 1. The petitioner should submit the "Current Drinking Water Sources" matrix, completed in Section 3.2.3, Step 2. In addition, for each source in the matrix, the petitioner should provide the following:
 - Narrative description for all sources except the proposed Sole Source Aquifer.
 - Sources or method of calculating water use percentages for each source shown in the matrix, (for example, 150 gallons per day/household) where municipal/commercial supply figures are not available.
 - Explanation of seasonal variations, if any.
 - Explanation of actual use versus potential capacity.

- Explanation of why the source is not used currently to its full capacity, such as mandates within a watershed restricting use of the water to a given area, lack of additional supply available to a proposed area or use of the source as an emergency supply only.

Potential sources - For each potential alternative source of drinking water considered by the petitioner, the following information should be supplied:

- Narrative description, including location in relation to the aquifer service area.
- Explanation of why the source is not used currently.
- Explanation of any legal or institutional constraints restricting use of the source.
- "Alternative Drinking Water Sources" matrix, completed in Section 3.2.3,

Step 6.

- Explanation of how the estimated daily supply was calculated, including all supporting data and documentation (to be provided for all sources which are still under consideration following the legal constraints evaluation).
- Explanation of what would be necessary to transfer petitioned aquifer users to this source, e.g., building of treatment and distribution facilities (to be provided for all sources which can supply adequate quantity, as determined above).
- Estimated cost to provide water of comparable quality from the sources and methods used to determine cost (to be provided for all sources included in the previous paragraph).
- Explanation of why use of the sources were determined to be economically infeasible or incapable of supplying water of comparable quality to that of the petitioned aquifer (if applicable).
- "Alternative Drinking Water Sources" matrix completed in Section 3.2.3, Step 9 (if applicable).

3.3.4. Boundary Information

Sufficient hydrogeological data are necessary for EPA to verify the boundaries of the aquifer, the designated area and the project review area and will give EPA a general understanding of the hydrogeological system. Requested hydrogeological information includes:

Aquifer and its location

- Narrative description of the locale including:

- * Topography
- * Climate
- * Geology
- * Ground water use and occurrence

--- Delineation of the aquifer's boundaries on detailed topographic maps. USGS 7.5 and 15 minute quadrangles are readily available and adequately detailed for this purpose. If the number of sheets involved becomes too cumbersome, consideration should be given to photographic reduction of the maps to a more workable scale or to the use of 1:100,000 or 1:250,000 scale maps.

--- Description and diagrams of hydrology and hydrogeology including:

- * Delineation (plane view) of the aquifer and non-aquifer units
- * Longitudinal and transverse geologic cross sections depicting the aquifer, including such things as lateral extent, types of materials (lithology) and thickness.
- * Data or estimates concerning aquifer characteristics such as porosity, hydraulic conductivity, direction of ground water flow, well yields.

---Description of discharge or ground water withdrawal from the aquifer, for example:

- * Wells (drinking, irrigation, industrial)
- * Springs
- * Stream baseflow
- * Maps showing water table contours or potentiometric surfaces, springs and surface water pathways.

recharge area(s)

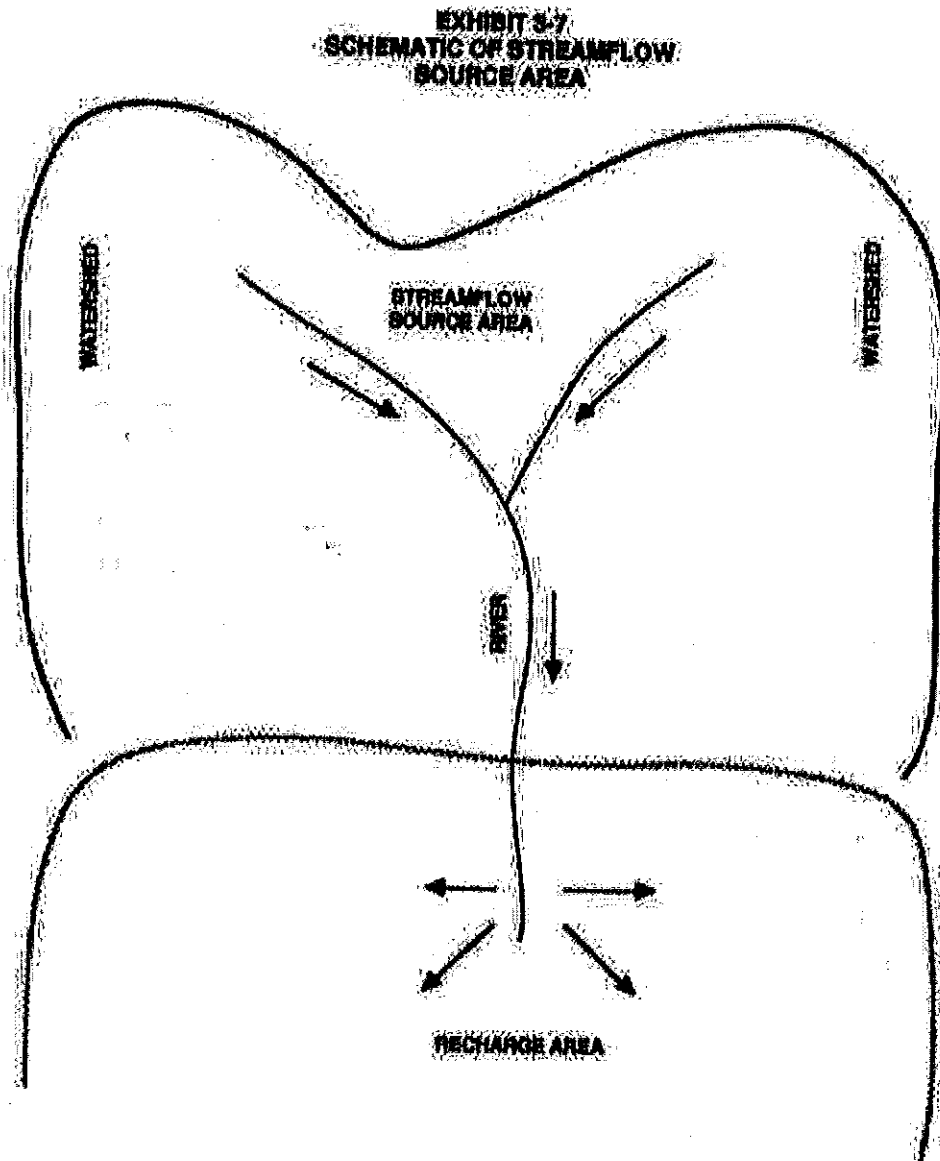
--- Delineation of recharge area(s) on the topographic maps.

--- Description of methods used to determine recharge area(s), for example:

- * Assessment of topographic, geologic or hydrogeologic maps
- * Review and assessment of regional and sub-regional ground water flow system(s) data
- * Data obtained from field studies based on isotopic dating techniques, observation well networks, tracer tests, etc.
- * Numerical simulation of regional flow

--- Description and location of natural and man-induced aquifer recharge such as precipitation, snow melt, unlined surface impoundments, septic fields and land disposal of sewage effluent, irrigation, injection of fluids and injection wells.

Exhibit 3-7 Schematic of Streamflow Source Area



Streamflow source area(s)

If there is a stream or river above the aquifer and its recharge area(s), the petitioner should either include information on the streamflow source area or explain why it has not been included.

The identification of a losing stream and evaluation of its contribution to ground water recharge may be more involved than for the aquifer and its recharge area(s). In arid regions, streams that emerge from mountainous areas may contribute nearly all of their flow to ground water in down gradient desert basins. In humid regions, streams typically receive ground water throughout the year; however, local pumping of an aquifer may lower the water table, resulting in ground water recharge by surface water. The relationship between surface water and ground water varies on both a spatial basis (along the length of a stream) as well as on a temporal one (dependent on the season). Therefore, the delineation of the streamflow source area(s) may require the assessment of considerable technical data as well as a good deal of professional expertise. If specific data are lacking, the petitioner should state this and indicate the basis for delineation of the streamflow source area. If the streamflow source area is not included in the project review area, the petitioner should explain why. If it is included, the following information is requested:

- Delineation of the streamflow source area(s) on detailed topographic maps, including location of losing streams if such streamflow demonstrably contributes to the aquifer through these areas;
- Explanation of methods used in determining streamflow contributions; and
- Streamflow characteristics, including delineation of gaining and losing portions of streams.

A schematic of a streamflow source area is presented in Exhibit 3-7.

Designated Area

The hydrogeological data for this area should already have been provided in the descriptions of the surface area above the aquifer and the recharge area(s). The proposed boundaries of the designated area should be delineated on a topographic map.

In addition, the petition must include a single 8.5 x 11 inch or 8/5 x 14 inch reproducible reference map of the sole source aquifer boundary/project review area. This single map must include, in addition to the boundaries mentioned above, county/parish boundaries; major streams and lakes; cities and towns; latitude and longitude of a reference point (selected by the petitioner) within the petitioned aquifer service area; other information that contributes to a clear understanding of the location of the area and its relation to other major political and physical features; and an inset map showing the aquifer location within the state or territory.

Project Review Area

The hydrogeological data for this area should already have been provided in the description of the designated area and of the streamflow source area(s), if appropriate. The proposed boundaries should be delineated on a topographic map.

3.3.5. Information Related to Significant Public Health Hazard

The law requires EPA to determine whether a petitioned aquifer, if contaminated, would create a significant hazard to public health. To assist the Agency in making such a determination, the petitioner may include information on public and/or private wells and springs producing water from the petitioned aquifer for drinking water that is supplied within the aquifer service area. EPA encourages the petitioner who decides to provide such information for drinking water wells and springs to report as many of the Data Sources, General Descriptors, Geographic Descriptors, and Well and Sample Descriptors listed below as available and in tabular or matrix format. This information is referred to as the "Minimum Set of Data Elements for Ground Water Quality" (MSDE).

General Descriptor

1. Data Sources

Geographic Descriptors

2. Latitude
3. Longitude
4. Method Used to Determine Latitude and Longitude
5. Description of Entity
6. Accuracy of Latitude and Longitude Measurement
7. Altitude
8. Method Used to Determine Altitude
9. State FIPS Code
10. County FIPS Code

Well Descriptors

11. Well Identifier
12. Well Use
13. Type of Log
14. Depth of Well at Completion
15. Screened / Open Interval

Sample Descriptors

16. Sample Identifier
17. Depth to Water
18. Constituent or Parameter Measured
19. Concentration / Value
20. Analytical Results Qualifier
21. Quality Assurance Indicator

These terms are explained further in Appendix F, The Minimum Set of Data Elements for Ground Water Quality.

3.4. Petition Submission

The petitioner should be typed and double-spaced. The petitioner should submit four copies of the petition to the EPA Regional Office appropriate for the state within which the petitioned area is located. Two of these copies should contain original maps or diagrams if copies of these would not reproduce all necessary colors. The addresses of the EPA Regional offices and the States within each Region can be found in Appendix D.
