



**Department of Environmental Quality  
Office of Land and Water Resources  
P. O. Box 2309  
Jackson, MS 29225-2309**

## **GENERAL PERMIT**

**TO WITHDRAW Groundwater from the Mississippi River Valley Alluvial Aquifer  
FOR BENEFICIAL USE  
Agriculture and Enhancement of Wildlife Habitat**

This groundwater withdrawal general permit is issued in accordance with the provisions of the Mississippi Water Laws, Mississippi Code Sections 51-3-1, *et seq.* (1972 as amended), and the regulations and standards as promulgated thereunder. Whether or not specifically named in a certificate of permit coverage under this general permit or in the applications for such permit coverage, anyone using water from the diversion/withdrawal point described in a certificate of permit coverage shall do so in compliance with the provisions of this general permit. Neither a certificate of permit coverage under this general permit, nor any authority conferred hereby, may be sold, conveyed, encumbered, assigned, or otherwise aliened, for any period of time or under any conditions whatsoever. This general permit may not be modified, transferred, or revoked without prior action by the Permit Board. Any attempts to modify, transfer or revoke this general permit or a certificate of permit coverage under this general permit, or to take any other action on this general permit or a certificate of permit coverage under this general permit, shall be invalid and unenforceable and may result in immediate revocation or suspension of the certificate of permit coverage. The holder of a certificate of permit coverage under this general permit shall at all times be responsible for adherence to the terms and conditions of this general permit. No agreement between the certificate of permit coverage holder and any other party shall affect the obligations and liabilities of the certificate of permit coverage holder.

This general permit for groundwater withdrawal shall automatically renew for an additional five-year term upon its expiration date. The certificates of permit coverage issued hereunder with terms surpassing the initial expiration date shall remain valid under such renewed general permit until the expiration date on each respective certificate of permit coverage. Provided however, that the Permit Board reserves the right to rescind or cancel this general permit if such action is necessary to effectively and efficiently manage, protect, and utilize the water resources of Mississippi. Authorization is hereby granted to divert/withdraw water for the beneficial use designated herein, and for no other purpose, subject to the terms, conditions, and limitations in Attachment I.

Permit No.: MRVA-003

Issued: October 1, 2021

Expires: September 30, 2026

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Chris Wells, Executive Director  
Mississippi Department of Environmental Quality

# ATTACHMENT I

## Special Terms and Conditions

- I. **Period of Coverage.** Coverage under this General Permit shall be valid for five (5) years from the issuance date of coverage specified on the Certificate of Coverage. The Permit Board reserves the right to rescind or cancel this General Permit if such action is necessary to effectively and efficiently manage, protect, and utilize the water resources of Mississippi.
- II. **Quantity of Water that May Be Withdrawn.** The volume of water that may be withdrawn and applied per acre during any calendar year covered under this General Permit shall be dependent upon the beneficial use of the water, as follows:
  - a. Up to 1.5 acre-feet per acre per year may be applied to row crops;
  - b. Up to 3.0 acre-feet per acre per year may be applied to rice;
  - c. Up to 5.0 acre-feet per acre per year may be withdrawn for all types of aquaculture except fingerlings;
  - d. Up to 7.0 acre-feet per acre per year may be withdrawn for raising fingerlings;
  - e. Up to 1.0 acre-feet per acre per year may be withdrawn for enhancement of wildlife habitat.
  - f. The permitted volume each year is cumulative depending on all applicable beneficial uses. Example: If rice is grown on a 100-acre field and the same field is later flooded for wildlife enhancement, the permitted volume of water would be 400 acre-feet per acre. (100 acres of rice x 3.0 acre-feet per acre per year = 300 acre-feet/year; 100 acres of wildlife enhancement x 1.0 acre-feet per acre per year = 100 acre-feet/year. 300 acre-feet/year + 100 acre-feet/year = 400 acre-feet/year, total permitted volume for the year.)
  - g. The permitted volume of water applied to an assigned acreage for a particular beneficial use or crop type cannot be exceeded whether or not multiple water sources are used. Conjunctive use of available water resources (involving both groundwater and surface water) is encouraged. For example, if a water well and a surface water intake are used conjunctively to flood a 100-acre rice field, the cumulative permitted volume of water cannot exceed 300 acre-feet/year, regardless of what proportion is pumped from each source. The same principle holds if multiple wells are used to cover an assigned acreage.
- III. **Notification of Address Changes.** As per MDEQ regulation 11 Miss. Admin. Code Part 7, Chapter 1, Rule 1.7 (A), all permittees and licensees shall inform MDEQ of any address changes within fifteen (15) days of any change of address, and must readily accept mail sent to them from the Commission, MDEQ, or the Permit Board.
- IV. **Implementation and Documentation of Required Water Efficiency Practices.** By no later than one (1) year from the issuance date of coverage under this General Permit, the permittee shall implement the required minimum level of water efficiency practices specified in Tables 1, 2 and 3 below and submit documentation to MDEQ, Office of Land and Water Resources (OLWR), on a form and in a manner prescribed by the OLWR that the required practices have been implemented. Failure to comply with the intent of these provisions will result in enforcement actions and/or revocation of the groundwater withdrawal Certificate of Coverage.

- V. **Compliance Inspections.** At reasonable times, including during the growing season and during irrigation events, if necessary, the permittee shall allow the Permit Board staff or an authorized representative upon presentation of credentials to enter upon the premises where a permitted well and the required associated water efficiency practices (see applicable tables below) are located and inspect the well, equipment, practices, and operations required under the conditions of this general permit; or, if requested, the permittee shall cooperate with the Permit Board staff in conducting a virtual inspection using commonly available technology. Any such inspection will be for the specific permitted acreage associated with the permitted well, not for a farm or farmer. MDEQ may use satellite imagery to remotely check compliance with certain required water efficiency practices when applicable. Any apparent findings of noncompliance based on imagery would have to be confirmed by other means.

**Table 1. Options for Required Water Efficiency Practices for Crops**

<p><b>The party with coverage under this general permit must implement one of the two alternatives listed below if the permitted well is used for irrigation of crops.</b></p>	
<p><b><u>Alternative 1 for Crops:</u></b></p>	
<b>Practice Name</b>	<b>Practice Description</b>
<b>Sprinkler System or Pivot</b>	Use of a sprinkler system to apply water by means of nozzles under pressure (e.g., a center pivot) to the entire acreage associated with the permitted well
<p><b><u>Alternative 2 for Crops:</u></b></p> <p>Implementation of at least three (3) of the following eleven (11) practices</p>	
<b>Practice Name</b>	<b>Practice Description</b>
<b>1. Precision land-forming and/or perimeter pads and pipes</b>	Precision land-forming is the reshaping of the surface of land to planned grades to permit uniform and efficient application of surface irrigation water without significant erosion, loss of water quality, or damage to soil and crops. Perimeter pads and pipes are structures that are a component of a water management system to control the stage, discharge, distribution, delivery or direction of water flow.
<b>2. Use of a Computerized Hole Selection design program for the entire acreage associated with the permitted well</b>	The computerized hole selection program, such as Pipe Planner, must provide for the optimum distribution of hole locations and sizes along poly-pipe using pipe diameter, pipe pressure, furrow spacing, pipe elevations, row lengths, and system flow rates in order to generate tail-water in the narrowest time frame possible and allow the well to run less total time. Upon inspection, the permit holder must be able to provide documentation or demonstrate how the computerized hole selection process was implemented.
<b>3. Irrigation scheduling using either A., B., or C. below:</b>	
<b>A. Soil moisture sensor data</b>	Soil moisture sensor data from a soil moisture monitoring device is used to determine the soil moisture and to time irrigations. At least one soil moisture sensor must be utilized within a one-mile radius of each well for which this practice is used. Upon inspection, the permit holder must be able to provide documentation or demonstrate how the soil-moisture sensor data are used for irrigation scheduling.
<b>B. Water-level indicating device</b>	Automatic or manual water level indicating device is used to determine level of ponding in a rice field to trigger irrigation only when needed to keep the field flooded, to allow for rainfall harvesting. Upon inspection, the permit holder must be able to provide documentation or demonstrate how the water level indicating device is used for irrigation scheduling.
<b>C. Weather Station meeting NRCS EQUIP Manual Requirements for Practice 449</b>	The weather station will be located than no farther than one mile from the permitted well and will record each of the following (at a minimum of four times per hour): high and low temperature, precipitation, humidity, wind speed and duration, and solar radiation. Upon inspection, the permit holder must be able to provide documentation or demonstrate how the weather station data are used for irrigation scheduling.

<b>Practice Name</b>	<b>Practice Description</b>
<b>4. Surge Valve on all acres covered by the permitted well</b>	An automated water control surge valve that varies irrigation cycles in a field to improve distribution uniformity and minimize tail-water losses. Upon inspection, the permit holder must be able to provide documentation or demonstrate how the surge valve functions to conserve water.
<b>5. Tail-Water Recovery System</b>	A tail-water recovery system to capture tail-water from one or more fields and reapply the captured water in order to reduce the amount of groundwater pumped from the permitted well. The system must meet NRCS design criteria, including providing at least twelve (12) acre-feet of storage for a 40-acre field. The system must include a water storage structure (typically a dug pit), a pumping plant, and underground distribution line. The design and construction should conform to NRCS MS-ENG-436 guidance. Upon inspection, the permit holder must be able to provide documentation or demonstrate that water from the tail-water recovery system is reapplied on the permitted acreage to reduce the amount of groundwater pumped from the permitted well.
<b>6. Surface water</b>	Conjunctive use of surface water from a permitted surface water intake used to reduce the amount of groundwater pumped from the permitted well. Upon inspection, the permit holder must be able to provide documentation or demonstrate that surface water from the permitted surface water intake is used on the permitted acreage to reduce the amount of groundwater pumped from the permitted well.
<b>7. Zero Grade</b>	Reshaping the surface of land to a planned grade of zero or modified zero to allow water depth to be the same over the entire field, easing the management necessary to maximize rainfall harvesting.
<b>8. Alternate wetting and drying of rice fields</b>	The fields are flooded and then allowed to dry-down until little or no water is standing in the field, but the soil is maintained in a saturated condition. The fields are then re-flooded, and the cycle is repeated throughout the growing season. The dry-down periods allow for rainfall harvesting. Upon inspection, the permit holder must be able to provide documentation or demonstrate that alternate wetting and drying is implemented on the permitted acres.
<b>9. Multiple inlet water distribution</b>	Water is delivered to individual cuts; therefore, the cuts do not have to be filled to their overflow point, allowing for rainfall harvesting. The direct delivery of water to individual cuts also allows water to be topped off in leaky cuts, without having to raise the water in all cuts above. Additional benefits include quicker flushes and flood establishment. Upon inspection, the permit holder must be able to provide documentation or demonstrate that multiple inlet water distribution is being implemented as required by the practice description.
<b>10. A timer or automatic shut off</b>	A timer or automatic shut off that can remotely or automatically shut off wells in order to provide a direct control of the time of irrigation, to assist in the efficient use of irrigation water, and to enable wells and power plants to be stopped at the desired time without an additional visit to the well. This provides precise control of water applied and pumped. Mechanical/electronic timers shall have a 24-hour ability.
<b>11. Flowmeter</b>	A fixed flowmeter meeting MDEQ requirements and a report of annual metered water use to MDEQ by February 1st of each year.

**Table 2. Options for Required Water Efficiency Practices for Aquaculture**

<b>The party with coverage under this general permit must implement one of the two alternatives listed below if the permitted well is used for aquaculture.</b>	
<b><u>Alternative 1 for Aquaculture:</u></b>	
<b>Practice Name</b>	<b>Practice Description</b>
<b>6/3 Water Management</b>	The 6/3 water management practice is a planned management program by which pond water levels are allowed to fall at least six (6) inches below the overflow level before pumping is initiated. Pumping is terminated when the water level reaches three (3) inches below the outflow point. This practice leaves three (3) inches available for rainfall capture. Upon inspection, the permit holder must be able to provide documentation or demonstrate how the 6/3 water management practice functions.
<b><u>Alternative 2 for Aquaculture:</u></b>	
<b>Practice Name</b>	<b>Practice Description</b>
<b>Flowmeter</b>	A fixed flowmeter meeting MDEQ requirements and a report of annual metered water use to MDEQ by February 1st of each year.

**Table 3. Options for Required Water Efficiency Practices for Wildlife**

<b>The party with coverage under this general permit must implement one of the two alternatives listed below if the permitted well is used enhancement of wildlife habitat.</b>	
<b><u>Alternative 1 for Wildlife:</u></b>	
<b>Practice Name</b>	<b>Practice Description</b>
<b>Water Control Structure</b>	A water control structure, such as a slotted board riser, that captures rainfall and runoff to the greatest extent practical. It is recommended that the structure be closed by (a) November 1 or (b) as soon after harvest as possible, whichever is earlier.
<b><u>Alternative 2 for Wildlife:</u></b>	
<b>Practice Name</b>	<b>Practice Description</b>
<b>Flowmeter</b>	A fixed flowmeter meeting MDEQ requirements and a report of annual metered water use to MDEQ by February 1st of each year.