

567—52.4(455B) Conditions on withdrawals from groundwater sources.

52.4(1) Withdrawals from unconfined aquifers adjacent to streams draining less than 50 square miles. Withdrawals of water from unconfined aquifers adjacent to streams draining less than 50 square miles shall be subject to the following conditions:

a. Two hundred gallon per minute (200 gpm) restriction. New withdrawals for a consumptive use at any location within ¼ mile (1320 feet) of a stream shall not be in excess of 200 gallons per minute (200 gpm), except when the applicant can conclusively demonstrate by conducting appropriate tests that withdrawals in excess of 200 gallons per minute (200 gpm) will not reduce the flow of the stream. However, the department may authorize withdrawals in excess of 200 gallons per minute (200 gpm) for storage purposes during high stream flows.

b. Protected flow restriction. Except as provided in 52.4(1)“c” and 52.4(1)“e,” withdrawals for consumptive uses, with the exception of community public water supplies, at any point within 1/8 mile (660 feet) of a stream shall be considered withdrawals from the stream and shall cease when the stream is below the protected flow designated in rule 567—52.8(455B), unless the applicant or permittee can conclusively demonstrate by conducting appropriate tests that the withdrawal will not reduce the flow of the stream.

c. Border stream-interior stream confluence restriction. Withdrawals for consumptive uses, with the exception of community public water supplies, from the alluvial aquifers below the floodplains of streams bordering the state at any point within 1/8 mile (660 feet) of any interior stream shall cease when the flow of such interior stream is at or below the seven-day, one-in-ten year (7Q10) low flow, except as provided in 52.4(1)“d.”

d. Other conditions. Notwithstanding 52.4(1)“a” to 52.4(1)“c,” other conditions may be imposed that are necessary to ensure adequate protection of water supplies for ordinary household, livestock, and domestic uses, for fish and wildlife, for recreational use, for the preservation and enhancement of aesthetic values, and for other uses of a public nature.

e. Replacement water exemption. Paragraphs 52.4(1)“a” to 52.4(1)“c” shall not apply to withdrawals for consumptive uses from an unconfined aquifer if the permittee discharges replacement water into such stream or tributary thereto at rates sufficient to offset the consumptive withdrawals and the department approves the method and location of discharge.

f. Exemption until July 1, 1991, for certain users. Rescinded IAB 6/7/06, effective 7/12/06.

52.4(2) Withdrawals from unconfined aquifers adjacent to streams draining 50 or more square miles. Withdrawals of water from unconfined aquifers adjacent to streams draining 50 or more square miles shall be subject to the following conditions:

a. Protected flow restriction. Withdrawals for consumptive uses, with the exception of community public water supplies, at any point within 1/8 mile (660 feet) of a stream shall be considered withdrawals from the stream and shall cease when the stream is below the protected flow designated in rule 567—52.8(455B), except as provided in 52.4(2)“c” to 52.4(2)“f.”

b. Seven-day, one-in-ten-year low flow restriction. Withdrawals for consumptive uses, with the exception of community public water supplies, at any point located between 1/8 mile (660 feet) and ¼ mile (1320 feet) of a stream, other than a stream bordering the state, shall cease when the stream flow is at or below the seven-day, one-in-ten-year low flow (7Q10), except as provided in 52.4(2)“c” to 52.4(2)“f.”

c. Border stream-interior stream confluence restriction. Withdrawals for consumptive uses, with the exception of community public water supplies, from the alluvial aquifers below the floodplains of streams bordering the state at any point within 1/8 mile (660 feet) of any interior stream shall cease when the flow of such interior stream is at or below the seven-day, one-in-ten-year (7Q10) low flow, except as provided in 52.4(2)“d.”

d. Other conditions. Notwithstanding 52.4(2)“a” to 52.4(2)“c,” other conditions may be imposed if they are necessary to ensure adequate protection of water supplies for ordinary household, livestock, and domestic uses, for fish and wildlife, for recreational use, for the preservation and the enhancement of aesthetic values, and for other uses of a public nature.

e. Replacement water exemption. Paragraphs 52.4(2)“a” to 52.4(2)“c” shall not apply to withdrawals for consumptive uses from an unconfined aquifer, if the permittee discharges replacement water into such stream or tributary thereto at rates sufficient to offset the consumptive withdrawals and the department approves the method and location of discharge.

f. Exemptions from low flow restrictions. The restrictions of 52.4(2)“a” to 52.4(2)“d” may be waived if the applicant or permittee can conclusively demonstrate by conducting tests to demonstrate that the withdrawal will not reduce the flow of the adjacent stream. The plan for testing must be approved by the department prior to the applicant’s or permittee’s conducting the tests.

g. Exemption until July 1, 1991, for certain users. Rescinded IAB 6/7/06, effective 7/12/06.

52.4(3) Withdrawals from the Cambrian-Ordovician (Jordan) aquifer. Withdrawals of water from the Cambrian-Ordovician (Jordan) aquifer, including the St. Peter sandstone formation, the Prairie du Chien group and the Jordan sandstone formation, shall be subject to the following conditions:

a. Two-hundred-gallon-per-minute restriction on irrigation, recreational, or aesthetic uses. New withdrawals of water for irrigation, recreational, or aesthetic uses shall not be in excess of 200 gallons per minute. Existing permits for irrigation, recreational and aesthetic uses that authorize withdrawal rates in excess of 200 gallons per minute may be modified or rescinded by the department if, as determined by the department, any well in the vicinity experiences loss of water due to pumping or if the pumping water level is reduced to or below the levels described in paragraphs “f” and “g” of this subrule.

b. Two-thousand-gallon-per-minute restriction on industrial or power generation uses. New withdrawals of water for industrial or power generation uses at one plant location shall not exceed 2,000 gallons per minute. Existing permits for industrial or power generation use that authorize withdrawal rates in excess of 2,000 gallons per minute may be modified or rescinded by the department if any well in the vicinity experiences loss of water due to pumping or if the pumping water level is reduced to or below the levels described in paragraphs “f” and “g” of this subrule.

c. Limited cooling and geothermal use. No once-through (single pass with disposal to storm sewer or equivalent) cooling water or geothermal usage is allowed. Withdrawals for geothermal purposes are prohibited unless 100 percent of the withdrawn water is reinjected into the aquifer in accordance with the requirements of the department.

d. Jordan aquifer high-capacity permits and wells. Water use permits for the Jordan aquifer shall be issued on a five-year permit cycle. The water use permit for wells expected to pump over 25,000 gallons per day from the Jordan aquifer must be obtained from the department before any water well construction permit is issued. After the water use permit has been obtained, the county may issue a Cambrian-Ordovician (Jordan) aquifer water well construction permit for any nonpublic water supply system unless that well is located in one of the protected-source areas listed in 567—subrules 53.7(2) and 53.7(3). The department may issue a Cambrian-Ordovician (Jordan) aquifer water well construction permit for a public water supply system or a well located in the protected source areas listed in 567—subrules 53.7(2) and 53.7(3). All driller’s logs for water use wells completed in the Jordan aquifer shall be submitted to the department and the Iowa Geological Survey.

e. Tier 1 Jordan wells. A Jordan water use well is classified as Tier 1 when pumping water levels have not reached Tier 2 or Tier 3 levels described in paragraphs “f” and “g” of this subrule. Permittees with Tier 1 Jordan wells shall follow standard water use reporting procedures for the Jordan aquifer pursuant to rule 567—52.6(455B).

f. Tier 2 Jordan wells. A Jordan well is classified as Tier 2 when the pumping water level measured at the well declines over 300 feet below the 1978 Horick and Steinhilber potentiometric surface or the pumping water level declines over 50 percent from the 1978 Horick and Steinhilber potentiometric surface and the top of the Jordan aquifer, whichever is more conservative. Permittees with Tier 2 wells shall comply with paragraph “h” of this subrule.

g. Tier 3 Jordan wells. A Jordan well is classified as Tier 3 when the pumping water level measured at the well declines over 400 feet below the 1978 Horick and Steinhilber potentiometric surface or the pumping water level declines over 75 percent from the 1978 Horick and Steinhilber potentiometric surface and the top of the Jordan aquifer, whichever is more conservative. Permittees with Tier 3 wells shall comply with paragraph “i” of this subrule.

h. Site-specific water use reduction plan for Tier 2 Jordan wells. Permittees with Jordan wells that have reached the Tier 2 level pursuant to paragraph “f” of this subrule shall develop a water use reduction plan and submit the plan to the department. The plan must be reviewed and approved by the department. The water use reduction plan shall set a defined usage percent reduction target that will minimize Jordan aquifer withdrawals and prevent the decline of the water level from reaching the Tier 3 category pursuant to paragraph “g” of this subrule. Guidance for writing and implementing water use reduction plans is available in paragraph “k” of this subrule. If the water use reduction plan is not implemented, the department may reduce the permitted water use allocation, pursue enforcement of the permit, or rescind the permit.

i. Enhanced site-specific water use reduction plan and predictive model for Tier 3 Jordan wells. Permittees with Jordan wells that have reached the Tier 3 level pursuant to paragraph “g” of this subrule shall develop an aggressive water use reduction plan using an approved predictive model that will lead to recovery of the pumping water level to elevations above Tier 3 levels. The plan and model predictions shall be reviewed and approved by the department. If water levels continue to decline beyond the Tier 3 level, the department may reduce the permitted water use allocation, pursue enforcement of the permit including aspects of the water use reduction plan, or rescind the permit.

j. Variances. Variances from the restrictions imposed by these rules will be considered by the department through the procedures found in rule 567—50.9(455B) and in 561—Chapter 10.

k. Resources for developing water use reduction plans. The resources suggested by and available from the department as guidance for developing water use reduction plans are listed in paragraph 52.9(3)“d.”

52.4(4) Withdrawals from the Dakota Sandstone formation of the Cretaceous system. The department may issue permits authorizing withdrawals of water from the Dakota Sandstone formation of the Cretaceous system for all beneficial uses under the following conditions:

a. Inventory of nearby wells by applicant. An applicant who requests authorization for withdrawals of water at a maximum rate in excess of 200 gallons per minute shall conduct and submit an inventory of nearby wells as described in 567—paragraph 50.6(1)“b.”

b. Observation wells. In addition to the requirement of 52.6(3) for construction of an access port to allow measurement of water levels in each production well, an applicant or permittee may also be required to construct, maintain, and monitor observation wells as a condition of obtaining or keeping a water permit if the department finds observation wells necessary to monitor the effects of the proposed or authorized withdrawals of water. Observation wells must be properly constructed and responsive to water level fluctuations in the aquifer. Plans for and monitoring of the observation wells must be approved by the department.

c. Prohibition of excessive water level declines. If the department determines that withdrawals of water from the Dakota Sandstone formation of the Cretaceous system within a designated geographical area are causing water level declines which constitute a significant threat to the public interest in the availability of water for sustained beneficial use of the aquifer, renewals of permits shall be denied, and permits shall be modified or canceled in accordance with procedures in Iowa Code section 455B.271, as necessary to protect the aquifer for sustained use.

d. Priorities in renewal, modification and cancellation of permits. If permit renewals must be denied or if permits must be modified or canceled to prevent or abate water level declines which constitute a significant threat to the public interest in the availability of water for sustained beneficial use of the aquifer, withdrawals of water for community public water supplies shall have priority over withdrawals of water for other regulated uses. The priority list for water use can be found in 52.10(3).

This rule is intended to implement Iowa Code sections 455B.261, 455B.264, 455B.266, 455B.271 and 455B.272.

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