



## Ground Water Discharge Plan Application

(Revised July 1997)

1. Name of discharger or person legally responsible for discharge (owner/ operator), refer to ARSD 74:54:02:06 (1):

Address: \_\_\_\_\_  
 \_\_\_\_\_

Telephone: \_\_\_\_\_

Local representative or contact person if different from above:

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

Address: \_\_\_\_\_  
 \_\_\_\_\_

Telephone: \_\_\_\_\_

2. Legal Location of Discharge Facility, refer to ARSD 74:54:02:06 (2)

County \_\_\_\_\_, \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4, Section \_\_\_\_\_,  
 Township \_\_\_\_\_, Range \_\_\_\_\_

3. Refer to ARSD 74:54:02:06 (3)

Name of facility and/or project \_\_\_\_\_

Estimated Project life \_\_\_\_\_ years

Type of operation, facility or development.

A.  New facility                       Modification of existing facility

Concentrated Animal Feeding Operation

Industrial (i.e. chemical manufacture, metal manufacturing wood treatment, photo processing, printing, paper mills, etc.)

Municipal waste

Mining

Other (i.e. agricultural, silvicultural, gravel washing, rock crushing Activities, etc.)  
Specify \_\_\_\_\_

Description of operation. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Name, location (1/4, 1/4, 1/4, Section, Township, and Range), and description of all wells (existing, abandoned, or proposed), water bodies, drainages, natural or man-made structures, and water usage (past, present, or future) within a one-mile radius of the discharge site. *Refer to ARSD 74:54:02:06 (4).*

Wells - existing, abandoned, proposed, *refer to ARSD 74:54:02:06 (12)*

<u>Name</u>	<u>Location</u>	<u>Description</u>	<u>Status</u>	<u>Usage</u>

Water Bodies and Drainages

<u>Name</u>	<u>Location</u>	<u>Description</u>	<u>Status</u>	<u>Usage</u>

Structures

<u>Name</u>	<u>Location</u>	<u>Description</u>	<u>Status</u>	<u>Usage</u>

***The above information MUST be included on a plat map and attached to the application.***

5. A. Geologic Description - discussion must include:
  1. Structural Geology - regional and local
  2. Stratigraphy - description of geographic formations and thickness  
- soil types, thickness, depth to bedrock, cation exchange capacity, and attenuation capabilities.
  3. Geomorphology (topography)
  4. Land use
  
- B. Hydrologic description - discussion must include:
  1. Depth to ground-water or aquifer - must include all sources, description of the source, flow directions and gradients, well logs must be included.
  2. The ground-water most likely to be affected by the discharge - description to include the name of the aquifer, saturated thickness, flow direction, porosity, hydraulic conductivity, and other flow characteristics, hydraulic connection with other aquifers or surface sources, recharge information, water in storage, usage, and the projected aerial extent of the aquifer. *Refer to ARSD 74:54:02:06 (11).*
  3. The quality of all water sources in accordance to the parameters listed in *ARSD 74:54:01:03 and 74:54:01:04*, inclusive. Future monitoring sites will be required to submit sampling data upon completion.

Source

<u>Parameter</u>	<u>Concentration (mg\L)</u>
_____	_____
_____	_____

4. Flooding potential of the site, the 100 year flood plain, if applicable, and any protection measures. *Refer to ARSD 74:54:02:06 (14).*
  
- C. Agricultural Description - if applicable, the discussion must include land use; types of crops produced; irrigation, if used; locations of livestock confinement areas (existing or abandoned).

6. Description of construction, modification or operation of discharge system to include a quality assurance/quality control plan for construction. Copies of plans and specifications relating to construction, modification, and operation of discharge systems, including materials specifications provided by the manufacturer, must be submitted to the Department of Environment and Natural Resources. *Refer to ARSD 74:54:02:13.*

The description must include the means of discharge (to a lagoon, cropland, septic tank-leach field, other - specify), the quantity, the quality, and the description of treatment, if any, prior to discharge. *Refer to ARSD 74:54:02:06 (6) and (10).*

Quantity

Average Volume discharged \_\_\_\_\_ gallons per day  
Maximum Volume discharged \_\_\_\_\_ gallons per day  
Number of days per year that facility will discharge. \_\_\_\_\_

If more than one discharge point exists, list the discharge volume (average and maximum) for each source in gallons per day.

Quality, refer to ARSD 74:54:01:03 and 74:54:01:04

Before Treatment

<u>Parameter</u>	<u>Concentration (mg/L)</u>
_____	_____
_____	_____
_____	_____

After Treatment - the quality of the discharge after treatment must be justified by the laboratory testing and calculation. If calculations are used, they must be submitted with the application. If more than one type of discharge, the quality for each must be submitted. composites of more than one individual discharge streams will not be accepted.

<u>Parameter</u>	<u>Concentration (mg/L)</u>
_____	_____
_____	_____
_____	_____

7. What conditions naturally exist, and what actions will the discharger take to assure that the discharge can be controlled and will not migrate into or adversely affect the quality of any waters of the state. This discussion should address chemical loading, attenuation, dilution, methods to minimize ground water discharge (i.e., synthetically lined ponds with leak detection), and methods for detecting system failures. *Refer to ARSD 74:54:02:06 (7) and 74:54:02:21.*
8. If applicable, describe the Perimeter of Operational Pollution (POP), and any Geologic or hydrological information used to determine the dimensions of the POP. A social and economic justification for the POP must be included. A plat map showing the proposed dimensions of the POP, monitoring points for the POP, and the compliance monitoring point must be included. *Refer to ARSD 74:54:02:06 (8), 74:54:02:11, and 74:54:02:17.*
9. *Refer to ARSD 74:54:02:06 (9) and 74:54:02:20*, a monitoring plan to include:
  - A. The ambient water quality of the discharge site in accordance with ARSD 74:54:02:18.
  - B. A quality assurance/quality control plan for sampling, well construction, or other effluent or leachate monitoring devices (e.g., lysimeters or tensiometers).

- C. A quality assurance/quality control plan for laboratories used by the operator.
  - D. an operational monitoring plan to address monitoring sites, parameters to be measured, a monitoring schedule, and reporting schedule.
  - E. Post closure monitoring plan to address monitoring sites, parameters to be measured, a monitoring schedule, and reporting schedule.
10. Define an operational compliance effluent (discharge stream) sampling plan. Include parameters to be sampled, a monitoring schedule, and the means or devices used for measurement of the rate of discharge (flow monitoring) . Also address a reporting schedule of the discharge. *Refer to ARSD 74:54:02:06 (13), 74:54:02:20 and 74:54:02:22.*
  11. Define an operation and a post-closure contingency plan to bring the facility into compliance if the permitted allowable limits are exceeded. *Refer to ARSD 74:54:02:06 (15), 74:54:02:22 and 74:54:02:27.*
  12. Define methods and procedures for inspections of facility operation and for detection of system failures. The discharger must include a notarized statement granting permission to inspect in accordance with ARSD 74:50:03:03. The document must be signed by a person legally responsible for the facility. *Refer to ARSD 74:54:02:06 (16).*

**NOTE: . *To demonstrate that the ground-water standards will not be violated, and waters of the State will be protected, additional information may be requested of the discharger.***

I certify that I am a person (the owner and/or operator) legally responsible for this facility, that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete and accurate.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Person Signing

\_\_\_\_\_  
Title