

**BOARD OF SUPERVISORS
OF
GLENN COUNTY, CALIFORNIA**

ORDINANCE NO. _____

**AN ORDINANCE REPEALING CHAPTER 20.03 OF THE GLENN COUNTY
CODE AND ADDING CHAPTER 20.09 TO THE GLENN COUNTY CODE
ENTITLED GROUNDWATER MONITORING, MANAGEMENT AND WATER
TRANSFERS AFFECTING GROUNDWATER.**

**THE BOARD OF SUPERVISORS OF THE COUNTY OF GLENN ORDAINS AS
FOLLOWS:**

Section 1. Chapter 20.03 of the Glenn County Code, Groundwater Management, is hereby repealed in its entirety.

Section 2. Chapter 20.09, Groundwater Monitoring, Management and Water Transfers Affecting Groundwater, is hereby added to the Glenn County Code and shall read as follows:

WHEREAS, the Preliminary Plan for Groundwater and Coordinated Water Management was adopted by the Glenn County Board of Supervisors ("Board") in May, 2006; and

WHEREAS, Glenn County, by virtue of its physical and hydrologic setting and foresight of its residents in the past, currently enjoys an enviable water supply situation in relation to many other counties in California; and

WHEREAS, as stewards of the water resources available to Glenn County, the Board is permitted to manage this unique resource (Water Code §10753) in order to meet the needs of Glenn County, the Sacramento Valley, and the state of California, in that order; and

WHEREAS, the needs of Glenn County are best met by monitoring and managing the groundwater in Glenn County, and in monitoring and managing water transfers/surface water exports that adversely or potentially adversely affect said groundwater including, but not limited to, water exports/transfers involving (1) surface water with groundwater substitution, (2) direct groundwater export, and (3) surface water originating in Glenn County; and

WHEREAS, the purpose and intent of this chapter is to establish an effective mechanism concerning direct groundwater exports/transfers and surface water exports/transfers affecting groundwater that will assure that the overall environment and economy of the County is protected and that significant adverse environmental, social, and economic impacts are avoided; and

WHEREAS, it is the intent of this ordinance to create an environment so that demonstrated adverse impacts from direct groundwater exports/transfers and other water exports/transfers have the potential of being resolved between the affected parties; and

WHEREAS, the Board is hopeful that this ordinance and any subsequent modifications will result in the desired compliance to protect the County's groundwater, thus obviating the need for an initiative ordinance to be voted upon by the people of this county to protect and preserve its groundwater by monitoring and restrictions on profiteering through direct groundwater exports/transfers and other water exports/transfers; and

WHEREAS, the Board expects to adopt a subsequent ordinance that further addresses groundwater protection in the areas of groundwater quality and land subsidence; and

WHEREAS, the Board intends to periodically evaluate and revise its water management plan, and intends to re-adopt it upon the adoption of this ordinance and the repeal of Chapter 20.03.

20.09.010 Purpose:

A. The Board finds that the protection of the groundwater resource for its use within the County is of major concern to the residents of the county for the protection of their health, welfare, and safety. The Board further declares that the beneficial use of groundwater and maintenance of safe yield is of critical importance to the economy of the County.

B. The Board intends to ensure the continued availability of groundwater and to ensure that extraction of groundwater does not exceed safe yield as defined in Exhibit A and its subsequent amendments and modifications, and as further set forth in this ordinance.

C. The Board recognizes that it is essential for information gathering and management purposes that the County adopts a monitoring and management program that addresses, among other aspects, groundwater levels.

D. The Board does not intend to limit other authorized means of managing the County's groundwater in adopting this groundwater monitoring and management, and water transfer ordinance.

E. While the focus of this ordinance is on the monitoring and protection of groundwater levels, it is acknowledged that the lack of groundwater management may have the following negative impacts on the groundwater resource, including but not limited to:

1. Lowering of groundwater levels leading to increased energy consumption, the increased cost of deepening existing wells, and the prospect that new wells will need to be deeper and more costly than would otherwise be required.

2. Damage to public roads, bridges, canals and other structures caused by land subsidence at substantial cost to the public treasury.
3. Drying up of surface and subsurface flows leading to the potential loss of critical riparian and wetland habitat.
4. Degradation of groundwater quality.
5. Degradation of the vibrant agriculture economy and rural lifestyle of Glenn County residents.

F. The Board intends to establish a viable groundwater quality monitoring network. The intent of the groundwater quality monitoring network will be to monitor a group of wells that can adequately determine representative groundwater quality conditions in the aquifer systems. It is anticipated that the network will include select domestic and irrigation wells from water districts, private owners, and municipal and industrial water suppliers.

G. The Board intends to establish a viable land subsidence monitoring network. The intent of the land subsidence monitoring network will be to detect land subsidence as a result of groundwater extraction, utilizing, among other devices, extensometers for continuous land subsidence monitoring.

H. The Board recognizes the value of mediation in attempting to resolve disputes among parties based upon groundwater extraction/export which exceeds safe yields as defined herein.

20.09.020 Definitions:

"Aquifer" means a geologic formation that stores, transmits and yields significant quantities of water to wells and springs.

"Available supply" means the quantity of groundwater, which can be withdrawn annually from a groundwater basin without exceeding safe yield of the basin.

"Board" means the Board of Supervisors of Glenn County.

"County" means County of Glenn.

"Direct Groundwater Export/Transfer" means the use of groundwater in Glenn County outside of the boundaries of the County and outside of the boundaries of any district that is partially within the County by utilizing, in whole or in part, directly or indirectly, the Sacramento River.

"District" means a district or municipality wholly or in part located within the boundaries of the county, which is a purveyor of waters for agricultural, domestic or municipal use.

Orland Unit Water Users and Willow Creek Mutual Water Company are included in this definition.

"Enforcement Agency" means the Board as the Enforcement Agency for general well standards and shall also be the Enforcement Agency under this chapter.

"Export" and/or "Transfer" means the use of groundwater in Glenn County outside of the boundaries of the County and outside of the boundaries of any district that is partially within the County by utilizing, in whole or in part, directly or indirectly, the Sacramento River. Surface water that is sold or exchanged outside of the boundaries of the County and outside of the boundaries of any district that is partially within the County by utilizing, in whole or in part, directly or indirectly, the Sacramento River, and that is replaced by groundwater extraction, shall also be considered export/transfer.

"Extensometer" means an instrument for measuring land subsidence.

"Groundwater" means all water beneath the surface of the earth below the zone of saturation, but does not include water which flows in known and definite subsurface channels.

"Groundwater Management Plan" means a plan prepared pursuant to the California Groundwater Management Act (commencing with Water Code Section 10750 et. seq.).

"Groundwater Substitution" means the voluntary substitution of an available surface water supply by a groundwater supply for the purposes of enhancing in-stream flow or export.

"Recharge" means flow to groundwater storage from precipitation, infiltration from streams, irrigation, spreading basins and other sources of water.

"Land Subsidence" means the lowering of the ground surface caused by the inelastic consolidation of beds in the aquifer system.

"Technical Advisory Committee" means an eight (8) person committee nominated and appointed by the Board. The committee shall include one representative each from the Glenn County Board of Supervisors, the Glenn County Planning & Public Works Agency, the Cooperative Extension, the Environmental Health Office, the Agricultural Commissioner, and one representative each from the United States Bureau of Reclamation, the State Department of Water Resources, and the Glenn Colusa Irrigation District. The Committee's duties and responsibilities are set forth in the following sections of this ordinance. The Committee shall have the power and authority to seek and utilize experts/knowledgeable persons in groundwater management and hydrology, and other individuals as needed, to assist it in carrying out its assigned duties in this chapter.

"Water Advisory Committee" means a twenty (20) person outreach body which shall be appointed by the Board, and with membership serving at the pleasure of the Board. The

Committee shall carry out the duties and responsibilities set forth in this ordinance. The membership of the Committee shall be as follows:

1. Stony Creek Water District - 1 member
2. Orland Artois Water District - 1 member
3. Orland Unit Water Users Association – 1 member
4. Reclamation District 1004 – 1 member
5. Glide Water District – 1 member
6. Kanawha Water District – 1 member
7. Provident Irrigation District – 1 member
8. City of Willows – 1 member
9. City of Orland – 1 member
10. Princeton-Codora-Glenn Irrigation Dist. – 1 member
11. Western Canal Water District – 1 member
12. Willow Creek Mutual Water Company – 1 member
13. Resource Conservation District – 1 member
14. East Corning Basin Private Pumpers – 1 member
15. BOS District 5 Private Pumpers – 1 member
16. BOS District 3 Private Pumpers – 1 member
17. Reclamation District #2106 – 1 member
18. West Colusa Basin Private Pumpers – 1 member
19. West Coming Basin Private Pumpers – 1 member
20. Glenn County Farm Bureau – 1 member

20.09.030 Safe Yield:

A. Safe yield for Glenn County will be determined by the Basin Management Objective (BMO) method. The BMO predefines acceptable levels of the following:

1. Groundwater levels.

B. Compliance with the BMO will be determined by evaluation of data collected from the groundwater level. Evaluation of this data shall be the only basis for determining compliance with the BMO. It is the intent that the BMO be chosen so as to assure that the overall environment and economy of the County is protected. The BMO, as currently set forth in Exhibit A, will be subject to subsequent amendments and modifications in the future.

20.09.040 Basin Management Objective:

A. Determination of the BMO: The current existing BMO will be reestablished annually by the Board, with the recommendation of the Technical Advisory Committee, based on monitoring data and existing hydrogeologic conditions of the aquifer system. It is the intent that there ultimately be one countywide BMO, which will incorporate individual BMO determinations for the County sub-areas shown in Exhibit A. This county-wide

BMO will be established using the best technological and scientific information available.

B. Groundwater management practices based on the established BMO criteria for one area of the county shall not result in exceeding the established BMO criteria in adjacent areas.

20.09.050 Monitoring BMO Compliance:

Monitoring programs designed to detect changes to groundwater levels will be an integral part in determining compliance with the BMO. The monitoring programs will measure select wells to determine changes in groundwater levels.

20.09.060 Monitoring Network:

A. Establishing the Groundwater Level Monitoring Network: The monitoring network will be established and reviewed by the Technical Advisory Committee and approved by the Board. It is subject to periodic updated review by the Technical Advisory Committee and subsequent approval by the Board. The purpose of the groundwater level monitoring network is to measure a select group of wells that can adequately identify representative conditions in the aquifer system for determination of compliance with the BMO.

B. The network will include select domestic and irrigation wells from water districts, private owners, and municipal and industrial water suppliers. Where needed, dedicated monitoring wells will be installed and monitored. Participation by private landowners will be on a voluntary basis.

20.09.070 Monitoring Frequency:

Establishing Monitoring Frequency for Groundwater Levels:

A. The frequency of groundwater level monitoring will be determined by the Technical Advisory Committee and approved by the Board. As a minimum, groundwater levels should be monitored three times during the year: one measurement prior to the irrigation season, one measurement during peak groundwater use, and one measurement following the irrigation season (typically in March, July, and October).

B. In order to properly maintain the safe yield of groundwater, a fee shall be charged to recover the costs associated with the groundwater management monitoring program. These fees are set by Resolution adopted by the Board of Supervisors and are reflected in Appendix "A" of Chapter 5.23 of the Glenn County Administrative Manual.

20.09.080 Changes in Monitoring:

A. Changes in Monitoring Frequency: If evaluation of the groundwater level data indicates a need for fewer or greater monitoring frequency, the Technical Advisory

Committee may propose a change in the monitoring schedule. The Board will consider changes when supported by credible evidence.

B. Changes in monitoring network: If evaluation of the groundwater level data indicates a need for a fewer or a greater number of monitoring wells or benchmarks, the Technical Advisory committee can propose a change in the monitoring networks. The Board will consider changes when supported by credible evidence.

20.09.090 Reporting and Filing Requirements:

Every person (as that term is defined in its broadest legal sense including, but not limited to an individual, individuals, groups of individuals, associations, organizations, districts, corporations, companies, joint partnerships, joint powers agencies, consortiums, etc.) and any other entity, which is wholly or in part located within the boundaries of Glenn County, and which causes, in whole or in part, directly or indirectly the export/transfer of groundwater and/or surface water as those terms is defined in this Chapter, and/or the direct groundwater export/transfer as that term is defined in this Chapter, by utilizing, in whole or in part, directly or indirectly, the Sacramento River, is required to do the following:

1. Provide the County with a copy of any Statement of Water Diversions and Use ("Statement") filed with the State Water Resources Control Board ("State Water Board") on or before July 1, 2010 within 10 (ten) days after this Chapter becomes effective, and further provide the County with every filing of Statement thereafter within 10 (ten) days of said filing with the State Water Board or its successor-designate.

2. Provide the County within 5 (five) days of the date and/or effective date of the verbal and/or written understanding (whichever is earlier), copies of all agreements, contracts, memorandum of understandings, purchase agreements/orders, and any and all other written arrangements which are the result, in whole or in part, of the export/transfer of groundwater, surface water, and/or direct groundwater export/transfer as those terms are defined in this Chapter.

3. Provide the County within 5 (five) days of filing, copies of any environmental document(s) filed pursuant to the California Environmental Quality Act ("CEQA") and/or the National Environmental Policy Act ("NEPA") which are the result, in whole or in part, of the export/transfer of groundwater, surface water, and/or direct groundwater export/transfer as those terms are defined in this Chapter.

20.09.100 Review of Technical Data:

A. The Technical Advisory Committee will establish standard methods for review and analysis of the collected data. The Technical Advisory Committee may meet bimonthly during the irrigation season (April through September) and quarterly during the off season (October through March) or as necessary.

B. During the irrigation season, the Technical Advisory Committee meetings will focus on data review and analysis with respect to compliance with the current BMO. During the non-irrigation season, the Technical Advisory Committee meetings will focus on a review of BMO compliance for the previous irrigation season and development of new BMO criteria for the following year.

C. The Technical Advisory Committee will establish methods for data collection, storage and dissemination. Methods for collecting groundwater level will follow control guidelines established by the Technical Advisory Committee.

D. At a minimum, the Technical Advisory Committee will disseminate the monitoring data through an Internet access via a County maintained groundwater homepage. At a minimum, the Technical Advisory Committee shall publicly present findings from the monitoring program on a semiannual basis to the Board of Supervisors.

E. The Technical Advisory Committee shall collect the following data from any district and/or person engaged the export/transfer of surface water resulting in groundwater substitution or groundwater exportation, and/or engaged in direct groundwater export: the weekly amounts of groundwater extracted from each well, the precise location of the wells, all pumping and non-pumping groundwater level measurements made during the groundwater substitution period, the time periods during which the groundwater substitution program will occur, and all required environmental documentation. It shall be the responsibility of the district and/or person involved in groundwater substitution or groundwater exportation to provide this information to the Technical Advisory Committee.

20.09.110 Action by the Technical Advisory Committee:

In the event that the Technical Advisory Committee becomes aware of a violation, or potential violation, of any provision of this Chapter as a result or caused by, in whole or in part, directly or indirectly, the export/transfer of groundwater, surface water, and/or direct groundwater export/transfer as those terms are defined in this Chapter, by utilizing, in whole or in part, directly or indirectly, the Sacramento River, it shall immediately report such violation or potential violation to the Board, which shall take whatever action it deems appropriate. In the event that the Technical Advisory Committee identifies an area of noncompliance with the BMO, the Technical Advisory Committee shall issue a report on the regional extent and magnitude of the noncompliance. This information shall also be released to the public. This report shall be made in a timely manner not to exceed five (5) days from the time at which BMO noncompliance was identified. The Technical Advisory Committee then shall collect all available pertinent hydrologic data and investigate possible causes for the BMO noncompliance, and shall attempt to resolve the BMO noncompliance. If negotiations with parties in the affected area do not result in a timely and positive action to reestablish BMO compliance, the Technical Advisory Committee shall recommend a plan to the Board to modify, reduce or terminate groundwater extraction in the affected area of the remainder of that irrigation season.

The general sequence of modification, reduction, or termination of groundwater extraction in the affected area, shall be as follows:

- Wells involved in exports
- All other wells

Notwithstanding the above provisions of this section, in the event that the Technical Advisory Committee determines that the documents it receives from the County for review under section 20.09.090 are deficient, either procedurally and/or substantively, the Technical Advisory Committee shall immediately notify the Board so that enforcement or legal action may be considered. Failure to seek such enforcement or legal action by the Board shall not preclude the Technical Advisory Committee from pursuing and/or completing its directive in accordance with the provisions of the first paragraph of this section, since commencement of such directive may be necessary to determine substantive deficiencies.

20.09.120 Duties and Responsibilities of the Water Advisory Committee:

The Water Advisory Committee shall meet, at a minimum, quarterly in a calendar year, or more frequently if it determines it is necessary, for the sole purpose of conducting outreach activities and receiving public comments/input concerning the groundwater monitoring, management, and surface water export/transfer actions taken or contemplated to be taken, and direct groundwater export, pursuant to this ordinance. The comments/input received from the public, along with any recommendations of the Committee, shall be forwarded to the Board for its consideration.

20.09.130 Action by Board of Supervisors:

The Board of Supervisors shall act as the Enforcement Agency for this ordinance.

20.09.140 Violation of Chapter 20.09:

Every person who violates any provision of this Chapter as a result or caused by that person, in whole or in part, directly or indirectly, being responsible for the export/transfer of groundwater, surface water, and/or direct groundwater export/transfer as those terms are defined in this Chapter, by utilizing, in whole or in part, directly or indirectly, the Sacramento River, is guilty of an infraction. Every such person who violates a particular provision of this Chapter three or more times is guilty of a misdemeanor for the third and every subsequent violation of that provision during any 12-month period. A separate offense is committed for each and every transaction, event, or occurrence in violation of any such provision of this Chapter. A separate offense is committed for each and every day or part of a separate day during which such violation is caused, committed, continued or permitted. Each offense is punishable separately from every other offense.

Section 2. All other ordinances or parts of other ordinances in conflict herewith are hereby repealed only to the extent of such conflict, and no further.

Section 3. The Board of Supervisors finds and determines that substantial evidence does not exist that the action taken hereunder will or may cause a significant effect on the environment.

Section 4. This ordinance shall take effect on and after 30 days after its passage, and before the expiration of 15 days after its passage a summary of the ordinance shall be published once in a newspaper of general circulation on the County of Glenn.

This ordinance was passed by the Board of Supervisors by the following vote on _____.

AYES:

NOES:

ABSENT OR ABSTAIN:

DRAFT

DEPARTMENT OF WATER RESOURCES
FALL GROUNDWATER ELEVATION MEASUREMENTS
 NORTHERN SACRAMENTO VALLEY & REDDING BASINS, CALIFORNIA

**CHANGE IN GROUNDWATER ELEVATION
 BY WELL DEPTH**

Fall 2004 to Fall 2010

	All Well Depths	Well Depth		
		0 to 200 ft-bgs	201 to 600 ft-bgs	601 to 1,500 ft-bgs
BUTTE				
Maximum Increase in GWE* (ft)	9.2	9.2	5.5	4.6
Maximum Decrease in GWE (ft)	-17	-6	-17	12.6
Average GWL Change (ft)	-1.5	0	-3	-3.1
Number of Wells	62	31	23	8
COLUSA				
Maximum Increase in GWE* (ft)	13	13	3.7	0.4
Maximum Decrease in GWE (ft)	-35.4	-11.6	-35.4	-14.8
Average GWL Change (ft)	-4.6	-1.5	-7.8	-4
Number of Wells	41	18	19	4
GLENN				
Maximum Increase in GWE* (ft)	2.5	2.5	0.1	-2
Maximum Decrease in GWE (ft)	-36.3	-36.3	-29.9	-34.4
Average GWL Change (ft)	-6.9	-5.1	-7.1	-14.5
Number of Wells	111	54	46	11
TEHAMA				
Maximum Increase in GWE* (ft)	8.8	8.8	4.9	-1.6
Maximum Decrease in GWE (ft)	-12.9	-11	-12.9	-8.4
Average GWL Change (ft)	-3.3	-2.9	-3.7	-3.5
Number of Wells	123	59	51	13
SHASTA COUNTY				
Maximum Increase in GWE* (ft)	5.8	2.6	5.8	1.2
Maximum Decrease in GWE (ft)	-4	-3.3	-4	-3.8
Average GWL Change (ft)	0.2	-1.2	0.5	-1.3
Number of Wells	28	9	17	2
TOTAL				
Maximum Increase in GWE* (ft)	13.0	13.0	5.8	4.6
Maximum Decrease in GWE (ft)	-36.3	-36.3	-35.4	-34.4
Average GWL Change (ft)	-4.0	-2.8	-4.7	-6.3
Number of Wells	365	171	154	40

Note: A positive number indicates that groundwater levels were higher in 2010 than in 2004; a negative number indicates that groundwater levels were lower in 2010 than in 2004.

*GWE=Groundwater Elevation

DEPARTMENT OF WATER RESOURCES
FALL GROUNDWATER ELEVATION MEASUREMENTS
 NORTHERN SACRAMENTO VALLEY & REDDING BASINS, CALIFORNIA

**CHANGE IN GROUNDWATER ELEVATION
 BY WELL DEPTH**

Fall 2009 to Fall 2010

	All Well Depths	Well Depth		
		0 to 200 ft-bgs	201 to 600 ft-bgs	601 to 1,500 ft-bgs
BUTTE				
Maximum Increase in GWE* (ft)	9.8	9.8	4.3	7.2
Maximum Decrease in GWE (ft)	-15.5	-3.4	-15.5	-5.3
Average GWL Change (ft)	0.2	0.9	-1	0.7
Number of Wells	106	48	38	20
COLUSA				
Maximum Increase in GWE* (ft)	14.3	14.3	8.5	8.7
Maximum Decrease in GWE (ft)	-10.6	-10.6	-4.1	-1.6
Average GWL Change (ft)	0.6	0.5	0.8	2.5
Number of Wells	68	25	31	12
GLENN				
Maximum Increase in GWE* (ft)	22.3	7.7	12.2	22.3
Maximum Decrease in GWE (ft)	-17.7	-7	-8.7	-17.7
Average GWL Change (ft)	1.8	1.3	0.9	5.2
Number of Wells	150	61	62	27
TEHAMA				
Maximum Increase in GWE* (ft)	6.7	4.8	6.7	1.5
Maximum Decrease in GWE (ft)	-6.7	-6.1	-6.7	-3.4
Average GWL Change (ft)	-0.5	0.1	-1.1	-0.2
Number of Wells	134	60	58	16
SHASTA COUNTY				
Maximum Increase in GWE* (ft)	6.9	2.5	6.9	2.5
Maximum Decrease in GWE (ft)	-3.3	-2.5	-3.3	0.4
Average GWL Change (ft)	1	0.7	1.1	1.4
Number of Wells	45	21	19	5
TOTAL				
Maximum Increase in GWE* (ft)	22.3	14.3	12.2	22.3
Maximum Decrease in GWE (ft)	-17.7	-10.6	-15.5	-17.7
Average GWL Change (ft)	0.6	0.6	0.0	2.3
Number of Wells	503	215	208	80

Note: A positive number indicates that groundwater levels were higher in 2010 than in 2009; a negative number indicates that groundwater levels were lower in 2010 than in 2009.

***GWE=Groundwater Elevation**

5-21.50

5-21.51

5-21.57

5-21.58

5-21.5

5-21.52

5-61

5-62

5-89

5-90

5-91

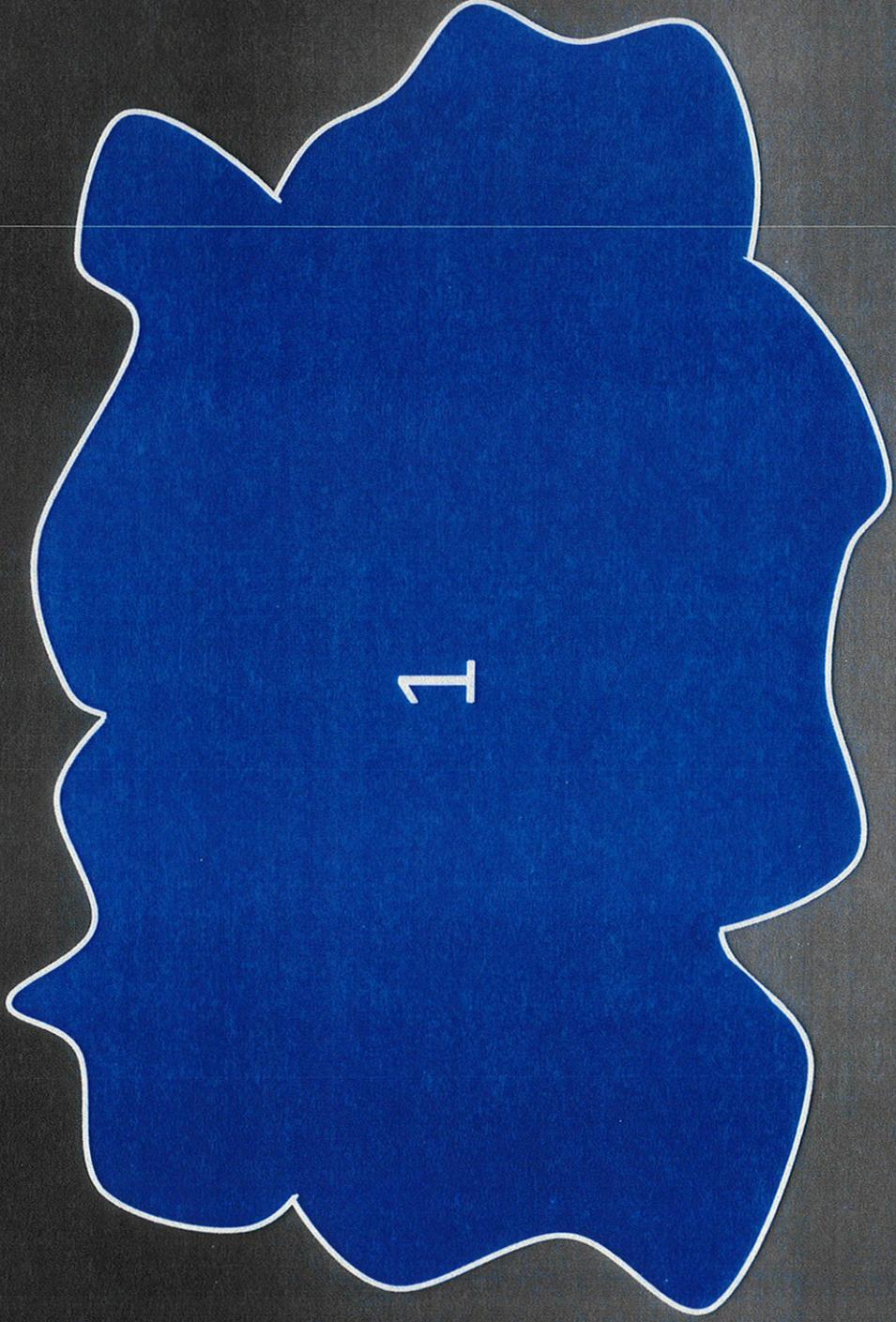
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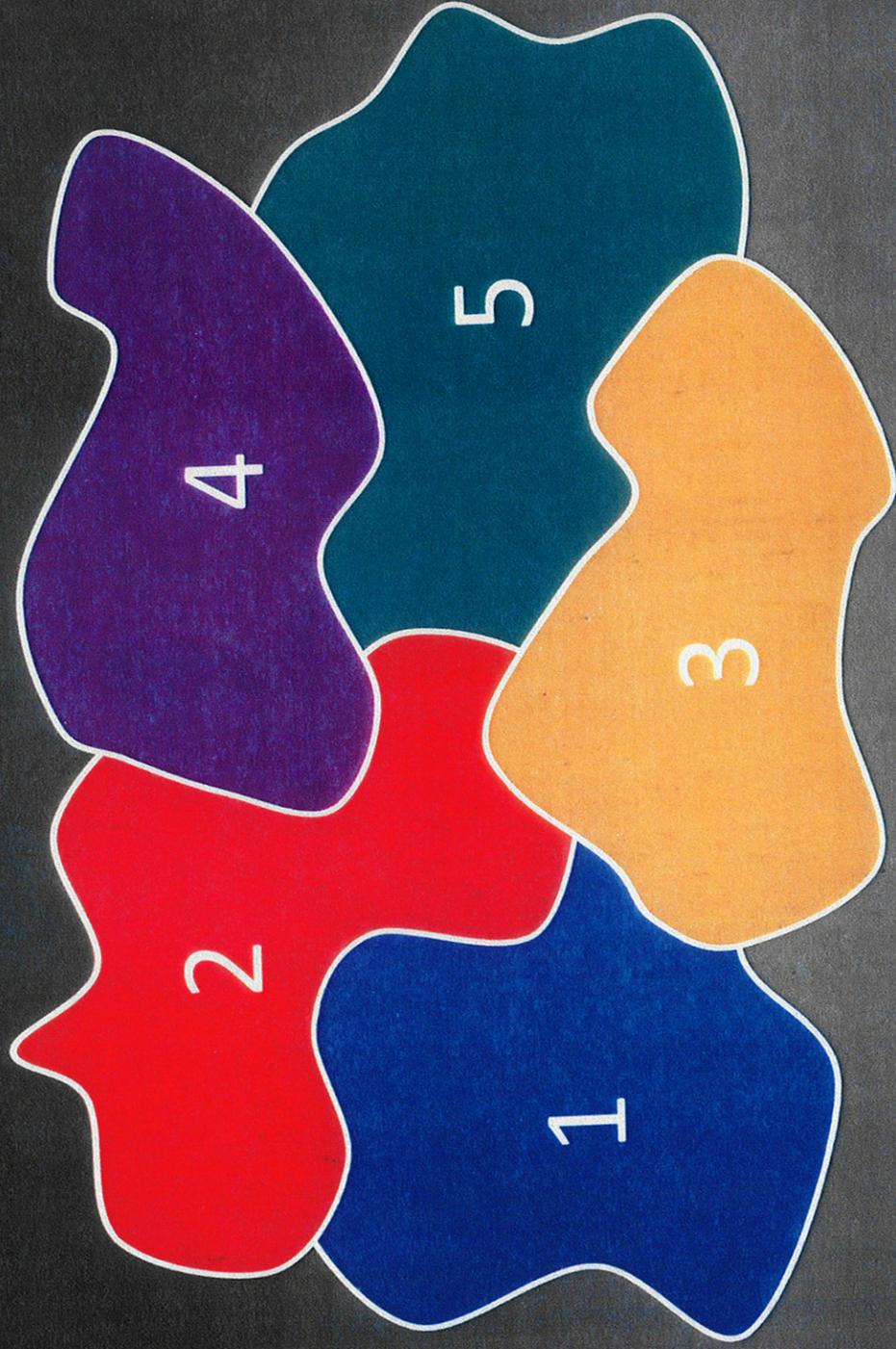


Single Monitoring Entity collects and reports
groundwater elevation data for the entire basin



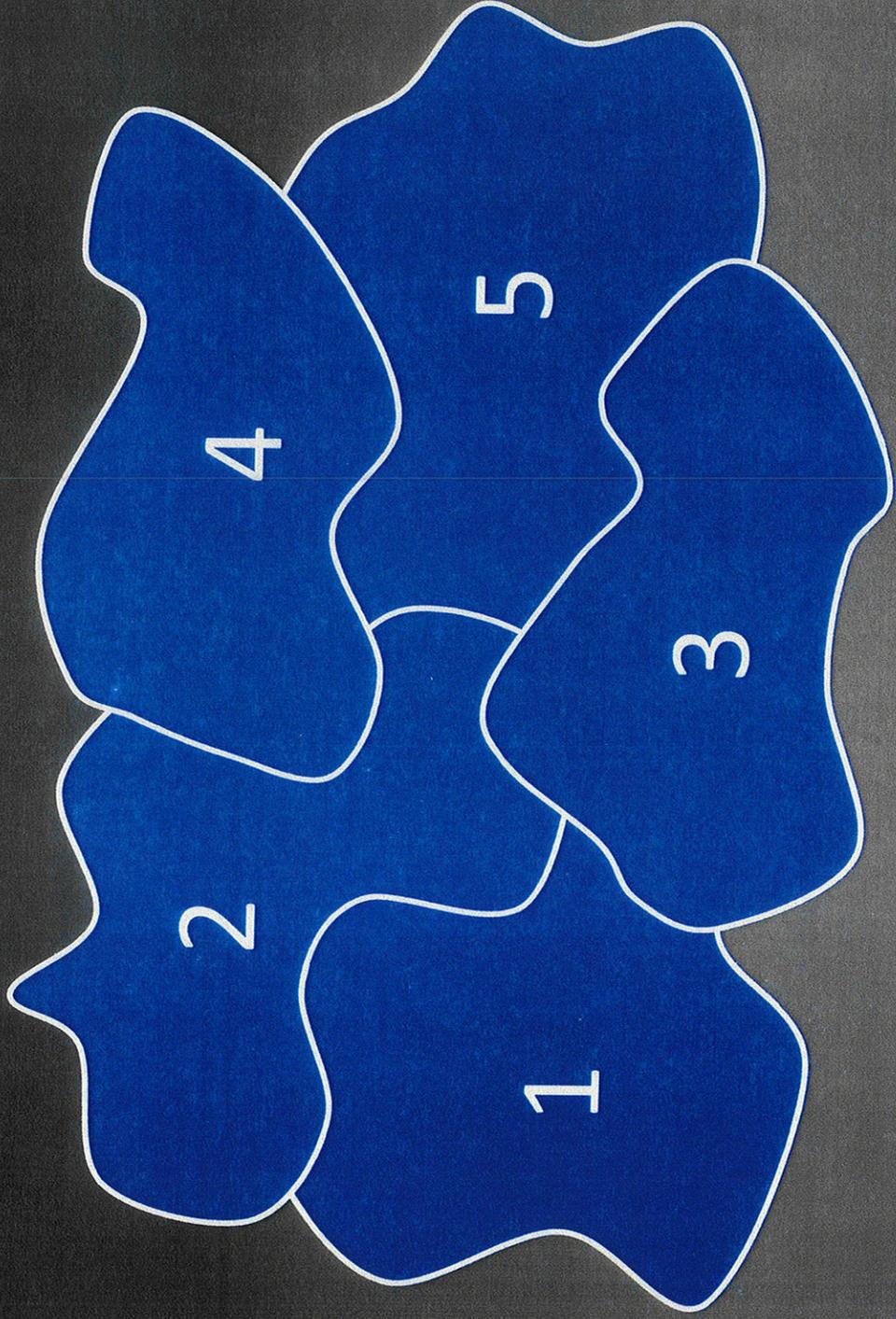
One basin – One Monitoring Entity

Multiple Monitoring Entities collect and report groundwater elevation data for their portion of a basin



One basin – Five Monitoring Entities (1-5) which are also the collecting agencies

Umbrella Monitoring Entity coordinates and reports groundwater elevation data collected by multiple agencies within a basin or portion of a basin



One basin – One Monitoring Entity – Five collecting agencies (1-5)