

Aquifer Pressure Relief and Existing Users:  
A Review of State Programs

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ALABAMA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

III. **Summary**

Artesian Aquifer Pressure-Relief Framework: Alabama does not manage decreasing, artesian aquifer pressure.

Decreasing Aquifer Levels: Alabama has no framework for addressing decreasing groundwater levels. Although there are some drawdown problems, well permits are required for construction. Some municipalities may restrict certain types of drilling so as to prevent interference with the public water supply. These restrictions generally limit the amount of groundwater withdrawal.

Regulation Organization: N/A

Mitigation Techniques: N/A

Regulations: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

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ALASKA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Water Management and Dam Safety, 11 ALASKA STAT. § 93 (year).

Regulations:

- Water Use Act, Title 46, Chapter 15.

Case Law: N/A

Related Information: N/A

III. **Summary**

Artesian Aquifer Pressure-Relief Framework: Alaska has no legal framework specifically addressing decreasing aquifer pressure.

Decreasing Aquifer Levels: The existing legal framework regarding groundwater use requires the permitting of wells withdrawing 500 gpd or greater. This process is conducted on a case-by-case basis.

Regulation Organization: Water management is performed on a state level by the Division of Water of the State of Alaska, Department of Natural Resources. Although the statutory framework is in place to form management districts, the Division only forms critical management areas as needed. To date only one critical management area has been established.

Regulations: Alaska manages water based on the interrelationship between groundwater and surface water. Applicants seeking water-use rights can receive conditional permits. Conditions may vary depending upon the situation.

Mitigation Techniques: The Division has historically used a variety of mitigation techniques including time of day withdrawal, controlled rate of diversion, and independent water level monitoring.

Water rights are based on prior appropriation. When well interference causes water pressure or levels to decrease, the Agency first determines who has rights and what can be done address the problem. The Agency addressed these problems in Anchorage, Fairbanks, Juneau, and Eagle River by reducing withdrawal rates from the aquifer and supplementing needs by using an alternative water source. Once the water table rebounded, the Agency continued to monitor water levels and

permitted new water right applications subject to existing conditions.

Regulation Problems: To date, the Agency has encountered no problems in implementing mitigation programs. The Agency is authorized to affect a water right holder's conditions, so long as the right holder is not adversely affected (i.e., can use that cause an existing well owner to have to drill at 100 ft. instead of 50 ft.).

Judicial or Administrative Decisions: No groundwater issues have been litigated in Alaska. Most disputes have involved surface water issues. Almost all disputes are settled out of court.

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## ARIZONA

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Arizona Groundwater Code, Title 45, Chapter 2.
- Surface Water Code Amendments for Title 45, Chapter 1, Article 1

#### Regulations:

- Surface and Ground Water Regulations, Title 12, Chapter 15.

#### Case Law:

Farmers Inv. Co. v. Bettwy, 558 P.2d 14 (1976)

#### Related Information:

- Arizona Environmental Law Manual*, Volume One, Nicholas J. Wallwork
- Arizona's Groundwater Code: Strength in Compromise*, Kathleen Ferris
- House Bill 2276
- Fact Sheet for House Bill 2276, Arizona State Senate
- Real Property Journal, Vol. 2, No. 1, Winter 1988/

### II. **Summary**

Artesian Aquifer Pressure-Relief Framework: Because most of the aquifers are unconfined, there is no regulation of artesian aquifers.

Decreasing Aquifer Levels: Arizona has comprehensive surface and groundwater regulations.

Regulation Organization: Groundwater regulation is carried out on a state level by Active Management Areas (AMA). The boundaries of AMAs are hydrologically based.

Regulations: State code regulates existing and future groundwater uses within AMAs. Every well user in the state must have a permit, and is allowed to use groundwater for reasonable uses. However, regulation in AMAs is more stringent.

Groundwater pumping in an AMA is only permitted through three legal devices.

(1) Water rights can be grandfathered for non irrigation purposes at 1975 usage levels.

(2) Service area rights allow private water companies to pump groundwater. Pumping capacity can be expanded with a showing of conservation restrictions.

(3) New service rights. Withdrawal permits for general industry and mining are also available. An applicant must meet all statutory requirements to use a legal mechanism.

Regulation Problems: The primary problem Arizona has encountered with this program is a constantly changing code. Response to newly discovered problems requires continual updating.

Judicial or Administrative Decisions: Litigation over the groundwater management framework has centered on constitutional issues. In the 1980s the regulations were challenged as takings.

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## ARKANSAS

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Arkansas Ground Water Protection and Management Act, Ark. Code Ann. §15-22-901.
- Certificates of Registration, Water Diversion, Exceptions, 15-22-215.
- Withdrawal of underground water, Annual reports, 15-22-302.
- Notice to judge of nearby abandoned or unused well by person with inadequate well. 15-22-402.

#### Regulations:

- Rules for the Utilization of Surface Water, Title III.
- Rules for the Protection and Management of Ground Water, Title IV.

Case Law: No recent litigation. The vast majority of disputes over well interference cases are negotiated out of court.

#### Related Information

- Arkansas Ground Water Fact Sheet
- Arkansas State Water Plan, Eastern Arkansas Basin
- National Water Summary 1988-89-Floods and Droughts:  
ARKANSAS
- National Water Summary-Arkansas

### II. **Summary**

Artesian Aquifer Pressure-Relief Framework: No artesian aquifer regulation.

Decreasing Aquifer Levels: No groundwater use regulation for aquifer management.

Regulation Organization: No centralized statewide groundwater monitoring system exists in Arkansas. However, the Arkansas Soil and Water Conservation Commission develops the Arkansas State Water Plan and allocates water among riparian water owners during periods of shortage. Although not currently regulating groundwater withdrawals, Arkansas is in the process of implementing groundwater management.

Recently, the Soil and Water Conservation Commission completed a study that determined that a 20 percent reduction in groundwater withdrawal would produce a safe yield. The department plans to have critical areas designated later this summer.

Regulations: N/A

Mitigation Techniques: N/A

Regulation Problems: Because of public resistance to statewide water management, the Commission implements classified critical areas to regulate groundwater problems.

This resistance is primarily due to the state's geological differences. In the south-southeast the geology is similar to most of the southern United States, and is the location of most of the Arkansas' aquifer drawdown. The north-northwest, however, is mountainous, relying primarily on surface water and lakes. Industrial and recreational users of this surface water are opposed to management of this resource.

Judicial or Administrative Decisions: Groundwater-use issues have been litigated in Arkansas. Most disputes have involved surface water issues.

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CALIFORNIA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: 8B 3030???

Case Law:

Related Information: N/A

II. **Summary**

Artesian Aquifer Pressure-Relief Framework: None

Decreasing Aquifer Levels: California does not regulate or monitor groundwater. State agencies historically attempt to influence local and regional governments to solve groundwater problems themselves. In fact, counties have power to adopt groundwater management programs. However, groundwater is regulated in adjudicated areas primarily for quality. For instance, groundwater is regulated in the Salinas basin to address saltwater intrusion problems. Groundwater production is also limited in the St. Gabriel basin, also a superfund site, to prevent contamination from spreading.

Regulation Organization: Management organizations differ generally depending on the reason for their creation. Many organizations are judicially established and are accountable to the courts. Management organizations are autonomously administered either by an organization or by a single person.

Regulations: N/A

Mitigation Techniques: In general, well permits and contractor permits are required. Mitigation techniques used among existing water management areas vary, while none are used outside of such a district.

Regulation Problems: Although no official regulatory program exists, problems often encountered by water management areas is getting non-affected citizens to support changes in water use necessary to aid affected citizens.

Judicial or Administrative Decisions: N/A

California recognizes appropriated rights.

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## COLORADO

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes

- Title 37, Article 82 - Appropriation and Use, November 1, 1994
- Title 37, Article 90 - Colorado Ground Water Management Act, November 1, 1994
- Title 37, Article 91 - Water Well Contractors, November 1, 1994
- Title 37, Article 92 - Water Right Determination and Administration Act of 1969, November 1, 1994

#### Regulations

- The Denver Basin Rules, Department of Natural Resources, Division of Water Resources, 2 CCR 402-6
- Statewide Nontributary Ground Water Rules, Department of Natural Resources, Division of Water Resources, 2 CCR 402-7.
- Denver Basin Artificial Recharge Extraction Rules, State of Colorado Division of Water Resources, Office of the State Engineer, Final Draft, May 8, 1995.

#### Case Law:

#### Related Information:

### II. **Summary**

Artesian Aquifer Pressure-Relief Framework: Colorado law provides no legal relief for injury to use of artesian aquifers. State law provides that reduction in the piezometric head in artesian aquifers does not constitute an injury. This law is only relevant in the Denver Basin Aquifer, some of which contains artesian aquifers. Conflicts arising from loss of artesian pressure are usually resolved through negotiation as causation is very difficult to prove. As of this writing, this statute has not been challenged.

Decreasing Aquifer Levels: Colorado regulates all groundwater either through its State Engineers Office or water management districts.

Regulation Organization: Water management districts are only located in the eastern part of the state where non-tributary aquifers exist. The areas managed by districts are referred to as "designated areas." The State Engineer's Office regulates the remaining "non-designated" areas.

The State Engineer has the authority to approve permits

for small capacity wells without regard to the Colorado Ground Water Act. However, groundwater management districts

may impose additional restrictions through further regulation.

Regulations: Rules regarding adverse impacts and compensable injuries differ between designated and nondesignated areas and between tributary and nontributary aquifers.

While all wells must be permitted, household and domestic wells are exempt from the "administration" process, or withdrawal regulation.

Mitigation Techniques: In general, Colorado does not guarantee water levels. Negotiation is the primary mitigation tool for addressing adverse affects identified during the permitting process. Permittees are required to obtain injury waivers from existing well users located within 600 feet from the proposed well site. To obtain waivers, permittees may negotiate timing and pumping rates.

Judicial or Administrative Decisions: Litigation is initiated where legal remedies exist. Compensation for adverse affects is available under specific circumstances.

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CONNECTICUT

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Water Diversion Policy Act §22A-365

Regulations:

Case Law:

Related Information:

- Proposal for the Connecticut Clean-up Standard Regulations (1994).

II. **Summary**

Artesian Aquifer Pressure-Relief Framework: None

Decreasing Aquifer Levels: Connecticut only regulates groundwater use through its Water Diversion program.

Regulation Organization:

Mitigation Techniques:

Regulations:

Regulation Problems:

Judicial or Administrative Decisions:

III. **Agency, Contact Person**

DELAWARE

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations

- Regulations Governing the Allocation of Water, 1987.

Case Law:

Related Information:

II. **Summary**

Artesian Aquifer Pressure-Relief Framework: Delaware does not regulate artesian aquifers.

Decreasing Aquifer Levels: Delaware manages water resources on a state-wide basis for the public benefit.

Regulation Organization: All water resources are managed by the Division of Water Resources in the Department of Natural Resources and Environmental Control.

Regulations: Delaware regulates groundwater use through permitting. Water allocation permits are required for any activity that causes withdrawal of groundwater. Water is allocated for municipalities, farmers, and industry. Use allocation to farmers is based on irrigated acreage with allocation to municipalities is based on the number of households served. Additionally, all wells pumping 50,000 gpd or more must be registered.

Mitigation Techniques: Well requirements range from specific isolation distance requirements to water conservation efforts.

Regulation Problems:

Judicial or Administrative Decisions:

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DELAWARE RIVER BASIN COMMISSION

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Delaware River Basin Compact of 1961, Pub. L. No. 87-328, 75 Stat. 688.
- Delaware River Basin Water Code (March 1994).

Regulations:

- Rules of Practice and Procedure, Administrative Manual (February 1994).
- Ground Water Protected Area Regulations, Southeastern Pennsylvania (October 1988).

Case Law:

Related Information:

- Annual Report 1994.

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No artesian regulation.

Decreasing Aquifer Levels: The Delaware River Basin Commission (DRBC) regulates groundwater withdrawals through its permitting process.

Regulation Organization:

Regulations: All wells pumping 100,000 gpd or greater during any 30 day period must obtain a permit. However, separate regulations applicable to a protected areas in the southeast portion of Pennsylvania require permitting for 10,000 gpd or greater. All groundwater regulation is accomplished through limitations included in pumping permits. To determine appropriate mitigation tools for inclusion in permits, the DRBS considers impact a new well may cause, yields during droughts, and impacts on perennial streams, to name a few.

Mitigation Techniques: Peak allocation limits and monthly withdrawal rates are included in permits. However, the Commission maintains authority to alter restrictions if problems occur subsequent to permit issuance.

Well users are liable for any adverse effects their withdrawal may cause. Such a user is required to make the injured use whole, either by drilling a new well or paying for municipal hook-up.

Regulation Problems: Primary reported problem is the large number of small wells in the basin.

Judicial or Administrative Decisions: The Compact has reportedly been unsuccessfully contested.

**III. Agency, Contact Person**

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GEORGIA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Groundwater Use Act of 1972, Title 12.
- Amendment, Title 12 (1995)

Regulations:

- Groundwater Use Rules, Chapter 391-3-2.

Case Law:

Related Information:

II. **Summary**

Artesian Aquifer Pressure-Relief Framework: No regulation.

Decreasing Aquifer Levels: Georgia is in the process of implementing groundwater use regulations.

Regulation Organization: Groundwater is managed on a state-wide bases.

Regulations: All wells withdrawing 100,000 gpd require a permit. These water users are required to show reasonable use and no adverse affects to other well users. Generally, groundwater use restrictions exist only in the southeast portion of the state. In this area groundwater is managed with production rates and timing restrictions based on reasonable use. Water preference are riparian based with reasonable use requirements.

Mitigation Techniques: All non-agricultural users of groundwater of more than 100,000 gpd must obtain a permit. Permitees must show expected adverse effects on other users and upon the aquifer from which the water is to be drawn, among other things. All permits stipulate withdrawal rates, conditions under which the permit is valid, and the expiration date. Semi-annual reports are generally required of applicants.

Regulation Problems: Since extensive water management is currently being implemented, the state has not encountered any problems in addressing groundwater consumption. However, they do expect some public resistance once consumption is limited.

Judicial or Administrative Decisions: Historically there has been more than enough water in Georgia. Officials have only

recently noticed problems with water supplies. No known litigation.

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## HAWAII

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- State Water Code, Chapter 174C

#### Regulations:

- Hawaiian Water Rights Rules, Chapter 13-172
- Rules of Practice and Procedure for the Commission on Water Resource Management, Chapter 13-167.
- Protection of Instream Uses of Water, Chapter 13-169.
- Amendments to Chapter 13-169.
- Hawaii Water Plan, Chapter 13-170.
- Designation and Regulation of Water Management Areas, Chapter 13-171.
- Amendment to Chapter 13-171.

#### Case Law:

#### Related Information:

- Standard Water Use Permit Conditions

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No artesian aquifer regulation.

Decreasing Aquifer Levels: The Commission on Water Resource Management oversees groundwater regulation for the state. However, state-wide management is administered by groundwater management districts.

Regulation Organization: The state regulates groundwater use based on groundwater management areas. Once the Commission designates and groundwater management area, all well users in that area must get a permit. The only exception is individual, domestic users. Water use in Hawaii is based on the public trust doctrine. Therefore, the Commission is the steward of the state's groundwater and must manage the rights for the good of the people.

Regulations: All permits have standard conditions. According to §13-171-13, a permittee must show that the proposed water use will not adversely impact the aquifer, is reasonable, will not adversely affect another user, and is consistent with public use, among other things.

Mitigation Techniques: The Commission has the authority to alter permit conditions to respond to changing conditions.

Regulation Problems: The Commission has encountered difficulties implementing the code because of inconsistencies and undefined terms. In response, the Commission has issued declaratory rulings. Additionally, the Commission has had to determine how to handle existing user rights when a water management area is declared. To date, the existing users go through the permitting process first.

Hawaii has also encountered jurisdiction problems. Agency overlap has occurred with the Department of Health, which is also charged with protecting water quality. Likewise, inconsistencies between agencies has been troublesome.

Judicial or Administrative Decisions: None.

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## IDAHO

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Idaho Code 42-603

#### Regulations:

- IDAPA 37, Title 03, Chapter 11, Rules for Conjunctive Management of Surface and Ground Water Resources.

#### Case Law:

- Musser v. the Idaho Department of Water Resources, 871 P.2d 809 (appeal)

#### Related Information:

- Conjunctive Management-Idaho Water Policy in the Wake of "Musser"*, Big River News, Northwest Water Law and Policy Project, Summer 1995, Volume 1, Number 4
- News Release, Magic Valley Canal Companies File Legal Challenge Against Conjunctive Management Rules, January 6, 1995.

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: Idaho does not mitigate pressure loss in artesian aquifers. Instead, aquifer development is halted when pressure loss occurs. New users must then access municipal sources.

Decreasing Aquifer Levels: Historically, Idaho operated under the presumption that water was plentiful. However, in response to litigation in 1992 (Musser v. the Idaho Department of Water Resources, 871 P.2d 809, 1992) the Idaho Legislature passed Code 42-603 requiring conjunctive management of groundwater and surface water.

Regulation Organization: Generally, water is managed by the state through the Department of Water Resources, however, water management districts are formed in problem areas. Two types of management districts are used depending the severity of the problem: groundwater management districts and critical groundwater management districts. Both provide increased and close water regulation.

Regulations: To increase water-use awareness and aid water right allocation enforcement, in 1994 the Idaho legislature passed new groundwater reporting and measurement requirements.

The purpose of this legislation is to compare the amount of water used versus actual water allocation rights.

Complimenting the 1994 legislation, the Legislature

granted authority to the Department of Water Resources (verify) in 1995 to form groundwater measurement districts.

Based on a concept of local management, these districts are only formed by community initiative through application to the Department of Water Resources. These groups will manage groundwater use in their geographic district using techniques such as fee assessment for hydrologic monitoring, measurement-device installation, and withdrawal limits. This program is in the early stages of implementation having received its first groundwater management district application.

To address problem arising from conflicting conservation and economic-development statutes, the reasonable pumping depth concept was implemented. While Idaho law provided appropriation rights, it is also prohibited from obstructing economic development of groundwater resources. Thus, the Department of Water Resources, or local groundwater management districts, examines on a case-by-case basis, occurrences of normal aquifer depletion which cause a shallow well owner to file a priority call. The interests of the junior and senior right holders are weighed recognizing that to a "reasonable pumping depth," a new user should have access the resource and a senior right holder should drill a deeper well. This advances the "first in time, first in right" doctrine without blocking full economic development. However, what is reasonable has yet to be determined.

Mitigation Techniques: The Conjunctive Management Rules provide procedures for assessing and determining remedies when a priority call is filed. These rules provide four mitigation tools: cash payment, replacement, recharge, and curtailment. Guidelines for cash payment for damages are not yet developed. Water replacement is generally supplied by surface water or municipal sources. Water banks are used for recharge purposes. This program allows people with too much water to sell, or deposit in a "bank," their excess water for transportation or reinjection into overused aquifers. When necessary, curtailment measures are implemented to gradually cease water use. Where aquifer depletion is critical, the state may require applicants to prove that they will not adversely impact existing users. Since applicants will be unable to meet this requirement, further aquifer development is effectively blocked.

Regulation Problems: Problems have occurred with Idaho's recent groundwater regulation. Ongoing litigation is challenging the legality of conjunctive management under the premise that state law requires strict appropriation management. A summary of the this litigation is included in the state materials in the form of a news release.

Judicial or Administrative Decisions: Generally litigation does not occur because people in problem areas tend to know of

groundwater problems and voluntarily compensate by using alternative water sources.

**III. Agency, Contact Person**

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ILLINOIS

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Illinois Groundwater Protection Act, P.A. 85-863
- Water Use Act of 1983, 525 ILCS 45
- Water Use Authorities Act, 70 ILCS 3715

Regulations:

- Containment Rules for Agrichemical Facilities, 1990.

Case Law: None.

Related Information: N/A

II. **Summary**

Artesian Aquifer Pressure-Relief Framework: Illinois does not regulate artesian aquifer pressure.

Decreasing Aquifer Levels: Illinois does not have a comprehensive regulation program. Drawdown is not regulated by the state.

Regulation Organization: Although the state does not regulate groundwater use, it does have 12 water authorities formed by referendum. These water authorities are located in the central part of the state which has a deep sand aquifer that is increasingly being used by growing urban areas. The water authorities are generally formed to safeguard the aquifer from big cities. The boundaries are political, are often gerrymandered, and have little if any correlation to water use or supply.

Additionally, the Illinois Department of Transportation handles water quantity issues. The state Environmental Protection Agency regulates community water supply, while the Illinois Department of Public Health regulates water quality issues for non-community water supplies.

Regulations: The only groundwater regulation is the Groundwater Protection Act, which requires notification/registration of wells with a capacity of 100,000 gpd or greater.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

**III. Agency, Contact Person**

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INDIANA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Water Well Drilling Contractors, Indiana Code 25-39-1.5.

Regulations:

- Emergency Water Regulations
- Final Rules Concerning the Regulation of Water Well Drilling, Title 310.
- Title 310, Department of Natural Resources, Digest.

Case Law:

Related Information:

II. **Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: No, only in emergencies

Regulation Organization: The Department of Natural Resources, Division of Water, regulates water issues on a state-wide basis.

Regulations: Only high capacity well owners are required to obtain permits (70 gpm or greater). These users are liable if they cause water levels to decline such that domestic well users are adversely affected. Generally, they must supply water to the adversely affected well owner.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

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IOWA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations:

- Environmental Protection Regulations, Withdrawal, Diversion and Storage of Water, Chapter 50-54.

Case Law:

Related Information:

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: Iowa does not have artesian aquifers, only a sloping aquifer in which some pressure may exist. Iowa does, however, regulate springs. Such a water user must apply for the same permit that a regular water user must obtain. These springs are classified as surface water. This is a gray area as springs occur infrequently in Iowa.

Decreasing Aquifer Levels: Iowa regulates groundwater consumption through its permitting requirements.

Regulation Organization: Groundwater is managed on a state-wide basis through the Department of Natural Resources.

Regulations: Water is managed for beneficial uses that cannot be destructive of the resources. Prior rights are considered in determining water rights.

All wells pumping 25,000 gpd or greater must be permitted. Although state codes guarantee rights to water, access to water and water levels are not guaranteed. However, restrictions are included in permits so as to alleviate drawdown problems.

The permitting process imposes upon the permittee the burden of showing that no adverse impacts to existing users will occur from the proposed use of the aquifer. Otherwise, the permittee is required to compensate other users for adverse impacts. However, the state does not require 100 percent compensation and requires no compensation for minor impacts. Once the permit is granted, a challenger claiming interference has the burden to show interference, and may be liable for pumping tests and other costs if it is shown that there is not interference.

A new user has several forms of compensation from which to choose if his proposed use adversely affects an existing

user. These include drilling the existing user a deeper well, providing alternative water sources, drilling a new well, or providing the senior user with water from the new user's well.

Municipalities have the option of providing free hook-up to the water-system for existing users if it is the new user.

Mitigation Techniques: The most common mitigation tool incorporated into permits is pumping capacity restrictions.

Where one permittee has several wells drawing from the same aquifer, the permit restricts the total amount of withdraw from the aquifer for the wells in aggregate. Furthermore, all wells have maximum annual withdrawal allowances. Other restrictions include source constraints, pumping rates, and location of withdrawal limitations.

Regulation Problems: N/A

Judicial or Administrative Decisions: Very rare to have litigation. Almost all problems are settled during the permitting process.

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## KANSAS

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Kansas Water Appropriation Act, July 1, 1991, K.S.A. 82a-705
- Groundwater Management District Act

#### Regulations:

- Procedures for Obtaining and Maintaining a Water Right in Accordance with the Kansas Water Appropriation Act, 1995.
- Rules and Regulations, Kansas Water Appropriation Act,

#### Case Law:

#### Related Information:

- Kansas Handbook of Water Rights

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: Kansas manages groundwater use on a state level through the Division of Water Resources. The Water Appropriation Act authorizes the state to regulate water use.

Regulation Organization: Kansas water rights are based on prior appropriation. However, priority rights do not establish priority of use. The western part of the state is closed to new appropriations because of declining water. However, rights can be transferred or changed.

While Kansas regulates water on a state-wide basis, there are regional-specific regulations. Additionally, locals can recommend to the Division that water be managed specifically for their area and that a groundwater management district should be established. Currently five such districts exist.

Regulations: All wells, with the exception of most domestic wells, must be permitted. While proposed wells must meet a safe yield analysis, specific regulations may vary regionally.

Applicants must plot any well within a half-mile radius of the proposed well. Additionally, the Division uses a two mile radius from the proposed well to determine use and recharge.

Groundwater consumption rates are generally included in approved permits but are somewhat flexible for temporary need increases. Pumping rates for irrigation are restricted to the acreage originally permitted.

Mitigation Techniques: Techniques may vary with regional use. However, permits must meet a safe yield analysis. Likewise, the Division reviews impacts within a 2-mile radius of the proposed cite to determine use and recharge. Kansas may implement consumption restrictions through permits, however, they are somewhat flexible when water needs temporarily increase. Additionally, restrictions exist specifically for irrigation which limits pumping to the original amount of acreage approved for irrigation. Thus, groundwater use cannot increase as irrigated acreage increases.

Regulation Problems: None.

Judicial or Administrative Decisions: None addressing conflicts over water allocation.

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## KENTUCKY

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

#### Regulations:

- 401 KAR Chapter 4 (currently under revision)
- Application for Permit, KRS 151.150
- Record and Report of Water Withdrawn under permit, KRS 151.160

#### Case Law:

#### Related Information:

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: Artesian aquifers do occur in Kentucky, however, existing regulations only address capping requirements.

Decreasing Aquifer Levels: Kentucky does regulate groundwater withdrawal.

Regulation Organization: Kentucky regulates groundwater withdrawal on a state-wide basis through its permitting program.

Kentucky does not have an absolute riparian system, however, riparian water rights are reflected in the law. The grants water rights based on a useful purpose requirement, water availability, and impacts to other water rights.

Regulations: Under Kentucky's permitting program, all wells with a capacity of 10,000 gpd (whether the well is pumping groundwater, surface water, or both), must file for a permit.

The permit process requires notice of intended uses and can be denied for impacts to other users. When adverse impacts are suspected of a proposed well, the Division of Water works, on a case-by-case basis, to develop an acceptable pumping scenario.

Mitigation Techniques: Depending on circumstances, the Division of Water often limits the rate of withdrawal, and sometimes institutes timing requirements. All permits include pumping limits that are determined on geologic information and production history of other local wells. Additionally, groundwater withdrawal permits include subsequent aquifer protection in order to address the uncertainty of long-term impacts. These requirements include immediate cessation of

pumping and or requirements for supplying a user with a new source of water.

Regulation Problems: No particular problems with state regulations. However, the problems Kentucky faces in managing groundwater allocation is geology.

Groundwater consumption problems in Kentucky are generally related to mining and/or geology. The Division of Water has required that miners adversely affecting other water right by dewatering an area supply other right holders with water. Sometimes the miner provide the right holders with the very groundwater it is pumping. Furthermore, the variety of geology in Kentucky limits the areas where a large volume of water can be accessed.

Judicial or Administrative Decisions: None regarding groundwater allocation or use.

### III. Agency, Contact Person

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LOUISIANA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Utilization of Ground Water Resources, Title 38, Chapter 13-A.
- Water Conservation, Greater Baton Rouge Water Conservation District, Title 38, Chapter 13.

Regulations:

Case Law:

Related Information:

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: No. Anyone can pump groundwater as long as it is for a beneficial purpose. Reportedly, groundwater levels are rising in most areas.

Regulation Organization: Groundwater is managed on a state-wide basis. There is, however, a groundwater management commission comprised of five parishes near Baton Rouge. This commission only manages wells that pump 50,000 gpd or more. Although the state has had allocation permitting authority for over 15 years, the power has never been exercised.

Regulations: Well construction is permitted and wells must be registered. This information is used to maintain a groundwater data base. Every five years the state conducts a major water use study that tracks quality and amount used by parish.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: Only problem involved several golf course developers who installed irrigation wells. These wells adversely affected other well users. However, the problem was settled through negotiation.

**III. Agency, Contact Person**

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MAINE

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Site Location of Development, 38 M.R.S.A. §§ 481-490

Regulations:

- Regulations, Site Location of Development, Chapters 371-378.

Case Law:

Related Information:

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: Maine only regulates groundwater for drinking water purposes. Public water supply regulation requires a pump test although possible adverse impacts are not considered. State law does provide a cause of action for property owners to sue to protect groundwater rights but does not regulate private wells.

The Site Location Development act regulates and protects groundwater as a result of development. This Act requires the consideration of groundwater impacts resulting from development.

Regulation Organization: N/A

Regulations: N/A

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: None

III. **Agency, Contact Person**

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MARYLAND

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Appropriation or Use of Waters, Title 8.
- Water Resources Administration, Title 8, Subtitle 5.

Regulations:

Case Law:

Related Information:

- Application for a Permit to Appropriate and Use Waters of the State.
- Application for Renewal of a Permit to Appropriate and Use Waters of the State.
- Aquifer Test Procedure
- Impact Analysis Summary
- Water Appropriation and Use Permit

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None

Decreasing Aquifer Levels: Maryland manages water allocation on a state-wide basis. Allocation is based on "water management levels." These levels are determined by looking at historical water levels to find the most reliable "pre-pumping" level, or the "pre-extensive use" level. This level becomes the static level. Available drawdown is then determined based on the static level. Eighty percent of the amount of water above the static level becomes the water management level. All permits are allocated based on their impact on the water management level.

Regulation Organization: All water users are required to have an allocation permit. Exceptions to this rule include (1) individual domestic users, (2) farmers who use less than an annual average of 10,000 gpd (for these farmers water allocation permits are voluntary), and (3) for extinguishing fires.

Regulations: The expected use and modelling of proposed mining are the primary things considered during the permitting process. Mitigation tools are incorporated into permits.

Mitigation Techniques: All permits are considered and problems addressed on a case-by-case basis. Thus, all mitigation techniques are used.

Mitigation implemented subsequent to the permitting process is generally determined by the nature of the problem.

The state does not protect water levels. So when a person exercises their right to use water in a reasonable way while causing a neighboring well to dry up, the question arises as to whether the original well was initially adequate. In such cases, the Agency conducts investigations to determine to whom the problem belongs. The Agency generally works to help resolve the problems.

The Agency has dealt with both expected and unexpected unreasonable impacts. In one instance where the unreasonable impact was expected, a trust was established to deepen or replace affected wells (the government established the trust in response to impacts resulting from a new prison facility).

However, when an unexpected unreasonable impact occurs, the user causing the problem must mitigate. In these instances the Agency helps to develop the most appropriate mitigation tool. Options the Agency will consider include:

(1) drilling another well further away from the problem to move the cone of depression,

(2) if the permittee has more than one well, shift pumping between them so as to lower pumping levels near the problem area while shifting rates to another well.

Well owners must bear the cost of drilling a new well where increased water withdrawal has rendered a well inadequate.

Regulation Problems: None.

Judicial or Administrative Decisions: No litigation regarding water allocation.

### III. **Agency, Contact Person**

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MASSACHUSETTS

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations:

Case Law:

Related Information:

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: Massachusetts regulates groundwater use through its permitting process.

Regulation Organization: Groundwater is managed through Massachusetts Department of Environmental Protection, Division of Water, on a state-wide basis by watershed.

Regulations: All wells withdrawing 100,000 gpd or greater must be permitted. Permits are based on actual use rather than capacity.

Mitigation Techniques: Restrictions are incorporated into the permits. The type of mitigation tool used depends on the situation.

In addition to protecting aquifer levels, Massachusetts practices environmental well management. Thus, the Division may institute "time of year" withdrawal rates and allocate groundwater to control stream volume. The Division also monitors wetlands, ponds, and rare species for affects of withdrawals.

The Division has enforcement power to modify withdrawal rates to mitigate problems occurring after the permit process is complete.

In cases of well interference, the Division may impose water sharing, timing, or cycling of withdrawal conditions.

When a larger well user causes a smaller well user to go dry, the larger well owner is required to replace water to the smaller user by whatever means is appropriate. These mitigation tools are designed to be "people" related.

Regulation Problems: Problems occurring during the program's implementation involved identification of proper pond and stream levels. The Division also faced challenges addressing previously occurring environmental impacts.

Additionally, the Division has encountered problems identifying user groups, or those who use 100,000 gpd or more. Since the law regulates by volume it was difficult to determine which users required permits.

Judicial or Administrative Decisions: Although permittees can appeal their restrictions, there has been no litigation.

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MICHIGAN

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: Michigan does not regulate groundwater consumption. However, users must comply with a reporting requirement. The recently implemented Water Use Reporting program is part of the Great Lakes initiative to collect data and track groundwater use.

Regulation Organization: Existing regulation is conducted on a state-wide basis by watershed basin. While the state does not permit groundwater use, the new water reporting program may lead to capacity permitting.

Regulations: N/A

Mitigation Techniques: N/A

Regulation Problems: Existing problems regarding groundwater use are associate with the Water Use Reporting program. Public awareness and communication is inadequate to overcome public fears of water taxation and use restrictions. Currently the agency is not empowered to implement either restriction.

Judicial or Administrative Decisions: Water use conflicts are settled in court and generally only occur during droughts. Litigation is difficult though because the litigant is required to show how much water they historically used. The new Water Use Reporting program will track this information. The goal, and outcome of litigation, is to either get water back or decrease withdrawal by the other party.

**III. Agency, Contact Person**

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## MINNESOTA

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Water Diversion and Appropriation, Chapter 103G

#### Regulations:

- Minnesota Rules, Public Water Resources, 6115.0600

#### Case Law:

#### Related Information:

- Minnesota's Water Appropriation Program

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: Groundwater is allocated through the permits which are required for wells pumping 10,000 gpd or 1 million gpy or more. Although Minnesota is perceived to have plenty of water, the state's Water Appropriation Program allocates water to protect and preserve the resource.

Regulation Organization: Water allocation is conducted on a decentralized, state-wide basis through the Minnesota Department of Natural Resources. Water appropriation is based on riparian rights modified by the concept of reasonable use.

Furthermore, Minnesota has established a priority system for handling conflicting water rights. Because both surface and groundwater use must be permitted, the state encourages conjunctive management.

Regulations: Applications for groundwater use are reviewed to determine the effects of proposed use on both the environment and senior users. As to groundwater, safe yields are established when groundwater quality is degraded in an aquifer due to excess withdrawals. Likewise, yields are established when longterm average withdrawals exceed recharge rates.

Mitigation Techniques: Pumping rates and volume limits are the general mitigation tools incorporated into permits to regulate groundwater use. All permits include a provision requiring the holder to supply like kind and quality water to another user if their use adversely impacts another. The permits also allow the agency to modify, restrict, or suspend groundwater use if other problems or conditions arise subsequent to permit issuance.

Regulation Problems: No specific regulation problems have occurred. However, have encountered issues regarding groundwater use and wetlands protection.

Judicial or Administrative Decisions: Some permits have been contested through the permit hearing procedure. However, these disputes are usually negotiated or addressed with water management plans.

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## MISSISSIPPI

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Permit requirement; notice of pre-existing rights or beneficial usage, 51-3-5.
- Exemptions from permit requirement; certain uses permissible, 51-3-7 (Amended 1995).
- Considerations of applications; criteria Regulations, 51-4-13.

#### Case Law:

#### Related Information:

### II. **Legal Framework Summary**

#### Artesian Aquifer Pressure-Relief Framework:

Decreasing Aquifer Levels: The Department of Environmental Quality, Office of Land and Water Resources, regulates groundwater consumption on a beneficial-use basis, although it has not prioritized the use categories. This regulation is conducted on a state-wide basis.

Regulation Organization: Mississippi uses neither the riparian or appropriation rights to determine groundwater-use rights. In 1985 the state abrogated its prior appropriation preference by claiming that the resources belonged to the state, and was therefore responsible for managing them for the good of all users. This legislation gave the state police power to regulate groundwater use.

Regulations: Mississippi regulates groundwater use through permitting. All wells with a casing size of six inches in diameter or greater must be permitted. Permits are granted where no immediate impacts to the aquifer is expected.

Mitigation Techniques: To determine whether a new well will adversely impact another user, the agency looks at the type of aquifer (confined/unconfined), the rate of decline (look at 15 to 20 year conditions), and other groundwater modelling factors. If any adverse impacts are apparent, the permit is denied. Otherwise, the use permit is granted with annual and daily maximum withdrawal limits. These permits also include a condition that withdrawal limits may be reduced in the future.

Regulation Problems: Since the program's inception in 1985,

the agency has encountered few problems with its implementation. The primary problem was public resistance.

Judicial or Administrative Decisions: Public resistance to the program's implementation resulted in some litigation which had no effect on the law itself.

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MISSOURI

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: None.

Regulation Organization: The state of Missouri only requires major water users to register their wells and report water consumption. The Division of Geology and Land Survey has no enforcement authority, thus, many users do not even report their wells.

Regulations: N/A

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

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MONTANA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Controlled ground water areas, 85-2-506.
- Limiting withdrawals, modification of order, 85-2-507.
- Controlled ground water areas, permits to appropriate, 85-2-508.

Regulations:

Case Law:

Related Information:

- Montana Water Plan, November 2, 1992.
- Montana Ground Water Plan, Draft, November 14, 1994.
- David Amman, Barbara Cosens, and Joan Specking, Negotiation of the Montana-National Park Service Compact, Rivers, Volume 5, Number 1, pp. 35-45.

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: New water users must apply for a permit with which the state manages groundwater use.

Regulation Organization:

Regulations: New water users must obtain permits prior to drilling a well. Applicants must file the proposed system design, show that water is available, and list any adverse effects on existing water rights. Ultimately, the permittee must show that the water rights of a prior appropriator will not be adversely affected.

Additionally, the Montana Reserved Water Rights Compact Commission and the National Park Service entered into the first state and federal compact to protect hydrothermal systems within the Yellowstone park. The compact protects Yellowstone's hydrothermal features by extending federal protection to a controlled groundwater area that extends beyond the park's boundaries. The compact provides a framework by which the state and federal government will work in cooperation to manage development of the area's water resources.

Mitigation Techniques: As water supplies become fully appropriated, watershed basins can be closed to new appropriations. Additionally, controlled groundwater areas

may be created if groundwater withdrawals exceed recharge, if groundwater levels are declining, and if contaminant migration and degradation are occurring.

Regulation Problems:

Judicial or Administrative Decisions:

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NEBRASKA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Ground Water Management Act, 46-656.
- Irrigation and Regulation of water, Chapter 46 (pertinent parts).

Regulations:

Case Law:

Related Information:

- Natural Resources Districts

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No regulation.

Decreasing Aquifer Levels: Nebraska does not regulate groundwater consumption.

Regulation Organization: Existing groundwater regulation is on a state-wide basis. However, groundwater management districts can be formed if problems arise. Two such districts currently exist (Upper Republican Natural Resources Division and the Central Platte Natural Resources Division).

Regulations: Groundwater users have equal access to groundwater. Users, however, are required to have a groundwater management plan.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

III. **Agency, Contact Person**

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NEVADA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Underground water and wells, Title 45, Chapter 534.

Regulations:

- Regulations for water well and related drilling, 1990.

Case Law:

Related Information:

- Summary of Statutory Procedure in Making Application for a Water Right and Filing Proofs of Appropriation and Fees Set by Statute.

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: Nevada permits groundwater wells to balance recharge rates through its State Engineer Office.

Regulation Organization: The state is divided into hydrographic basins upon which water is managed. However, groundwater and surface water are not regulated as interrelated resources.

Regulations: Several factors are considered for permitting new wells. First, recharge rates and demands are considered to determine the availability of water. Second, potential adverse impacts are identified. Third, public interest is considered to determine whether there is a better use for the water as certain basins are designated for preferred users.

The state does not have groundwater regulations, but instead uses State Engineer Orders.

Mitigation Techniques: Since permits are granted based on balancing withdrawal with recharge, restrictions generally include limits on the speed of withdrawal and well spacing.

Regulation Problems: Nevada has encountered conflicts over adverse affects to senior users where the user is located in a formerly rural areas which has become urban. Options generally include hook-ups to the municipal system or drilling a new well. If the difference in price between the cost of redrilling and hook-up is \$500 or less, the state can require the party to hook up to the municipal water line.

When unexpected problems arise the state can order

pumping cessation.

Judicial or Administrative Decisions: Litigation over water rights is rare. The only water rights claim filed in the past few years had no legal effect as the claim was erroneous. Otherwise, most disputes are petitions for review of State Engineer decisions. A good administrative record and legal allowances for reasonable water declines are factors attributed to few litigation occurrences.

However, tribal water rights are currently being litigated in Nevada v. U.S. and Las Vegas Pauite Tribe, (call court for docket number and filing date). The dispute arose out of the Pauite Tribe's construction of several golf courses without groundwater permits in a water basin where water rights are completely appropriated. The issue in this case is whether a reserved right to groundwater exists on tribal lands. The dispute has been in settlement negotiations for the past year.

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NEW HAMPSHIRE

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: New Hampshire does not regulate groundwater. Only requires that wells pumping 20,000 gpd or greater be registered.

Regulation Organization: N/A

Regulations: The state does permit for water quality, construction, and well head protection. The Agency knows they will have to regulate water quantity eventually. However, New Hampshire is still a "home rule" state where control remains at the local levels so that state regulation is difficult to pass.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

III. **Agency, Contact Person**

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NEW JERSEY

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Water Supply Management, Chapter 58:1A

Regulations:

- Water Supply Allocation Rules, Chapter 7:19

Case Law:

Related Information:

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: The New Jersey Department of Environmental Protection regulates water use for the state.

Regulation Organization: Critical management areas are established where high chloride levels, or saltwater intrusion, occurs. In these areas, permittees must file projected groundwater withdrawal rates.

Regulations: Groundwater use regulation is primarily of large users. Private users are not formally regulated. All wells pumping water at a rate greater than 70 gpm must have a water allocation permit. Standard conditions for permits include monthly pumping restrictions, reporting requirements, and static water level monitoring.

Regulation Problems: New Jersey has encountered problems of public resistance to regulation because of the cost of alternative groundwater sources.

Judicial or Administrative Decisions: While litigation is rare, conflicts are usually handled out of court. Permittees must initiate any investigation to first determine whether they are the cause of the problem.

However, two issues arose through the use of critical management areas. Litigation in 1989 resulted in amendments to the Critical Area Program. In the \_\_\_\_\_ case, the court held that permits could not be renewed for the quantity originally permitted for because \_\_\_\_\_. In 1993, the law was amended to permit criteria for determining groundwater withdrawal rates as studies required.

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## NEW MEXICO

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Water Law, New Mexico Statutes Annotated, Chapter 72 (pertinent parts).

#### Regulations:

- Rules and Regulations Governing Drilling of Wells and Appropriation and Use of Ground Water in New Mexico , State Engineer, 1991.

#### Case Law:

- Pecos Valley Artesian Conservancy Dist. v. Peters, 52 N.M. 148 (1948).

#### Related Information:

- General information: Pecos Valley Artesian Conservancy District.
- State Engineer Office Memorandum: Legal Foundations for Water Conservation, June 17, 1994.

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: New Mexico Statute 73-1-19 authorizes formation of artesian conservancy districts. The only district in existence to date is the Pecos Artesian Conservancy District.

The Pecos Artesian Conservancy District guards the artesian aquifer in the Pecos basin by challenging the State Engineer to take certain actions. Although no enforcement authority was granted, the District effectively enforces artesian-related regulations by initiating litigation. For instance, the Pecos Artesian Conservancy District enjoined a well owner from unpermitted use of the artesian aquifer, even though the well was located outside of the district. Pecos Valley Artesian Conservancy Dist. v. Peters, 52 N.M. 148 (1948).

This District also works in coordination with the State Engineers office to protect the artesian resource. For instance, the District took over well monitoring and maintenance from the New Mexico State Engineer.

Alternatively, the District may petition the state legislature to enact new laws to protect the aquifer. Often the State Engineer will protest such actions as they acquire the responsibilities of new regulation. The District may directly challenge the State Engineer to enact more rules and regulations.

Apart from litigation, the District offers a public fund

loan program to farmers for conservation projects and other public information designed to advance conservation.

Decreasing Aquifer Levels: New Mexico comprehensively manages ground and surface water use.

Regulation Organization: New Mexico groundwater regulation is conducted through the state engineer's office through the use of groundwater management districts. The state's 32 declared basins cover about 81 percent of the state, outside of which the state engineer has no authority.

Regulations: New groundwater users must file an application with the state engineer's office and has the burden of proof to show that unappropriated water is available and that the granting of their application will not impair existing water rights. The state engineer has the authority to deny the permit if no water is available or if a new well would impair water use. Decisions can be appealed in court. Additionally, water right owners are not restricted to hearings before the state engineer for damages to water rights. Exhaustion of available administrative procedures is not a condition for filing a suit for protection or redress of water rights.

Mitigation Techniques: Where decreasing aquifer levels occur, the state engineer must manage water consumption for economic and long-term uses. Mitigation techniques such as well spacing, timing, and pumping rates.

Regulation Problems: Existing regulation problem exists with water levels in the Albuquerque area where levels are decreasing faster than estimated. To ameliorate the problem that state is considering recharging the aquifer with sewage effluent and/or surface recharge of federal groundwater.

Judicial or Administrative Decisions:

- Pecos Valley Artesian Conservancy Dist. v. Peters, 50 N.M. 165 (1945). An owner of a well which taps waters of an artesian aquifer or other underground water that is already appropriated has no right to use such waters, even though his well is located outside the boundaries of any previously defined underground stream or artesian basin.

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NEW YORK

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Environmental Conservation Law, Article 15, Title 15

Regulations:

- Water Supply Applications, Exclusive of Long Island Wells, 601.
- Applications for Long Island Wells, 602.

Case Law:

Related Information:

- Water Conservation Program Form
- DRAFT - Water Conservation Manual, 1989.
- Public Water Supply Program, Applicant's Guide.

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: New York, in general, does not regulate groundwater consumption. However, water supply ties into five drinking water permits, that regulate water supply. Therefore, any well that pumps 45 gpm or greater must be permitted. Thus, most permits are for municipalities, corporations, and transportation.

Regulation Organization: The New York Bureau of Water Resources regulates on a state-wide basis with the exception of Long Island. Groundwater regulations do exist for Long Island.

Regulations: In Long Island, under regulation 602, all applicants for new water use rights must submit a water conservation plan. Because of salt water intrusion certain layers of the aquifer cannot be mined. Thus, permits are either denied or altered to alleviate adverse effects.

Mitigation Techniques: Mitigation tools are often used in Long Island in order to issue a permit. The most common limitation is a pumping restriction. In fact, some areas have blanket pumping limits. Additionally, where irrigation water is supplied by municipal water systems, local jurisdictions will impose use restrictions.

Regulation Problems: N/A

Judicial or Administrative Decisions: None regarding use conflicts.

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NORTH CAROLINA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Regulation of Use of Water Resources (Capacity Use Areas), N.C. Gen. Stat. § 143-215.15-17, 22 (1994).

Regulations:

- Capacity Use Area Water Withdrawal, NC Admin. Code title 15A, r. 2E.0100 and .0200 (July 1988).

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: No.

Decreasing Aquifer Levels: North Carolina has not yet restricted groundwater consumption. However, use restrictions may exist in a water management area.

Regulation Organization: The state has the power to designate Capacity Use Areas. This process is initiated by private parties who conduct a capacity use investigation. This investigation is conducted in cooperation between the Department of Water resources (conducts research) and the Division of Environmental Management (controls permitting). rules are formed when a capacity use area is formed. No rules currently exist although users cannot adversely impact other users.

Only one capacity use areas has ever been designated. The reason for its designation was the establishment of a phosphate mine. The expected drawdown did not occur, so groundwater use was not an issue.

Regulations:

Mitigation Techniques: The closest thing to mitigation techniques North Carolina uses are local water management plans. Such a plan has been implemented in the central coastal plain where decreasing aquifer levels and threats of salt water intrusion exist. Currently no formal action is being undertaken to mitigate the problems. However, the Water Resources Division uses certain processes to alleviate demands upon the aquifer.

The division works to increase public awareness of the problems. Water suppliers for 500 or more households must

submit a local water supply plan. This plan projects water demands and supply for a certain period of time. Likewise, this increases awareness and highlights potential problems. The Water Resources Division also works with users to help determine which aquifer to use and possible mitigation techniques that may be implemented. All such activities are cooperative efforts as the Water Resources Division has no enforcement power.

Regulation Problems: The state has not defined "adverse effect" or "excessive drawdown."

Judicial or Administrative Decisions: N/A

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NORTH DAKOTA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Chapter 61 - Century Water Code

Regulations:

- Chapter 89 - North Dakota Administrative Code

Case Law:

Related Information:

- Flowing Well Pressure Changes in the Knife River Areas
- Water Well Construction and Water Well Pump Installation, Article 33-18

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: North Dakota regulates wells mining groundwater from artesian aquifers. In general, artesian aquifer wells and other groundwater wells are similarly regulated. In particular, the State requires an efficient capture system with a valve to control flow. Existing requirements address free flowing artesian wells.

Decreasing Aquifer Levels: Groundwater consumption is regulated on a local basis, although the State Water Commission is the principle agency.

Regulation Organization: Although the State Water Commission is the principle agency, North Dakota has county water management districts along with other special districts, designed to resolve specific issues.

Regulations: All permit applications are reviewed for possible impacts on senior users, according to the state's prior appropriation water rights system. Mitigation techniques for adverse impacts are not addressed in groundwater use permits. However, if a junior user impacts a senior user, the State Engineer has the authority to shut down a junior user, or require the junior user to supply the senior use with water. Parties can challenge the action in court.

All commercial industrial and municipal water users are required to obtain a permit. Permits are not required for domestic or stock wells.

Mitigation Techniques: When a junior user adversely impacts a senior user the State Engineer has the authority to "shut down" the junior user or have require the junior user to

supply water to the senior user. All parties have the option to challenge these decisions in court.

Regulation Problems:

Judicial or Administrative Decisions:

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OHIO

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations:

- Division of Water, Chapter 1521.

Case Law:

Related Information:

- Ohio Department of Natural Resources Division of Water Fact Sheet.
- Water Rights, An Overview of Ohio Water Withdrawal Law.
- Water Withdrawals in Ohio, An Overview of Ohio's Water Withdrawal Facility Registration Program.

II. **Legal Framework Description**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: Ohio does not regulate groundwater use.

Regulation Organization: Existing regulations are managed state-wide. Water diversion is managed by basin.

Regulations: Groundwater withdrawal is not permitted. However, industrial wells with a capacity of 100,000 gpd or greater must be registered. Well logs and pumping test results must also be filed with an annual withdrawal report.

Mitigation Techniques: The Division of Water becomes involved, however, when problems arise. An investigation is conducted of the conflict after which technical recommendations are made in report form. Recommendations usually include some combination of well spacing and pumping schedules. The reports do not address social or economic matters.

Responses to these reports vary as the Division of Water has no enforcement power. Although litigation is a possible response, there is very little case law. Ohio has no cases that have gone through the entire process, although there are several cases currently being litigated.

Regulation Problems: The primary problem the Division has encountered is its lack of enforcement power.

Judicial or Administrative Decisions: N/A

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OREGON

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Ground Water Act of 1955, ORS 537.505

Regulations:

- Statutory Ground Water Terms, Oregon Administrative Rules, Chapter 690, Division 8, Water Resources Department.
- Ground Water Interference with Surface Water, Oregon Administrative Rules, Chapter 690, Division 9, Water Resources Department.

Case Law:

Related Information:

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework:

Decreasing Aquifer Levels: Oregon permits groundwater use on a case-by-case basis groundwater use.

Regulation Organization: Regulation is conducted on a state-wide basis. However, the state encourages creation of local basin councils to work in coordination with state efforts. The purpose of this approach is to respond to problems of getting municipalities to recognize the correlation between land planning and water use. The state also seeks to promote local input, facilitate cooperation, and give water users a greater sense of control on the local level.

To accomplish these objectives, the state issues a groundwater use right to basin councils. The councils then make contracts with users and operates within the boundaries of the state granted permit.

Regulations: All wells require permits except for (1) domestic wells pumping up to 15,000 gpd, (2) livestock wells, (3) small community well less than 50,000 gpd, (4) and wells for irrigation of small, non commercial gardens.

Permit issuance is base on groundwater availability. The permit usually includes a pumpage rate as part of permit conditions. Rates vary depending on availability and impacts on other users. When permits are denied the state works with the party of help find and provide an alternative groundwater source.

Mitigation Techniques: Pumping rates may be incorporated into the

Regulation Problems: Oregon's primary problem in groundwater management was getting municipalities to recognize the correlation between land use planning and protection and conservation of water resources. The permitting process has helped to improve this awareness.

Judicial or Administrative Decisions: Litigation is rare as the state works with parties whose permits have been denied to find alternative groundwater sources. However,

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PENNSYLVANIA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: State College Borough Water Authority v. Board of Supervisors of Halfmoon Township, 659 A.2d 640 (Pa. Commw. 1995).

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: Pennsylvania does not regulate groundwater use. However, the Office of Water Quality maintains well volume information which it inputs into a data base for aquifer mapping purposes. Currently the state regulates only groundwater quality.

Regulation Organization: Pennsylvania law recognizes riparian rights, but has amended the rights so as to recognize that groundwater is a resource that belongs to all citizens and should be managed for the common good. Water regulation is carried out on a state-wide basis.

Regulations: Despite state level regulation, and the absence of groundwater consumption regulation, groundwater use in portions of the state are regulated by interstate water management commissions. The eastern-third of the state is part of the Delaware River Basin Commission (DRBC). The center portion of the state is part of the Susquehanna River Basin Commission (SRBC). The remaining western portion of the state is governed by Pennsylvania state law.

Mitigation Techniques/Regulation Problems: Pennsylvania state water law is primarily comprised of adopted English common law and the Water Rights Act of 1939. This Act requires permits for surface water withdrawal by public water supply groups. The antiquated character of the law makes it difficult to apply to current disputes which generally are over public water supply rights to serve a particular area. Because of the uncertainty of litigation, expense, and time, most people settle out of court.

Judicial or Administrative Decisions: Pennsylvania court held in State College Borough Water Authority v. Board of Supervisors of Halfmoon Township, 659 A.2d 640 (Pa. Commw.

1995), that the regional water commission decision preempts local decisions regarding land-use decisions that affect groundwater.

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RHODE ISLAND

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: Rhode Island does not regulate groundwater use. Existing state law regulates groundwater quality and public water supply.

Regulation Organization: The state does have authority to regulate groundwater through its wetland regulations. If a well causes aquifer draw down and affects a wetland, the Department of Environmental management has the authority to regulate groundwater consumption in order to repair the wetland.

Regulations: N/A

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

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SOUTH CAROLINA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Groundwater Use Act

Regulations:

- Water Resources Commission, Ch. 121
- Water Use Regulation (Amendment 5?).

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: South Carolina regulates groundwater consumption in designated areas, and requires consumption reports in remaining areas.

Regulation Organization: While the state currently operates under its Groundwater Use Act, a water management plan is being developed. Existing water management is conducted on a state-wide basis and is not based on watersheds.

Regulations: Under existing laws, all wells within designated areas must be permitted. The two designated areas in existed are located in the southeast and southwest regions of the state. All other well users must report consumption.

Mitigation Techniques: Techniques such as well spacing and timing restrictions are implemented on a case-by-case basis.

Regulation Problems: Management of groundwater withdrawal is problematic in the southeastern portion of the state, specifically between Hilton Head, Beaufort, and Savannah. Much of the problem is transboundary, as Savannah and the southern portion of South Carolina use the same aquifer. Saltwater intrusion is occurring in this aquifer. The primary problem is that South Carolina's groundwater regulation of this aquifer is attenuated by withdrawal across the state line in Savannah.

Judicial or Administrative Decisions: None.

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## SOUTH DAKOTA

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Water Rights Law, State of South Dakota, Sections 1-40-15 through 1-40-20, 1-40-30, Chapters 34A-2A, 43-17 and 46-1 through 46-10A, Effective July 1, 1994.

#### Regulations:

- S.D. ADMIN. R. Title 74 (1993).

#### Case Law:

- Fraser v. Water Rights, 294 NW 2d 784 (S.D. 1980)
- State of South Dakota, Water Management Board, Findings of Fact, Conclusions of Law and Final Decision

#### Related Information:

- John H. Davidson, *South Dakota Groundwater Protection Law*, 40 S.D. L. Rev. 1 (1995).

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: While artesian wells do occur in South Dakota, there is no direct statutory protection of aquifer pressure. However, through the state's permitting process, permit engineers and protect or maintain artesian head pressure.

Decreasing Aquifer Levels: In general, South Dakota does not permit groundwater withdrawal. However, drawdown is a major issue in the state. Currently the state is monitoring approximately 1700 wells. It is noted, however, that the many unmaintained or abandoned, or free flowing wells significantly contributing to aquifer drawdown should be addressed prior to restricting new users.

Regulation Organization: Groundwater is managed on a state-wide basis. All existing groundwater users are notified of new permit applications. These users have an opportunity to comment on the permit application and may challenge the permit in administrative hearings before the Water Management Board.

Regulations: While there is no actual program designed to regulated groundwater consumption, engineers, through the permitting process, consider potential adverse impacts.

Mitigation Techniques: No mitigation techniques are used per se, but the Department considers and occasionally issues permits based on timing. Mitigation techniques may also vary

by season and type (i.e., irrigation).

Regulation Problems: N/A

Judicial or Administrative Decisions: Litigation is rare as most disputes are settled during the permitting process. However, two fairly recent disputes have specifically addressed artesian aquifer capture methods. which .

The Supreme Court of South Dakota in Fraser v. Water Rights, 294 NW 2d 784 (S.D. 1980), held that a prospective well's interference with domestic wells must be considered during the permitting process. The court specifically held that in regard to artesian aquifers the court must "consider" any adverse impacts the new user may have on a domestic user whose capture method is artesian pressure rather than a pump.

However, an absolute preference for domestic artesian aquifer rightholders does not exist because the court merely must "consider" the impacts. However, this rule was limited by the Coca Cola Bottling Dispute that occurred early in 1995.

The Coca Cola Bottling Dispute arose out the City of Rapid City's challenge to Coca Cola's well permit. Although never litigated, the South Dakota Water Management Board determined that as between an industry and a municipality, considerations of delivery methods were not required. This dispute effectively created an exception to the Fraser v. Water Rights case.

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SUSQUEHANNA RIVER BASIN COMMISSION

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Susquehanna River Basin Compact, Public Law 91-575, 84 Stat. 1509

Regulations:

- 18 C.F.R. 803, 804, 805 (1995)

Case Law: N/A

Related Information:

- Susquehanna GUARDIAN, Volume 4, No. 1, Winter 1994/95
- Brochure: Susquehanna River Basin Commission
- 1993 Annual Report, Susquehanna River Basin Commission.

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: The Susquehanna River Basin Commission (SRBC) does not regulate artesian aquifer pressure. However, problems could be addressed if such a case arose, by including appropriate limitation in the permit.

Decreasing Aquifer Levels: The SRBC regulates groundwater use through its permitting process.

Regulation Organization: The SRBC is a federally created commission that regulates ground and surface water in the Susquehanna River Basin. This basin includes portions of the states of New York, Pennsylvania, and Maryland.

Regulations: All wells with a capacity of 100,000 gpd or greater must be permitted. Limitations on groundwater use are determined on a case-by-case basis and are incorporated into the permit. However, if problems should arise subsequent to granting the permit, the SRBC has "continual oversight" authority and can amend or change the permit restrictions.

Mitigation Techniques: The SRBC generally implements withdrawal restrictions and pumping limits in order to manage groundwater withdrawal.

In general, a well user that adversely affects another users rights is responsible for fixing the problem. This is usually accomplished by digging deeper well or supplying the injured user with another source of water. In determining the appropriate mitigation form, SRBC will consider whether the injured well is adequate under the drilling conditions.

Regulation Problems: No groundwater management problems were reported. Most users are cooperative and negotiate remedies out of court. Additionally, no challenges to SRBC decisions were reported.

Judicial or Administrative Decisions: N/A

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TENNESSEE

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None

Decreasing Aquifer Levels: None

Regulation Organization: N/A

Regulations: Tennessee does not regulate ground withdrawal. Existing statutes address well construction and well head protection. Groundwater related rules are designed to address pollution issues.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

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## TEXAS

### I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations:

Case Law:

Related Information:

- RONALD A. KAISER, J.D., HAND BOOK OF TEXAS WATER LAW: PROBLEMS AND NEEDS (Texas Water Resources Institute, EIS 86-236 I/87-2M)
- JOHN M SWEETEN, MANAGING PRIVATE GROUNDWATER THROUGH UNDERGROUND WATER CONSERVATION DISTRICTS (Texas Agricultural Extension Service, Texas A&M University System, B-1612).
- Texas Alliance of Groundwater Districts, Membership Directory & District Activities, February 1995.

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: Texas has very few areas with artesian aquifers.

Decreasing Aquifer Levels: Aquifer levels are protected by groundwater management districts.

Regulation Organization: The state of Texas does not regulate groundwater consumption. Instead, local groundwater conservation districts are legislatively formed requiring a confirmation election by district residents.

The 1949 Texas Groundwater Districts Act authorizes groundwater conservation district formation. This legislation provides for the creation of two types of conservation districts: underground water conservation districts and subsidence districts. Approximately 40 underground water conservation and subsidence districts exist. This statute also gave conservation districts the authority to conserve and preserve the underground water supplies. Some of the water conservation districts have established successful conservation programs, all of which vary depending on the nature of the problem and the district's geologic characteristics.

Regulations: In general, groundwater conservation districts have the power to regulate groundwater by restricting production and well spacing. Currently groundwater production regulation generally is not used as a regulation mechanism although it is increasingly being adopted.

For instance, the Edwards Underground Water District has the power to issue rules and permits for surface and groundwater transportation, but not groundwater consumption.

Meanwhile the Barton Springs-Edwards Aquifer Conservation District does limit consumption.

Mitigation Techniques: Mitigation techniques vary among groundwater conservation districts depending on geologic characteristics and groundwater problems.

For instance, the Harris-Galveston Coastal Subsidence District uses a variety of techniques to manage water production. The over production of groundwater has caused so much land subsidence that the district is prone flooding. Therefore, this district works in coordination with USGS to identify "zones" in which surface and groundwater regulation "mixes" are implemented to reduce adverse aquifer impacts. In some instance the district even attempts to gradually cease groundwater production.

Regulation Problems:

Judicial or Administrative Decisions:

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## UTAH

### I. **General Legal Framework used to address impacts on existing Water Users.**

#### Statutes:

- Utah Code Ann. § 73-1, 2 (1994). (pertinent parts)

Regulations: Utah has no regulations regarding groundwater use. Instead, the state engineer refers directly to the statute. Existing regulations address hearing procedures and well drilling.

#### Case Law:

#### Related Information:

### II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: Utah is not regulating to protect artesian well pressure. However, Utah State courts are split as to whether well pressure is protected.

Decreasing Aquifer Levels: The Utah State Engineer regulates water use throughout the state, managing some areas by water basins. In fact, there are many areas in Utah where new wells are not permitted.

#### Regulation Organization:

Regulations: All permits are subject to the State Engineer's approval and are granted based on prior appropriation rights.

Permits are reviewed on a case-by-case basis by a "reasonable drawdown standard." However, "reasonable" has not been defined. All permit decisions can be appealed.

Mitigation Techniques: Restrictions on new wells may include citing, use, and drawdown restrictions. The appropriateness of specific techniques vary with location, as further water-resource development is prohibited in some areas.

Regulation Problems: No regulation problems were reported.

This was attributed to fundamental regulation under the law. Issues that arise generally pertain to whether a permit can be issued.

Judicial or Administrative Decisions: None reported

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VERMONT

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

- Groundwater Cause of Action, 10 V.S.A. § 1420 (1994)

Regulations:

- Environmental Protection Rules, Chapter 21, Water Supply Rule (pertinent parts), September 24, 1992.

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None currently in existence, however, a bill recommending artesian aquifer monitoring was recently submitted to the state legislature.

Decreasing Aquifer Levels: Vermont does not regulated on a state-wide basis for groundwater depletion. In general, decreasing aquifers have not been a problem in Vermont. However, some regulations do occur at the municipal level.

Regulation Organization: Existing regulation is conducted only at on a state-wide basis as the state is to small geographically in terms of population to defer to regional or municipal levels.

Regulations: None

Mitigation Techniques: None

Regulation Problems: None

Judicial or Administrative Decisions: None

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VIRGINIA

I. General Legal Framework used to address impacts on existing Water Users.

Statutes:

- Ground Water Management Act, VA. CODE ANN. § 62.1-254 through 62.1-270 (Michie 1992)

Regulations:

- Va. Regs. Reg. 680-13-07 Ground Water Withdrawal Regulations.

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: None.

Regulation Organization: Although Virginia has a groundwater mitigation plan, it does not restrict groundwater withdrawal. The only exception is in the state's groundwater protection area located in the coastal plain.

Regulations: Virginia regulations require water withdrawal reporting for all wells that pump 10,000 gpd or greater. Proposed wells located within the groundwater protection area with a capacity of 10,000 gpd or greater require a permit.

Mitigation Techniques: Within groundwater management areas groundwater users must submit water conservation and management plans as party of the permit application. Additionally, permits are only issued for the amount of groundwater that will be applied to the proposed beneficial use.

Regulation Problems: None.

Judicial or Administrative Decisions: None

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WASHINGTON

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations:

- Administration of Surface and Ground Water Codes, Chapter 508-12 WAC

Case Law:

- Rettkowski v. Dept. of Ecology, 122 Wash. 2d 219 (1993).

Related Information:

- QUESTIONS AND ANSWERS, WATER RIGHTS IN WASHINGTON (Washington State Department of Ecology, A-WR-92-105, March 1992).

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework:

Decreasing Aquifer Levels:

Regulation Organization: Washington currently manages ground and surface water on a state-wide basis. However, the state is moving towards an ecosystem and watershed management approach.

Regulations: All groundwater wells must be registered with the state and wells pumping 5,000 gpd or greater must be permitted. Wells pumping groundwater below the threshold are exempt from the permitting requirement if the use is for stockwatering, irrigation of a half acre or less, single or group domestic purposes, or industrial purposes. To approve or deny a well permit the state considers the beneficial use, potential for impairment of existing rights, groundwater availability for appropriation, and the potential adverse effects to the public's interest.

Mitigation Techniques: All types of mitigation techniques are used as required on a case-by-case basis.

Regulation Problems:

Judicial or Administrative Decisions:

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WEST VIRGINIA

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: None.

Regulation Organization: West Virginia has a Groundwater Protection Act that regulates groundwater quality but not quantity.

Regulations: None.

Mitigation Techniques: N/A

Regulation Problems: N/A

Judicial or Administrative Decisions: N/A

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WISCONSIN

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes: N/A

Regulations: N/A

Case Law: N/A

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: None.

Regulation Organization: Existing regulation is statewide.

Regulations: Wisconsin regulates only high capacity groundwater users to the extent that their use affects the public water supply wells. Groundwater pumping permits are granted for these purposes based on possible adverse effects to the public water supply, well location in relation to soil contamination or landfills, and construction standards. Permits can only be disapproved if it is shown that the existing water supply will be adversely impacted. All wells that pump 70 gpm or greater must obtain a permit. Other impacts would have to be handled in civil court.

Mitigation Techniques: N/A

Regulation Problems: The nature of the geology in the region makes it difficult to predict with any accuracy whether a well will impact others. For this reason, the state has adopted a "wait and see" attitude towards well impacts.

Judicial or Administrative Decisions: None.

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WYOMING

I. **General Legal Framework used to address impacts on existing Water Users.**

Statutes:

Regulations:

- New rules and regulations are being published but anticipated date of completions is unknown. Old, 1973 regulations are available.

Case Law:

Related Information: N/A

II. **Legal Framework Summary**

Artesian Aquifer Pressure-Relief Framework: None.

Decreasing Aquifer Levels: Permits are required prior to drilling any groundwater well. High-yield wells are generally the only wells for which pumping is curtailed. Domestic and stock wells have a preferred-use designation are almost always permitted.

Regulation Organization: Groundwater is regulated on a state-wide basis.

Regulations: New regulations are presently being drafted and published. The date of availability is uncertain.

Mitigation Techniques: Mitigation techniques are implemented based on the interrelationship between surface and groundwater. Specific techniques are applied on a case-by-case basis.

Regulation Problems: The only reported problem has been with getting attorney's to agree on the statutory interpretation of certain terms.

Judicial or Administrative Decisions: Groundwater-related conflicts are generally settled in negotiation. However, recent litigation addressed the adverse effects of groundwater mining for irrigation purposes upon another person's ditch.

III. **Agency, Contact Person**

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