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 Web site.\*

### 433.01 Introduction

This chapter includes information and requirements for describing groundwater resources in the vicinity of the project area, and identifying potential significant adverse environmental impacts of project alternatives on these resources. Other information relevant to this chapter may be found in **Chapter 420** (Geology and Soils) and **Chapter 430** (Surface Water).

#### (1) *Summary of Requirements*

In general, transportation projects must be designed to avoid significant adverse environmental impacts to groundwater resources, and mitigate any unavoidable adverse impacts (e.g., through use of Best Management Practices (BMPs)).

A full Discipline Report is required when one or more project alternatives may introduce enough stormwater or wastewater into an aquifer or its recharge zone to create a significant adverse environmental impact. The Groundwater Discipline Report should include information on regional and local aquifers underlying and/or proximally down gradient from the project area, and determine whether stormwater or wastewater discharges produced by any project alternatives are likely to enter Sole Source Aquifers (SSAs), Critical Aquifer Recharge Areas (CARAs), or Wellhead Protection Areas (WPAs) in quantities sufficient to produce a significant adverse environmental impact. It should also identify other significant adverse environmental impacts to groundwater, and mitigation options for identified impacts.

WSDOT's Groundwater Discipline Report Checklist (**Exhibit 433-1**) provides a concise framework for describing groundwater conditions and detailing significant adverse environmental impacts of project alternatives. Information

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\*Web sites and navigation referenced in this chapter are subject to change. For the most current links, please refer to the online version of the EPM, available through the WSDOT Environmental Services Office (ESO) home page: <http://www.wsdot.wa.gov/environment/>

referred to in this chapter, including legislation, regulations and regulatory (permitting) processes, Interagency Agreements, and technical resources, provides the basis for the checklist.

## (2) **Abbreviations and Acronyms**

Abbreviations and acronyms used in this chapter are listed below. Others are found in the general list in **Appendix A**.

AKART	All known, available, and reasonable methods of prevention, control, and treatment
BMPs	Best Management Practices
CARA	Critical Aquifer Recharge Area
DOH	Washington State Department of Health
GIS	Geographical Information System
GMA	Growth Management Act
NPDES	National Pollutant Discharge Elimination System
OSS	On-site Sewer
SCA	Sanitary Control Area
SDWA	Safe Drinking Water Act
SSA	Sole Source Aquifer
SWAP	Source Water Assessment and Protection
SWDP	State Waste Discharge Permit
UIC	Underground Injection Control
WPA	Wellhead Protection Area

## (3) **Glossary**

Terms described in this chapter are listed below and also included in the general glossary in **Appendix B**.

**Critical Aquifer Recharge Area** – Area designated by a city or county for protection under the Growth Management Act that has a critical recharging effect on aquifers used for potable water.

**Groundwater** – Water that occurs below the surface of the earth, contained in pore spaces. It is either passing through or standing in the soil and underlying strata and is free to move under the influence of gravity.

**Injection Well** – Any disposal system designed to place fluids, including highway runoff and treated wastewater from on-site sewage disposal systems, into the subsurface. Such systems include bored, drilled, or dug holes; for example dry wells, French drains, and drainfields.

**Sanitary Control Area** – An area (minimum radius 100 feet) maintained around a public water source (surface or well) for the purpose of protecting that source from existing and potential sources of contamination. No sources

of contamination may be constructed within the sanitary control area without the permission of the Washington Department of Health (DOH) and the water purveyor. DOH guidance identifies stormwater runoff and spills resulting from vehicular accidents on roadways as potential sources of contamination.

**Sole Source Aquifer** – Any aquifer which (1) is so designated by USEPA, (2) supplies 50 percent or more of the drinking water to the population living over the aquifer, (3) has distinct hydrogeological boundaries, and (4) for which there is no economically feasible alternative source of drinking water if it should become contaminated.

**Source Water Protection Area** – Area protected for drinking water supplies; these include Wellhead Protection Areas and Sanitary Control Areas.

**Water Right** – Legal authorization to use a certain amount of public water for specific beneficial purposes.

**Wellhead Protection Area** – Area managed by a community to protect groundwater drinking water supplies.

## 433.02 Applicable Statutes and Regulations

This section lists the primary statutes and regulations applicable to groundwater issues. See **Appendix D** for a list of statutes referenced in the EPM. Permits and approvals required pursuant to these statutes are listed in **Section 433.06**.

### (1) **Federal**

#### (a) **National Environmental Policy Act/State Environmental Policy Act**

The National Environmental Policy Act (NEPA), requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts on groundwater are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Chapter 410, Chapter 411, and Chapter 412**.

#### (b) **Safe Water Drinking Act**

The Safe Drinking Water Act of 1974 (SDWA), 42 USC 300 et seq, Chapter 6A, sets national primary drinking water standards, regulates underground injection of fluids, and designates sole source aquifers. Amendments were added by Congress in 1986 and 1996. The 1996 amendments identify source water protection, water system operator training, and public information as components of safe drinking water programs. This law, including the 1996 amendments, is online at:

 <http://www4.law.cornell.edu/uscode/42/ch6AschXII.html>

It is also available, along with background information and implementing regulations, at:

☞ <http://www.epa.gov/safewater/sdwa/sdwa.html>

**(c) Clean Water Act**

The federal Water Pollution Control Act (better known as the Clean Water Act) applies to discharge of pollutants into groundwater. See **Section 430.02** for applicable descriptions and links.

**(2) State**

**(a) State Environmental Policy Act**

The State Environmental Policy Act (SEPA) requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental considerations such as impacts on water quality are given due weight in decision-making. State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on SEPA procedures, see **Chapter 410** and **Chapter 411**.

**(b) State Water Quality Laws and Administrative Rules**

State water quality regulations are mandated by the Clean Water Act referenced in **Section 433.02(1)** above. The Water Pollution Control Act (RCW 90.48) is the primary water pollution law for the state of Washington. Under this statute, any discharge of pollutants into waters of the state, including groundwater, is prohibited unless authorized.

WAC 173-200 mandates groundwater quality standards to maintain the highest quality of the state's groundwaters and to protect existing and future beneficial uses of the groundwater through the reduction or elimination of contaminant discharge. Because many citizens drink groundwater and use it in their homes, the state of Washington currently classifies all of its groundwater as a potential source of drinking water. It is not necessary for ground water to be defined as an aquifer (i.e. a saturated permeable geologic formation that can produce a significant quantity of water) in order to be protected. Likewise the standards do not distinguish ground water which is perched, seasonal or artificial. Chapter 90.48 RCW (Revised Code of Washington) mandates that all underground water be protected; however, water in the vadose zone (unsaturated zone) is not specifically protected by the Ground Water Quality Standards.

The Water Pollution Control Act is available online at:

☞ <http://apps.leg.wa.gov/RCW/default.aspx?cite=90.48>

State groundwater quality standards are available online at:

☞ <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-200>

Implementation Guidance for the Groundwater Water Quality Standards (Ecology Publication #96-02) is available online at:

<http://www.ecy.wa.gov/biblio/9602.html>

### (c) **Drinking Water – Source Water Protection**

Protection of drinking water sources (surface and groundwater) is mandated by the federal Safe Drinking Water Act. In Washington, RCW 43.20.050 designates the State Department of Health (DOH) as lead agency for assuring safe and reliable public drinking water supplies, in cooperation with local health departments and water purveyors. State regulations (WAC 246-290-135 for Group A systems; WAC 246-291-100 for Group B systems) provide for two types of area-based controls for source protection of wells and springs serving as sources of public water supplies\*:

**Sanitary Control Area (SCA)** – An area established and maintained around a well or spring for the purpose of protecting it from existing and potential sources of contamination. The minimum SCA is a 100 foot radius about the source for wells, and 200 feet for springs, unless “engineering justification” supports a smaller area. The well or spring owner is required to have fee simple ownership of the SCA, and must prohibit or exercise direct control over the construction, storage, disposal, or application of existing or potential sources of contamination.

**Wellhead Protection Areas (WPA)** – A portion of the zone of contribution for a Group A well or spring, as determined by delineation criteria based on the estimated time-of-travel for a particle of water from the zone boundary to its eventual arrival at the well. Water purveyors are required to inventory all known and potential groundwater contamination sources within the WHPA and complete a susceptibility assessment every five years. Additional information is available in DOH’s Wellhead Protection Guidance Document.

State laws and regulations pertaining to source water protection of drinking water supplies are available at:

<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.20.050>

<http://apps.leg.wa.gov/WAC/default.aspx?cite=246-290-135>

<http://apps.leg.wa.gov/WAC/default.aspx?cite=246-291-100>

DOH’s Wellhead Protection Guidance Document is available at:

[http://www.doh.wa.gov/ehp/dw/Publications/wellhead\\_protection.htm](http://www.doh.wa.gov/ehp/dw/Publications/wellhead_protection.htm)

\*“Group A” systems regularly serve 15 or more residential connections or 25 or more people/day for 60 or more days per year. All remaining systems are designated “Group B.” Wells serving a single residential connection are not considered public water supplies, but are generally regulated by local ordinances.

#### (d) Underground Injection Control

The Underground Injection Control (UIC) Program, authorized by the Safe Drinking Water Act (SDWA), is designed to prevent contamination of underground sources of drinking water from the use of injection wells. A UIC well is a hole that is constructed to put water and other fluids into the ground. In Washington, most of these wells are dug to dispose of stormwater or wastewater (e.g., drywells, drainfields, and infiltration trenches).

The UIC Program was established in 1984 and is administered under 40 CFR, Part 144. Ecology was delegated authority by USEPA to administer the program in Washington State, and operates under statutory authority of RCW 43.21A.445 and RCW 90.48. The UIC program is administered under WAC 173-218. All new underground control activities must treat the “waste” fluid before injection. For the current minimum acceptable level of treatment, see WSDOT’s approved *Highway Runoff Manual* (M 31-16) for stormwater standards, and the current Department of Health standards for on-site sewage.

State laws and regulations pertaining to underground injection control are available at:

☞ <http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21A.445>

☞ <http://apps.leg.wa.gov/RCW/default.aspx?cite=90.48>

☞ <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-218>

For information on the UIC Program see:

☞ <http://www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html>

#### (e) Growth Management Act

In 1990, the Washington State Legislature adopted the Growth Management Act (GMA), RCW 36.70A. This statute, combined with Article 11 of the Washington State Constitution, mandates development and adoption by local jurisdictions of ordinances that classify, designate, and regulate land use in order to protect critical areas. Aquifer recharge areas are one type of critical area, and are regulated through local Critical Aquifer Recharge Area (CARA) ordinances. See **Section 450.02** for more information on the GMA.

Under the GMA, state agencies must comply with local comprehensive plans and development regulations (RCW 36.70A.103); likewise local agencies should coordinate with WSDOT. See **Section 433.02(3)** below for more information and links.

### (3) **Local Critical Aquifer Recharge Area Ordinance**

The purpose of Critical Aquifer Recharge Area (CARA) ordinances is to provide cities and counties with a mechanism to classify, designate, and regulate areas deemed necessary to provide adequate recharge and protection to aquifers used as sources of potable (drinking) water. Unless the local laws conflict with state law, WSDOT must meet the requirements of local regulations. Local planning departments should be contacted to determine the location or descriptive criteria of geologically hazardous areas that may impact the project.

Information on the ordinances that define and regulate Critical Aquifer Recharge Areas, can be found online at:

☞ <http://www.ecy.wa.gov/programs/wq/grndwtr/cara/index.html>

Ecology's Guidance Document for the Establishment of Critical Aquifer Recharge Area (Ecology Publication # 97-030) is online at:

☞ <http://www.ecy.wa.gov/biblio/0510028.html>

Additional information on local implementation of CARAs may be available at Web sites for the appropriate local jurisdictions (search for "critical areas" or "growth management").

## 433.03 Policy Guidance

### (1) **State Source Water Assessment and Protection Programs Guidance**

State Source Water Assessment and Protection (SWAP) Program guidance is required under the SDWA Amendments of 1996 (Public Law 104-182, Section 1453) to ensure better quality drinking water. Water assessments will generate information on significant potential contamination sources and will also generate information regarding the susceptibility of systems to contamination. The USEPA is responsible for the review and approval of state SWAPs.

*State Source Water Assessment and Protection Programs Final Guidance* (August 1997) describes USEPA's recommendations for what should be the elements of a State SWAP program, and of the importance of federal, state and public cooperation in developing and implementing SWAP programs (USEPA publication 816-R-97-009). Information on source water assessments and a link to the guidance document is available at:

☞ <http://cfpub.epa.gov/safewater/sourcewater/sourcewater.cfm?action=Assessments>

## 433.04 Interagency Agreements

The following interagency agreements pertaining to groundwater are available at:

☞ <http://www.wsdot.wa.gov/Environment/Compliance/agreements.htm>

### (1) Sole Source Aquifers

A 1988 Memorandum of Understanding between FHWA Region 10, USEPA Region 10 and WSDOT on sole source aquifers (SSAs) aims to ensure that each highway project is designed and constructed in a manner that will prevent the introduction of contaminants into an SSA (see glossary in **Section 433.01** for definition) in quantities that may create a significant hazard to public health. For a WSDOT project to be within the scope of the MOU, all three of the following conditions must be met:

- USEPA-designated SSA
- Federal funding
- Project type included, not excluded

The MOU includes lists of sole source aquifers as of 1988 (Attachment A), excluded projects (Attachment B), projects that should be submitted to USEPA (Attachment C), and 1987 National Primary Drinking Water Regulations (Attachment D).

Federal funds may not be expended unless the project is designed to avoid any violation of federal or state drinking water regulations referenced in the MOU, and partially listed in Attachment D.

To comply with the Sole Source Aquifer MOU:

- Provide USEPA early opportunity to participate in development and review of environmental documents. USEPA should be contacted before the first draft document is circulated outside WSDOT for general review.
- Immediately transmit to USEPA any agency comments received indicating adverse impacts on the aquifer.
- Respond to USEPA direction.

USEPA has designated ten Sole Source Aquifers in Washington. They are: Cedar Valley Aquifer, Cross Valley Aquifer, Guemes Island Aquifer, Marrowstone Aquifer, Newberg Aquifer, Pierce County Aquifer System, Spokane Valley Rathdrum Prairie Aquifer, Troutdale Aquifer, Vashon Aquifer, and Whidbey/Camano Island Aquifer.

The use of injection wells (such as dry wells, sumps, and drainfields) for stormwater treatment and disposal is common over these aquifers. All injection activities must meet Washington groundwater quality standards.

Therefore, before injection, all stormwater must be treated using an approved stormwater BMP as contained in WSDOT's latest approved *Highway Runoff Manual* (M 31-16). USEPA may consider the use of other BMPs on a case-by-case basis or through an updated memorandum of Understanding between USEPA, FHWA, and WSDOT. In addition, if untreated stormwater runoff is disposed using injection wells, WSDOT must ensure that the injection well is retrofitted to apply the latest approved stormwater BMPs as identified in the *Highway Runoff Manual*.

For a map of sole source aquifers, see USEPA's Web page:

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

### (2) **Drinking Water Well Sanitary Control Areas – Screening Criteria**

The purpose of this 2006 agreement is to clarify expectations, establish project screening criteria, and facilitate communication among WSDOT, DOH, and water purveyors when a proposed highway project intersects with the sanitary control area of a public water supply. The MOA is available online at:

☞ <http://wsdot.wa.gov/environment/compliance/agreements.htm>

### (3) **Other Interagency Agreements**

See **Appendix E** for a guide to all interagency agreements referenced in the EPM, including a summary of provisions related to each phase of the WSDOT Transportation Decision-Making Process.

## 433.05 Technical Guidance

### (1) **Groundwater Discipline Report**

WSDOT's Groundwater Discipline Report provides discipline-specific information required for EAs, EISs, permits, and other environmental documents. This information includes a description of regional and local aquifers underlying the project area, whether these aquifers are designated as Sole Source Aquifers, and whether stormwater or wastewater discharges from each project alternative are likely to enter Critical Aquifer Recharge Areas, Wellhead Protection Areas, or Sanitary Control Areas. It should also identify other environmental impacts to groundwater, and discuss mitigation options for identified significant adverse environmental impacts. Discipline reports should be "right-sized" to adequately describe potential impacts and corresponding preventative or mitigation measures, without providing unnecessary detailed analysis or information.

A full Discipline Report is required when one or more project alternatives may introduce enough stormwater or wastewater into an aquifer or its recharge zone to create a significant environmental impact. A determination of frequency, quantity, and duration of introduced flows sufficient to produce a significant environmental impact will vary depending on the administrative classification of the groundwater resource area (e.g., SSA, CARA, WPA,

SCA) and its location relative to the project. Early consultation with appropriate WSDOT and regulatory (WDOE, WDOH, county planning) staff is recommended. If a full discipline report is determined to be unnecessary, the rationale should be documented in a letter to the project file.

The Groundwater Discipline Report generally contains the following major sections:

- Summary
- Description of Project Alternatives
- Study Methodology
- Coordination
- Affected Environment
- Environmental Impacts
- Mitigation of Impacts
- References/Information Sources

Sections which are sufficiently brief may be combined with other sections where it makes sense to do so (e.g., Study Methodology and Coordination).

Technical reports, memoranda, data summaries, or other documentation developed to support the Discipline Report should be placed in one or more appendices after the main body of the report.

Further guidance for preparing the discipline report is provided below. A Discipline Report Checklist is provided as **Exhibit 433-1**.

**(a) Summary**

The summary presents significant findings of the report in non-technical terms. Significant findings include regional and local aquifers and their administrative designations (SSA, CARA), predicted environmental impacts, and mitigation recommendations. The summary should be suitable for incorporation into the environmental document (EA or EIS), for presentation at public hearings, or for use by management and policy groups in decision-making.

**(b) Description of Project Alternatives**

This section presents a brief description of project alternatives identified during the EIS or EA scoping process. Descriptions should be consistent with those in other discipline reports.

**(c) Study Methodology**

This section describes the approach used to determine and evaluate predicted environmental impacts and other report findings and conclusions. The description should include data and information sources,

field methods, analysis techniques and tools, and decision criteria, and should be as succinct as possible. Detailed descriptions, where necessary, should be included in the appropriate appendix.

**(d) Coordination**

This section identifies agencies and other organizations involved with or contacted during the development of the report.

**(e) Affected Environment**

This section describes the existing conditions with respect to geology and soils in the vicinity of the project area. Topic areas include the following:

- **Hydrogeologic Setting** – Describe regional and local aquifers in the vicinity of the project area.
- **Administrative Designations** – Determine whether aquifers described above are designated as Sole Source Aquifers, Critical Aquifer Recharge Areas, or contain Wellhead Protection Areas or Sanitary Control Areas that are likely to be impacted by the project.

**(f) Environmental Impacts**

This section describes the potential environmental impacts of project alternatives on groundwater resources, including an assessment of whether each identified impact is considered significant in the context of the SEPA/NEPA process. Impacts to be considered include direct (construction and operational), indirect, and cumulative. For more information about analysis of impacts, see **Section 411.03(5)** and **Chapter 412**.

**(g) Mitigation of Impacts**

This section describes recommended or proposed mitigation measures, commitments, and monitoring procedures corresponding to significant adverse impacts identified in (f) above, as well as mitigation measures considered or available but not included, with reasons why.

**(2) WSDOT Highway Runoff Manual**

The 2006 *Highway Runoff Manual* (M 31-16) provides a guide for policies, procedures, and methods for developing and documenting the design and maintenance of improvements to WSDOT's transportation system.

The manual contains approved methods of managing water quantity and quality from WSDOT facilities. These methods are known as Best Management Practices (BMPs). Selection criteria are established for the use of acceptable BMPs during construction and long-term maintenance of highways. Several of the BMPs identify groundwater-related limitations which may preclude their use; see Sections 3A-2.4, 5.4.2.3 (RT-06), 5.4.3.2 (FC-01), and 5A-3.1.2. Mitigation recommendations should consider if and where within the project area such limitations are likely. The *Highway Runoff Manual* (M 31-16) is available online at:

<http://www.wsdot.wa.gov/Environment/WaterQuality/Runoff/HighwayRunoffManual.htm>

### (3) **Wellhead Protection Program**

A wellhead protection area is the area managed by a community to protect its groundwater-based drinking water supplies. WSDOT practice is to participate proactively in the development and implementation of local wellhead protection plans. If wellhead protection areas are identified that are likely to be impacted by one or more project alternatives, then the appropriate entities (well owner, local and state departments of health) should be consulted regarding appropriate protective and mitigation measures.

DOH provides technical guidance in the *Washington State Wellhead Protection Program Guidance Document* (DOH Publication #331-018, April 1995). The document includes information on the determination of wellhead protection areas, management strategies and implementation, program financing, and interagency issues.

### (4) **FHWA Technical Advisory**

FHWA Technical Advisory T 6640.8A (October 1987) gives guidelines for preparing environmental documents, including specifically impacts on groundwater. For example, when a proposed project encroaches on a wellhead protection area (as identified by the state under approval by the USEPA), an EIS should identify the area, the potential impacts, and proposed mitigation measures for each alternative. For details, see the FHWA Web page at:

<http://www.fhwa.dot.gov/legregs/directives/techadvs/t664008a.htm>

### (5) **FHWA Environmental Guidebook**

Guidance documents on Sole Source Designation Aquifer Programs and Sole Source Aquifer Programs are available from the FHWA's Environmental Guidebook, online at:

<http://environment.fhwa.dot.gov/guidebook/index.asp>

## **433.06 Permits and Approvals**

Permits relating to groundwater are addressed in the following sections:

### **State**

- **Section 540.12** – State Waste Discharge Permit
- **Section 540.14** – Underground Injection Control Registration
- **Section 540.21** – On-Site Sewage Facility Permit
- **Section 540.25** – Other State Approvals (Water Right, Water System Project Approvals)

- **Section 540.25** – Other State Approvals (Dam Construction Permit, Reservoir Permit)

*Local*

- **Section 550.10** – Other Local Approvals (On-site Septic systems, Water System Approval for non-public use such as a maintenance facility)

### **433.07 Non-Road Project Requirements**

Ferry, rail, airport, or non-motorized transport systems are subject to the same policies, procedures, or permits that apply to road systems.

### **433.08 Exhibits**

Exhibit 433-1 Groundwater Discipline Report Checklist



## ***Exhibit 433-1      Groundwater Discipline Report Checklist***

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Project Name: \_\_\_\_\_ Job Number: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Date Received: \_\_\_\_\_ Date Reviewed: \_\_\_\_\_ Reviewer: \_\_\_\_\_

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

A Groundwater Discipline Report can be highly detailed or extremely concise depending upon whether the level of impact or controversy is substantial or minimal. Project teams should take care to “right-size” the discipline report so it adequately addresses the impacts and controversy without over-analyzing or providing unnecessary information.

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### **I. Summary**

SAT INC MIS N/A

- |  |  |
|--|--|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | A. Describes significant environmental impacts, identified hazards, and mitigation recommendations in non-technical terms.   |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | B. Summary <u>is written in “Plain Talk” language (see <a href="http://www.accountability.wa.gov/plaintalk/">http://www.accountability.wa.gov/plaintalk/</a>) and is suitable for incorporation into the environmental document (EIS, EA, or DCE), for presentation at public hearings, or for use by management and policy groups in decision-making.</u> |
- 

### **II. Description of Project Alternatives**

SAT INC MIS N/A

- |  |   |
|--|---|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | Briefly describes project alternatives identified during the EIS or EA scoping process; descriptions are consistent with those in other discipline reports. |
|--|---|
- 

### **III. Study Methodology**

SAT INC MIS N/A

- |   |  |
|---|--|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | A. Describes the approach used to determine and evaluate predicted environmental impacts and other report findings and conclusions, including data and information sources, field methods, analysis techniques and tools, and decision criteria. |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | B. Detailed descriptions, where necessary, are included in the appropriate appendix.   |

**IV. Coordination**

SAT INC MIS N/A

- Agencies and other organizations involved with or contacted during the development of the report are identified.

**V. Affected Environment**

SAT INC MIS N/A

- A. Describes regional and local aquifers in the vicinity of the project area.
- B. Sole Source Aquifers are correctly identified.
- C. Critical Aquifer Recharge Areas are correctly identified.
- D. Wellhead Protection Areas and Sanitary Control Areas are correctly identified.

**VI. Environmental Impacts**

SAT INC MIS N/A

- A. Describes the predicted direct construction and operational impacts of project alternatives on groundwater resources, including drinking water supplies.
- B. Describes the indirect and cumulative impacts of project alternatives on groundwater resources, including drinking water supplies.

**VII. Mitigation**

SAT INC MIS N/A

- A. Describes recommended or proposed mitigation measures, commitments, and monitoring procedures corresponding to impacts described in Section VI above.
- B. Describes mitigation measures considered or available but not included, with reasons why.

General Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_