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STATE LEGISLATIVE OPTIONS FOR PROTECTING GROUNDWATER QUALITY

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WATER QUALITY CONTROL:
INTEGRATING BENEFICIAL USE AND ENVIRONMENTAL PROTECTION

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Larry Morandi

I. Introduction

A. Summary

State governments have exercised primary responsibility for protecting groundwater quality; federal legislation comparable to many state statutes only recently has been introduced. In the absence of comprehensive congressional legislation, the U.S. Environmental Protection Agency's 1984 National Groundwater Protection Strategy emphasized the predominant role of states in groundwater protection. Its initial component was to support program development and institution building at the state level. This perspective contrasts markedly with the federal agency's lead role in protecting surface water quality following passage of the Federal Water Pollution Control Act in 1972.

The initiative for establishing state groundwater protection programs in the late 1970s and early 1980s often came from executive agencies. Aquifer classification systems and groundwater quality standards developed in New York, Connecticut and New Mexico, for example, were formulated under general water quality enabling statutes enacted primarily to address surface water quality problems.

The more recent groundwater protection programs, however, have resulted from state legislative action. Legislators have responded to specific groundwater problems (e.g., agricultural chemicals and underground storage tanks) that could not be managed adequately under general enabling statutes. More importantly, they have perceived a lack of overall program direction and have sought to provide it.

This outline describes a range of legislative approaches to protecting groundwater quality. It divides them into three broad categories: (1) comprehensive groundwater protection statutes that provide sufficient regulatory authority over pollutant discharges from a number of sources under a single management framework; (2) legislation designed to address specific, significant groundwater contamination sources, or that incorporates specific discharge-source regulation into an overall management framework; and (3) legislation that recognizes the relationship between water use and water quality and manages the former to protect the latter. The outline concludes with a discussion of how consensus-building processes have been used to complement the legislative

process in devising complex groundwater protection policy.

The outline focuses on legislation adopted in the 19 western states. State statutes from other regions of the country are included as appropriate to more clearly illustrate an alternative policy approach.

B. References

The principal references used in preparing this outline are the statutory citations that appear in the text. Bill analyses written by legislative staff are not included because of their inaccessibility outside of the legislature. Other more general references to state groundwater protection programs follow.

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2. Meeks, Gordon, Jr. Arizona Groundwater: Negotiating an Environmental Quality Act. Denver, Colo.: National Conference of State Legislatures, January 1987.
3. Midwestern Legislative Conference. "Agricultural Chemicals and the Midwestern States." Lombard, Ill.: Council of State Governments, March 26, 1987.
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6. National Research Council. Ground Water Quality Protection: State and Local Strategies. Washington, D.C.: National Academy Press, 1986.
7. New York State Legislative Commission on Water Resource Needs of Long Island. Progress Report, 1984. Albany, N.Y., March 31, 1984.
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10. Selected State and Territory Ground-Water Classification Systems. Washington, D.C.: Government Printing Office, May 1985.
11. Survey of State Ground-Water Quality Protection Legislation, 1985. Washington, D.C.: Government Printing Office, April 1987.
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II. Legislative Approaches

A. Comprehensive Groundwater Protection Statutes

Comprehensive groundwater protection statutes generally include provisions for classification of aquifers by use (or a nondegradation policy statewide), establishment of groundwater quality standards to protect those uses, and regulation of pollutant discharges to ensure compliance with the standards.

1. *Wisconsin's* 1983 Act 410 (Wis. Stat. Ann., 160.001 et seq.) exemplifies this comprehensive approach. The statute requires the Department of Natural Resources (DNR) to establish two sets of standards applicable statewide: an enforcement level beyond which a violation would occur; and a preventive action limit designed as an early warning device to notify dischargers that continued waste disposal will result in noncompliance with the enforcement standard. The preventive action limits are percentages of the enforcement levels (10, 20 or 50

percent) and are based on the health impacts of the regulated substance. DNR is the lead agency in the groundwater management process; four other state agencies that issue permits for waste discharges monitor groundwater to track contamination and regulate activities from sources under their control.

2. *Arizona's* 1986 Environmental Quality Act (Ch. 368; Ariz. Rev. Stat. Ann., 36-3501 et seq.) creates a Department of Environmental Quality responsible for administering the state's groundwater protection program. The department must classify all aquifers by use and assign groundwater quality standards to protect such uses. The act further establishes a permit program for waste discharges to groundwater from both point and nonpoint sources.
3. Other states that have enacted comprehensive groundwater quality protection legislation include *Florida* (Ch. 83-310 [1983]; Fla. Stat., 373.026 et seq.); *Illinois* (Pub. Act 85-863 [1987]; Ill. Ann. Stat., 111 1/2-7451 et seq.); *Rhode Island* (Ch. 494 [1985] and Ch. 298 [1986]; Gen. Laws R.I., 46-13.1-1 et seq.); and *Vermont* (Act 53 [1985]; Vt. Stat. Ann., 48-1390 et seq.).
4. A local government variation on the comprehensive regulatory scheme has been enacted in *New York* (Ch.

305 [1986]; Env. Cons. Law, 55-0101 et seq.). The statute authorizes the Department of Environmental Conservation to establish special groundwater protection areas within sole source aquifers to be managed by designated planning agencies. A designated agency must devise a groundwater protection plan based upon the capacity of the land area to sustain development activities without degrading the aquifer. The plan must contain local land use regulations and identify areas suitable for public acquisition.

5. *Washington* has adopted a similar critical area's protection approach (Ch. 453 [1985]; Rev. Code Wash., 90.44.400 et seq.).

B. Specific Groundwater Protection Legislation

The two most prominent areas of specific groundwater legislative activity in recent years has been the regulation of agricultural chemicals and underground storage tanks. In a survey of 1985 state legislation conducted for the U.S. Environmental Protection Agency, the National Conference of State Legislatures found that 14 of the 24 states enacting groundwater legislation that year passed agricultural chemical bills; 11 adopted underground storage tank laws (the two largest pluralities). These categories correspond to two of the groundwater areas receiving the greatest congressional

attention: the 1984 amendments to the Resource Conservation and Recovery Act (RCRA); and the pending reauthorization of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Significant western state legislation in each category is described below.

1. Agricultural Chemicals

California's 1985 Pesticide Contamination Prevention Act (Ch. 1298; West's Ann. Cal. Food & Agric. Code, 13141 et seq.) sets up a five-part program for managing agricultural chemical use to protect groundwater quality. It requires a pesticide registrant to submit information on the substance's environmental fate to the Department of Food and Agriculture. The department then must assign numeric values for specified pesticide characteristics that presumably determine its ability to enter an aquifer, and publish a list of those substances with the potential to pollute groundwater. Based upon statewide monitoring efforts, the department may cancel the registration (or prescribe mitigation measures) for any listed pesticide found in groundwater.

Arizona's 1986 Environmental Quality Act contains a pesticides section (Ariz. Rev. Stat. Ann., 49-301 et seq.) modeled after the California law.

Unlike California's legislation, Iowa's 1987 Groundwater Protection Act (Ch. 225; Iowa Code, 455E.1 et seq.) emphasizes education, research and demonstration projects to lessen farmers' dependence on agricultural chemicals in crop production.

An agricultural chemical program of particular interest to irrigation states concerns chemigation, the mixing of chemicals with water in groundwater irrigation systems. Four western states have enacted chemigation statutes. Colorado's (Ch. 260 [1987]; Colo. Rev. Stat., 35-11-101 et seq.) is representative of this legislative approach. It requires a permit from the Department of Agriculture for chemigation systems and specifies the following equipment on all systems: a backflow prevention check valve and a vacuum relief valve; inspection port; automatic low-pressure drain; and a simultaneous interlock device. Permitted chemigation systems must be inspected every two years; a permit may be revoked if groundwater contamination is discovered.

Kansas (Ch. 5 [1985]; Kans. Stat. Ann., 2-3301 et seq.); Nebraska (LB 284 [1986]; Rev. Stat. Neb., 46-1101 et seq.); and North Dakota (Ch. 93 [1987]; N.D. Cent. Code, 4-35.1-01 et seq.) have comparable programs.

2. Underground Storage Tanks

Seven western states have enacted legislation setting up new programs to regulate underground storage tanks since passage of the 1984 congressional amendments to RCRA. The programs generally require notification procedures, leak detection systems, record maintenance, release reporting, corrective action, tank closure, financial responsibility, and new tank performance standards.

Oregon's 1985 statute (Ch. 737; Ore. Rev. Stat., 468.901 et seq.) illustrates this legislative approach. It empowers the Environmental Quality Commission to issue regulations for leak detection standards, reporting requirements, corrective action measures, and financial responsibility. The legislation specifically mandates that the commission's regulations be sufficiently stringent to obtain primacy from EPA for administering the program.

Other western state citations for underground storage tank programs enacted since 1985 are *Arizona* (Ch. 230 [1986]; Ariz. Rev. Stat. Ann., 36-3301 et seq.); *Hawaii* (Act 197 [1986]; Haw. Rev. Stat., 342-61 et seq.); *Montana* (Ch. 633 [1985]; Mont. Code Ann., 75-10-403 et seq.); *Nebraska* (LB 217 [1986];

Rev. Stat. Neb., 81-15, 117 et seq); *North Dakota* (Ch. 306 [1987]; N.D. Cent. Code, 23-20.3-01 et seq.); and *South Dakota* (Ch. 284 [1985]; S.D. Codified Laws Ann., 34A-2-98 et seq.).

C. Water Use/Water Quality Relationships

The arid western states are especially susceptible to groundwater pollution associated with irrigation practices. Excessive irrigation can dissolve agricultural chemicals and leach them into groundwater. Controlling groundwater pollution becomes a function of managing water use in such instances.

1. *Nebraska's* 1986 legislation (LB 894; Rev. Stat. Neb., 46-656 et seq.) attempts to manage an irrigation-based nitrate problem in the state with the largest growth in groundwater pumping. The bill empowers the Department of Environmental Control to designate special groundwater protection areas where nonpoint pollution sources are the principal problem. Once designated, the local natural resources district with jurisdiction must prepare a groundwater management plan to curtail pollution. The plan may stipulate changes in irrigation practices, including irrigation scheduling and more efficient timing of agricultural chemical applications. The department must approve each local plan; if a plan is not prepared or is

rejected, the department can enforce its own regulations.

2. Other western state statutes (e.g., *Montana*, Ch. 189 [1985]; Mont. Code Ann., 85-2-506) provide for more general state authority to designate critical groundwater areas and manage water use.

III. Consensus Building and the Legislative Process

The two most comprehensive legislative approaches to protecting groundwater quality described in this outline-- Wisconsin and Arizona--required the employment of decisionmaking processes outside of the normal legislative process. The issues were too complex and the ability of affected interest groups to preclude a solution too strong to rely on an adversarial process. Former Wisconsin State Representative Mary Lou Munts, who chaired that state's consensus-building process, has noted that "Much of our thinking about legislative leadership is about how to *get and keep power, not how to share it.*"

- A. The criteria necessary for reaching consensus in each state's approach included:
 1. agreement on overall objectives with the specific means of implementing the agreement being subject to negotiation;
 2. the selection of negotiators who were accountable to their interest groups so that their positions carried weight;

3. vesting each interest group with a stake in the outcome in order to create a second more important constituency (the group); and
4. expanding the scope of the agreement to provide a win-win situation for each party.

B. The existence of a "hammer" in Arizona (an initiative ballot measure that was considered to be more environmentally stringent than the negotiated agreement) and the realization by agricultural interests in Wisconsin that their lobbying influence had waned were important outside factors in keeping the negotiators at the table. No votes were taken during the consensus-building processes until a bill had to be recommended. Each chair--Representative Muntz and Arizona State Representative Larry Hawke--were respected facilitators who had clout in the legislature. Once negotiated by the affected parties (instead of being lobbied by the affected parties), the legislative process was able to function smoothly.

