

## **2. THE STRATEGIC ACTIVITIES AND ADEQUACY CRITERIA OF A COMPREHENSIVE PROGRAM**

A Comprehensive State Ground Water Protection Program consists of a set of six Strategic Activities. These six Strategic Activities foster more efficient and effective protection of ground water through more cooperative, consistent, and coordinated operation of all relevant federal, State, Tribal, and local programs within a State. Attainment of a Core CSGWPP marks the point at which all six Strategic Activities first emerge as a cohesive program which is clearly identifiable, although not identical, across States. Continuous improvement in the implementation of a State's Core CSGWPP will eventually lead to the attainment of a Fully-Integrating CSGWPP. A Fully-Integrating CSGWPP occurs when the Strategic Activities fundamentally influence and are supported by the day-to-day operations of all ground water-related programs within the State, including those of EPA, and, where relevant, other federal programs (See Figure 1-3).

### **2.1 BENEFITS OF THE CORE CSGWPP**

EPA recognizes that fundamental changes in its own and other federal agency programs are just as much a prerequisite to achieving a Fully-Integrating CSGWPP as the Strategic Activities that a State needs to undertake. However, to initiate or accelerate these federal program changes, there needs to be both an initial tangible commitment and a catalytic mechanism. EPA believes its joint support with the States of Core CSGWPPs will meet both needs, better enabling the States to leverage increased support from numerous federal programs that involve ground water quality concerns.

The Core CSGWPP will also serve as a distinct benchmark to assist EPA and the States in communicating the aggregate achievements of States to Congress. As Congress proceeds with reauthorizations of various ground water-related statutes over the next several years, the existence of Core CSGWPPs will provide an additional basis for meaningful dialogue regarding States' capabilities and needs for both flexibility and resources. Similarly, an individual State's Core CSGWPP could serve to enhance the State legislature's understanding of current ground water protection accomplishments, ongoing efforts, and remaining challenges.

### **2.2 THE ADEQUACY CRITERIA: CORE AND FULLY-INTEGRATING CSGWPPs**

EPA and the States, in consultation with other federal agencies, have established adequacy criteria for each of the six CSGWPP Strategic Activities. These adequacy criteria have been chosen to provide a balance between ensuring accountability for effective ground water protection and providing each State with the flexibility necessary to tailor its programs to its unique circumstances. States are, however, encouraged to work with adjacent States to achieve consistency in how adequacy criteria are met to facilitate resolution of inter-State ground water protection issues.

Adequacy criteria are presented for both the Core and Fully-Integrating levels of a CSGWPP. Each of the adequacy criteria for the Fully-Integrating CSGWPP is reflected in the Core CSGWPP. The primary differences in the adequacy criteria at these two levels relate to the scope of the activity, the degree of sophistication, and the timing and degree of influence on all relevant operating programs and activities within the State. Generally, development of an approach, initiation of efforts, or implementation within at least one program are all that is required to meet the adequacy criteria of a Core CSGWPP, whereas at the Fully-Integrating CSGWPP level approaches and activities are expected to be fully developed and influencing all ground water protection programs and efforts operating in the State. In some instances, the adequacy criteria at both levels are the same.

Although the overall level of effort necessary to achieve a Core CSGWPP is significantly less than is needed for a Fully-Integrating CSGWPP, the intended scope of a Core CSGWPP must be comprehensive and reach beyond a planning exercise. Initial implementation of the Strategic Activities must be evident by their influence on at least one ground water-related program operating within the State. Also, the State must intend that the Strategic Activities eventually will influence all ground water programs operating within the State, although such an objective may require several years of programmatic changes at the federal, State, and local levels. These specific thresholds of implementation at the Core level will be key to energizing the partnership between a State and EPA's ground water-related programs.

EPA recognizes and is encouraged that some States, given their history of effort in ground water protection, appear to have already met many of the adequacy criteria outlined in this Guidance. Indeed, EPA anticipates that the majority of States will have Core programs within the next one to two years.

### **2.3 OTHER GENERAL GUIDANCE**

The term "sufficient" is used in a number of adequacy criteria for a Fully-Integrating CSGWPP as one of the general indicators for where specific agreements between EPA and a State must occur. What is considered "sufficient" will depend on the level of flexibility a State is seeking from EPA. (The need to develop specific agreements for flexibility may also arise with respect to adequacy criteria which do not include the term "sufficient" in the Fully-Integrating description.)

The term "sufficient" is not included in any Core adequacy criteria because the criteria as presented are intended to describe only the initial threshold of activity needed to obtain EPA's endorsement. However, after the Core CSGWPP is endorsed and the State undertakes improvements, the level of flexibility available over time will be linked to the degree to which the State is implementing the adequacy criteria.

As policy evolves in this area, EPA will take steps to ensure that negotiations (between the Agency and the States) are based on consistent policy across all ten of

EPA's Regional Offices. EPA will undertake case studies and work with the States and other federal agencies to provide examples of what should be included in a CSGWPP at both levels.

In addition to adequacy criteria, EPA has indicated additional factors to be considered in developing and implementing CSGWPPs. These factors have been developed to serve as a guide to States in developing and implementing ground water protection activities under the CSGWPP framework. These factors are not adequacy criteria, but EPA believes that these considerations are relevant in developing and implementing a CSGWPP.

A State, in order to elicit EPA's endorsement of its Core CSGWPP, will indicate in writing how it has fulfilled all of the Core adequacy criteria under each of the Strategic Activities. (For a more detailed discussion of the CSGWPP review and development process, please see Chapter 3 of this Guidance.)

## **2.4 THE SIX STRATEGIC ACTIVITIES AND THEIR ADEQUACY CRITERIA**

The following section lists the specific adequacy criteria under each of the six Strategic Activities for both a Core CSGWPP and a Fully-Integrating CSGWPP. The language in bold print indicates the specific differences between the criteria at the Core level and the Fully-Integrating level.

The Strategic Activities and adequacy criteria are as follows:



## STRATEGIC ACTIVITY 1

**ESTABLISHING A GROUND WATER PROTECTION GOAL TO GUIDE  
ALL RELEVANT PROGRAMS IN THE STATE**

FULLY-INTEGRATING ADEQUACY CRITERIA	CORE ADEQUACY CRITERIA
1. A State ground water protection goal is established through adequate public participation. <sup>1</sup>	1. Same.
2. The State's ground water protection goal is: <ul style="list-style-type: none"> <li data-bbox="245 726 797 919">-- No less protective than EPA's overall ground water protection goal of preventing adverse effects to human health and the environment and protecting the environmental integrity of the nation's ground water resources<sup>2</sup>.</li> <li data-bbox="245 957 813 1020">-- Integrated with its other water quality and environmental goals.</li> </ul>	2. Same.
3. The State's ground water protection goal guides all federal, State and local ground water-related programs operating within the State which address potential sources of contamination, including federally-unregulated sources. <sup>3</sup>	3. The State's ground water protection goal guides at least one key State ground water-related program.

**ADDITIONAL FACTORS TO BE CONSIDERED**

1. The State is encouraged to incorporate water supply goals and objectives, including support of valuable ecological systems and other beneficial uses, into its ground water protection goal.

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<sup>1</sup>A ground water goal adopted by State statute or a public participation process equivalent to the objectives defined and employed by EPA in 40 CFR Part 25 will be considered to have been established with adequate public participation. (See the description of Public Process in Appendix B.)

<sup>2</sup>See Appendix A for a detailed discussion of EPA's policy regarding ground water protection goals.

<sup>3</sup>EPA is working to have the State's goal guide all ground water-related federal programs operating in the State to the extent possible under federal law.



## STRATEGIC ACTIVITY 2

**ESTABLISHING PRIORITIES, BASED ON CHARACTERIZATION OF THE RESOURCE,  
IDENTIFICATION OF SOURCES OF CONTAMINATION, AND PROGRAMMATIC  
NEEDS, TO DIRECT ALL RELEVANT PROGRAMS AND ACTIVITIES IN THE  
STATE TOWARD THE MOST EFFICIENT AND EFFECTIVE MEANS OF  
ACHIEVING THE STATE'S PROTECTION GOAL**

**FULLY-INTEGRATING ADEQUACY CRITERIA**

1. The State has established basic definitions and approaches for a coherent priority-setting process and is applying them in a **consistent manner across all federal, State, and local ground water-related programs operating within the State.**
2. A State's ground water priority-setting process is based on **sufficient** consideration of varying ground water characteristics such as, but not limited to, those listed on Figure 2-1 on Page 2-18.
3. The State **has sufficient** contamination source inventories and assessments to support its process for identifying all significant potential sources of contamination (including federally-unregulated sources) and to consistently determine its ground water protection priorities based on the relative threats of these sources to the resource.
4. The State **has sufficient** technical capabilities to support its priority-setting process and determinations.
5. The State **has formally adopted** measures of ground water protection (e.g., performance standards, quality standards, reference points, etc), **which are sufficient** to support consistent program priority setting and the measurement of progress.<sup>4</sup>

**CORE ADEQUACY CRITERIA**

1. The State has established basic definitions and approaches for a coherent priority-setting process and is applying them in **at least one key ground water-related program.**
2. A State's ground water priority-setting process is based **primarily** on consideration of varying ground water characteristics such as, but not limited to, those listed on Figure 2-1 on Page 2-18.
3. The State **is systematically implementing a plan to add to its** contamination source inventories and assessments to support its process for identifying all significant potential sources of contamination (including federally-unregulated sources) and to consistently determine its ground water protection priorities based on the relative threats of these sources to the resource.
4. The State **is systematically implementing a plan to further develop its** technical capabilities to support its priority-setting process and determinations.
5. The State **is systematically implementing a plan to formally adopt** measures of ground water protection (e.g., performance standards, quality standards, reference points, etc.) to support consistent program priority setting and the measurement of progress.<sup>4</sup>

<sup>4</sup>Such measures need to be consistently applied and must not discriminate against federally-financed remediation activities.

**FULLY-INTEGRATING ADEQUACY CRITERIA**

6. Protecting public water supplies is among the State's highest priorities and controlling sources in wellhead protection and recharge areas and basins of drinking water aquifers is a priority.
7. The State is **sufficiently** coordinating its ground water protection priorities with its surface water quality and other environmental priorities.
8. State priorities **sufficiently** incorporate and support a process of ongoing review and improvement of the six Strategic Activities of the State's CSGWPP.

**CORE ADEQUACY CRITERIA**

6. Same.
7. The State is coordinating its ground water protection priorities **under its Core CSGWPP** with its surface water quality and other environmental priorities.
8. State priorities incorporate and support a process of ongoing review and improvement of the six Strategic Activities of the State's CSGWPP.

**ADDITIONAL FACTORS TO BE CONSIDERED**

1. For stability, the State is encouraged to make its priorities long-term in nature and change them only in the face of compelling new information or needs.
2. The State is encouraged to include in its ground water characterization effort:
  - Detailed mapping and assessment to address the State's highest priority needs at an appropriate scale as determined by a coordinated State effort;
  - A comprehensive well inventory that includes private and municipal production wells, monitoring and test wells, and injection wells; and
  - A system for utilizing and integrating State and federal (e.g., USGS, USDA-SCS) ground water assessment and mapping programs.
3. The State is encouraged to have its formally adopted measures of ground water protection include an integrated set of direct measures such as MCLs, State water quality standards, and indirect measures such as BMPs, technology standards, siting criteria, and construction standards.
4. The State is encouraged to consider deployment of new and alternative technologies for improved pollution prevention as a priority.



## STRATEGIC ACTIVITY 3

**DEFINING AUTHORITIES, ROLES, RESPONSIBILITIES, RESOURCES, AND  
COORDINATING MECHANISMS ACROSS RELEVANT FEDERAL, STATE,  
TRIBAL, AND LOCAL PROGRAMS FOR ADDRESSING IDENTIFIED GROUND  
WATER PROTECTION PRIORITIES**

**FULLY-INTEGRATING ADEQUACY CRITERIA**

1. All agencies and programs responsible for addressing the State's priorities are identified and a primary point of contact (e.g., lead agency, coordinating committee, Governor's staff, etc.) with EPA is established for the development and implementation of CSGWPPs across all involved agencies.
2. A coordinating mechanism is operating that includes all State agencies and programs with ground water responsibilities and **all programs'** expertise is brought to bear on the State's ground water protection priorities.
3. **Sufficient** legal authorities and resources are available to address the State's ground water protection needs, requirements, and priorities under its CSGWPP.
4. Relevant federal agencies, operating within the State, are **sufficiently consulted** in the development and implementation of the CSGWPP.
5. Neighboring Tribal officials and States **sufficiently consult each other** in the development and implementation of their joint or independent CSGWPPs.
6. The State has established capabilities and mechanisms for inter-State coordination of ground water protection issues.

**CORE ADEQUACY CRITERIA**

1. Same.
2. A coordinating mechanism is operating that includes all State agencies and programs with ground water responsibilities and **more than one program's** expertise is brought to bear on the State's ground water priorities.
3. Legal authorities and resources are available to address the State's ground water protection needs, requirements, and priorities under its **Core** CSGWPP and the State has **identified the gaps in authorities and resources for achieving a Fully-Integrating CSGWPP.**
4. Relevant federal agencies, operating within the State, are **notified of and given opportunity to comment on the State's decisions** in the development and implementation of the **Core** CSGWPP.
5. Neighboring Tribal officials and States **consult each other** in the development and implementation of their joint or independent CSGWPPs.
6. Same.

**FULLY-INTEGRATING ADEQUACY CRITERIA**

7. Local governments are **sufficiently included** in the development and implementation of the CSGWPP and the State **is sufficiently implementing** coordination, guidance, or oversight mechanisms where local governments have authorization to address State ground water-related objectives and priorities.

**CORE ADEQUACY CRITERIA**

7. Local governments **are notified of and given opportunity to comment on the State's decisions** in the development and implementation of the **Core** CSGWPP.

**ADDITIONAL FACTORS TO BE CONSIDERED**

1. The State is encouraged to adopt a coordinating mechanism that is capable of influencing the movement of human and financial resources to target joint efforts valuable to more than one State program.
2. The State is encouraged to provide a field management presence for ground water of priority concern either by supporting local government efforts to protect ground water or establishing special districts, boards, or other similar institutional arrangements.
3. The State is encouraged to consider assessing fees for various activities that pose potential threats to ground water to augment funds for prevention of ground water contamination as well as for remediation activities.

## STRATEGIC ACTIVITY 4

**IMPLEMENTING ALL NECESSARY EFFORTS TO ACCOMPLISH THE STATE'S  
GROUND WATER PROTECTION GOAL CONSISTENT WITH  
THE STATE'S PRIORITIES AND SCHEDULES**

**FULLY-INTEGRATING ADEQUACY CRITERIA**Prevention of Contamination

1. Programs with measurable objectives aimed at prevention and control of contamination are being implemented **to the degree sufficient for attaining the State's ground water protection goal and addressing the priorities of the State's CSGWPP.**<sup>5</sup>
2. For site-specific or area-specific prevention measures, characterization and assessment of the ground water resource's vulnerability and, where appropriate, the ground water's use and value, **sufficiently** supports rational decision-making.
  - Definitions and approaches for ground water characterization and vulnerability assessment are applied in a consistent manner.
  - Factors considered include intrinsic sensitivity, geologic/hydraulic parameters and local hydrogeologic settings, and potential sources of contamination.; when necessary, other ground water characteristics such as, but not limited to, those listed in Figure 2-1 on Page 2-18 are considered.
  - The State **has sufficient** technical capabilities to support its decision-making.

**CORE ADEQUACY CRITERIA**Prevention of Contamination

1. Programs with measurable objectives aimed at prevention and control of contamination are being implemented **to address the priorities of the State's Core CSGWPP.**<sup>5</sup>
2. For site-specific or area-specific prevention measures, characterization and assessment of the ground water resource's vulnerability and, where appropriate, the ground water's use and value, support rational decision-making.
  - Same.
  - Same.
  - The State **is systematically implementing a plan to further develop its** technical capabilities to support its decision-making.

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<sup>5</sup>This includes programs aimed at reducing or eliminating potential environmental releases that may adversely impact ground water, by controlling contamination sources through permitting authorities, performance standards, enforcement and compliance activities, land use regulations, facility siting, and other regulatory and non-regulatory activities.

**FULLY-INTEGRATING ADEQUACY CRITERIA**

3. The State is **sufficiently implementing** an EPA-approved Wellhead Protection Program (as called for under Section 1428 of SDWA). (Required)
4. The State is **sufficiently carrying out across all programs** an integrated strategy to:
  - Implement a variety of prevention measures in the absence of actual detection of contamination;
  - Implement additional controls necessary if contamination is detected or increasing towards a concentration considered as a reference point for the State's protection goal; and
  - Take immediate action to prevent further contamination if contamination has reached or exceeded a concentration considered as a reference point for the State's protection goal.

Remediation and Facility Siting

5. Programs with measurable objectives aimed at remediating ground water contamination are being implemented **to the degree sufficient for attaining the State's ground water protection goal and addressing the priorities of the State's CSGWPP.**
6. For site-specific remediation measures and facility siting, characterization and assessment based on the use, value, and vulnerability of the ground water resource **sufficiently support rational decision-making.**
  - Definitions and approaches for ground water characterization and assessment are applied in a consistent manner.
  - Ground water characteristics such as, but not limited to, those listed in Figure 2-1 on Page 2-18 are considered.
  - The State **has sufficient** technical capabilities to support its decision-making.

**CORE ADEQUACY CRITERIA**

3. (Optional)
4. The State is carrying out **in at least one key program** an integrated strategy to:
  - Same.
  - Same.
  - Same.

Remediation and Facility Siting

5. Programs with measurable objectives aimed at remediating ground water contamination are being implemented **to address the priorities of the State's Core CSGWPP.**
6. For site-specific remediation measures and facility siting, characterization and assessment based on the use, value, and vulnerability of the ground water resource support rational decision-making.
  - Same.
  - Same.
  - The State is **systematically implementing a plan to further develop its** technical capabilities to support its decision-making.

**FULLY-INTEGRATING ADEQUACY CRITERIA**

7. Provisions are in place and are being implemented **across all programs** to avoid cross-media contamination during remediation activities.

**CORE ADEQUACY CRITERIA**

7. Provisions are in place and are being implemented **in at least one program** to avoid cross-media contamination during remediation activities.

**ADDITIONAL FACTORS TO BE CONSIDERED**

1. The State is encouraged, as part of its efforts to address potential sources of ground water contamination which are not federally regulated, to consider the following items:
  - Certification programs for drillers, pump installers, and test samplers;
  - A plan for addressing abandoned and poorly constructed wells (i.e., problem wells) that is consistent with the State priorities and objectives;
  - Legally enforceable standards for well construction, abandonment, and testing, and a compliance program that ensures that the driller community is complying (Note: For disposal wells, these standards must be consistent with the regulatory requirements under the SDWA's Underground Injection Control (UIC) Program);
  - Regulatory and non-regulatory approaches by the State to address on-site sewage disposal as a ground water contamination concern; and
  - Other efforts to control sources of ground water protection not addressed by federal statutes or regulations.



## STRATEGIC ACTIVITY 5

**COORDINATING INFORMATION COLLECTION AND MANAGEMENT TO  
MEASURE PROGRESS, RE-EVALUATE PRIORITIES, AND  
SUPPORT ALL GROUND WATER-RELATED PROGRAMS**

**FULLY-INTEGRATING ADEQUACY CRITERIA**

1. The State collects, coordinates, and manages information, including record-keeping, monitoring, and other necessary information, within and across all programs to re-evaluate priorities, measure progress toward meeting the State's ground water protection goal and priorities, and support all related program activities.
2. The State is using relevant data from local governments and other State and federal programs (i.e., Wellhead, Public Water Supply, etc.)
3. The State has defined a **sufficient** set of data elements to facilitate efficient data sharing and cross media analyses and provide users with consistent and comparable data, and is using it in **all ground water-related programs**.
4. The State monitoring program scope and design reflect the State's ground water priorities and contain **sufficient QA/QC** plans for data acquisition and analysis based on sound scientific protocols.

**CORE ADEQUACY CRITERIA**

1. The State **has developed a systematic process** to collect, coordinate, and manage information, including record-keeping, monitoring, and other necessary information, within and across all programs to re-evaluate priorities, measure progress toward meeting the State's ground water protection goal and priorities, and support all related program activities and **is using it in at least one program**.
2. Same.
3. The State has defined a set of data elements to facilitate efficient data sharing and cross media analyses and provide users with consistent and comparable data, and is using it in **at least one key ground water-related program**.
4. The State monitoring program scope and design reflect the State's ground water priorities and contain QA/QC plans for data acquisition and analysis based on sound scientific protocols.

**ADDITIONAL FACTORS TO BE CONSIDERED**

1. The State is encouraged to computerize its data bases and use geographic information systems (GIS) technology to better integrate data in a manner most useful to comprehensive ground water decision-making.
2. The State is encouraged to use EPA's Minimum Set of Data Elements for Ground Water Quality, which EPA programs are required to use for new ground water information systems or when modernizing old ones.
3. The State is encouraged to use EPA's location policy to assign latitude/longitude positions of Public Water Supplies and sources of ground water contamination in its ground water-related information systems.
4. The State is encouraged to participate with EPA in the development of one or more environmental indicators that will help provide a national picture of ground water protection progress and needs. The State is encouraged to use the indicator(s), once developed, as part of its own efforts to measure progress and needs.
5. The State is encouraged to establish and track environmental indicators to measure progress in protecting its ground water resources.



**STRATEGIC ACTIVITY 6****IMPROVING PUBLIC EDUCATION AND PARTICIPATION IN ALL ASPECTS OF  
GROUND WATER PROTECTION TO ACHIEVE SUPPORT OF THE  
STATE'S PROTECTION GOAL, PRIORITIES, AND PROGRAMS****FULLY-INTEGRATING ADEQUACY CRITERIA**

1. Public participation in the development and implementation of a CSGWPP is equivalent to the objectives defined and employed by EPA in 40 CFR Part 25. (See the description of Public Process in Appendix B.)
2. An active public education program exists that addresses the key issues in decisions on the goal, objectives, priorities, and progress of the State's CSGWPP.
3. The State is implementing:
  - A mechanism to provide information to those responsible for implementing ground water protection measures; and
  - An outreach process for making ground water monitoring data and information available to the public.
4. The State is implementing a public education program to:
  - Enable citizens to better manage common practices and activities that contribute to ground water contamination (e.g., private well construction, septic tanks, etc) that are not now regulated; and
  - Promote methods for protecting the ground water quality supplying individuals' private wells.

**CORE ADEQUACY CRITERIA**

1. Same.
2. Same.
3. Same.
4. The State has developed a public education program to:
  - Same.
  - Same.

**ADDITIONAL FACTORS TO BE CONSIDERED**

1. The State is encouraged to undertake a Farm-A-Syst program in cooperation with USDA's Extension Service, the Soil Conservation Service, and EPA.

**FIGURE 2-1**

Ground water characteristics such as, but not limited to, the following are to be used in setting priorities, determining appropriate remediation methods, and making siting decisions:

- Intrinsic sensitivity, hydrogeologic regimes and flow patterns (recharge/discharge areas), geologic/hydraulic parameters and local hydrogeologic setting;
- Quantity and potential yield;
- Ambient and/or background ground water quality as determined by monitoring;
- Potential for remediation where contamination already exists;
- Current use;
- Reasonably expected future use based on demographics, land use, remoteness, quality, and availability of alternative water supplies;
- Values attributed to ground water resources (See Appendix B);
- The interactions and potential contamination impacts between surface and ground water and the value of ground water quality to the maintenance of ecosystem integrity; and
- Inter-jurisdictional characteristics.

Please see Attachment I for a description of how a State's definitions of current and/or reasonably expected future ground water uses and benefits will be employed by EPA's regulatory programs (e.g., RCRA, CERCLA, FIFRA and Radiation).