

MEMORANDUM

TO: Water Resources Commission

FROM: Tom Paul, Field Services Division Administrator

SUBJECT: Agenda Item IV, November 21, 2003
Water Resources Commission Work Session

Deschutes Mitigation Program Annual Implementation and Evaluation Report

I. Issue Statement

This report provides an evaluation of the implementation of the Deschutes Ground Water Mitigation Rules, OAR Chapter 690, Division 505; and Deschutes Basin Mitigation Bank and Mitigation Credit Rules, OAR Chapter 690, Division 521. The Water Resources Department is required, pursuant to these rules, to annually report on and evaluate the implementation of these rules. *This is an information report only; no Commission action is required.*

II. Background

Much of the mainstem Deschutes River and the Metolius River are designated State Scenic Waterways. Likewise, much of the mainstem Deschutes River and many of its tributaries contain instream water rights. The flows established for the Scenic Waterway and instream water rights are not always met. In addition, surface water in the Deschutes Basin is not available for most of the year due to prior appropriations. To compound the situation, the U.S. Geological Survey and Department's ground water study demonstrated a direct hydraulic connection between ground water and surface water in the Deschutes Basin Ground Water Study Area (Study Area). The study concluded that:

- ◆ Virtually all ground water not consumptively used in the Upper Deschutes Basin discharges to surface water near Pelton Dam;
- ◆ Virtually the entire flow of the Deschutes River at Madras is supported by ground water discharge during the summer and fall; and
- ◆ Ground water and surface water are directly linked, and removal of ground water will ultimately diminish streamflow.

Given these facts, new ground water uses in the Study Area would be prohibited without mitigation. To provide a framework under which the Department could approve new ground water uses in the Study Area, the Commission adopted the Deschutes Ground Water Mitigation Rules and the Deschutes Basin Mitigation Bank and Mitigation Credit Rules on September 13, 2002. These administrative rules provide for mitigation of impacts to scenic waterway flows and senior water rights while allowing additional qualifying appropriations of ground water. The rules also provide existing ground water right holders, whose rights are conditioned to allow for

regulation in favor of scenic waterway flows, with the option of providing mitigation to avoid future regulation for scenic waterway flows.

The three objectives of the Deschutes Basin Mitigation Program are to:

- ◆ Maintain flows for Scenic Waterways and senior water rights, including instream water rights;
- ◆ Facilitate restoration of flows in the middle reach of the Deschutes River and related tributaries; and
- ◆ Sustain existing water uses and accommodate growth through new ground water development.

The Deschutes Ground Water Mitigation Rules provide two options for ground water users to provide mitigation – completion of an individual mitigation project or acquisition of mitigation credits awarded by the Department based on the completion of a mitigation project.

The Deschutes Basin Mitigation Bank and Mitigation Credit Rules provide for the establishment of a mitigation credit system and mitigation banks to help facilitate transactions among holders of mitigation credits and persons interested in acquiring mitigation credits.

III. Discussion

The Department is required to annually report on and evaluate the implementation of the Deschutes Ground Water Mitigation Rules. This annual evaluation is done in coordination with the Oregon Department of Fish and Wildlife (ODFW), Department of Environmental Quality (DEQ), Division of State Lands (DSL), and Oregon Department of Parks and Recreation (ODPR). This evaluation includes consideration of new ground water appropriations, streamflow monitoring, and mitigation activity to determine whether scenic waterway flows and instream water right flows in the Deschutes Basin continue to be met on at least an equivalent or more frequent basis as compared to long-term representative base period flows established by the Department. The Department is also required to annually report on the implementation and management of the mitigation credits system under the Deschutes Basin Mitigation Bank and Mitigation Credit Rules.

Since the mitigation rules were adopted last September, one new ground water permit has been issued under the rules. Mitigation activity has been insufficient to evaluate and determine how streamflows are responding and how the mitigation credit system is working. However, over the past year, the Department has been developing the process and structure to implement the rules and has recently begun moving pending ground water applications through the mitigation process.

A. Deschutes Ground Water Mitigation Rules - Implementation Activities

1. The mitigation rules require ground water users to provide mitigation within one of the zones of impact identified by the Department, depending on the location of the users impact. The purpose of these zones of impact is to target mitigation in and above stream reaches, on a subbasin level, where impact on streamflows by ground water pumping is expected to occur. The Department has identified the zones of impact, which include a general zone of impact anywhere in the Deschutes Basin above the Madras gage and "local" zones of impact in the Squaw Creek, Middle Deschutes River, Crooked River, Metolius River, Little Deschutes River, and the Upper Deschutes River subbasins. A map of the zones is provided as Attachment 1. Additional zones of impact may be identified as needed.
2. On August 25, 2003, the Department reached a significant milestone by mailing the Notice of Mitigation Obligation to most of the pending ground water permit applicants. This letter described the amount of mitigation needed for the proposed use; the zone of impact in which mitigation needs to be provided; and how the applicant could respond to that notice with proposed mitigation. The amount of mitigation to be provided by ground water permit applicants, by rule, is based on the consumptive portion of the proposed ground water use.
3. Department staff will be developing similar information for holders of ground water permits that are subject to regulation for scenic waterway flows who choose to provide mitigation.
4. Department staff have integrated the review of mitigation into the ground water permit application review process, including a coordinated review of the ground water permit applications between the Department and ODFW, DEQ, ODPR, DSL, and Department of Agriculture (DOA). New report formats have been developed for Initial Reviews, Proposed Final Orders, Final Orders, and Ground Water Permits.
5. The review process for mitigation projects has been integrated into the application processes for the different types of mitigation projects; and a coordinated process for review of mitigation proposals has been developed between the Department and staff from ODFW, DEQ, DSL, DOA and ODPR. To determine the amount of water generated by a mitigation project (instream transfers, instream leases, and allocations of conserved water), the Department calculates the consumptive use of the originating water right and considers factors such as priority date. This allows for new ground water appropriations without increasing overall consumptive use that would reduce streamflows. For storage releases and aquifer recharge projects, the Department may consider the amount of water that could be available on an average annual basis to determine the amount of mitigation water generated by one of these types of potential mitigation projects.
6. On September 9 and 10, 2003, the Department hosted a mitigation workshop for ground water permit applicants to discuss the mitigation program and mitigation options available. The Deschutes Water Exchange (DWE) Mitigation Bank also participated in this workshop.

B. Deschutes Basin Mitigation Bank and Mitigation Credit Rules - Implementation Activities

1. The Water Resources Commission approved a mitigation bank charter for the DWE at its April 2003 meeting. The DWE Mitigation Bank must submit its first annual report on credit transactions to the Department by January 31, 2004. Annual review of the charter is expected to occur in April 2004.
2. The process to review mitigation credit projects has been established, including coordination with ODFW, DEQ, DSL, DOA, and ODPR.
3. Preliminary and Final Award of Mitigation Credits has been incorporated into the application review processes for the different types of mitigation credit projects identified in the rules.
4. One mitigation credit transaction has been completed since the rules were adopted. Hence, it is difficult to evaluate the program in detail. The few mitigation credit projects submitted took longer than normal to review as staff established the internal review structures for mitigation projects.

C. New Ground Water Appropriations and Mitigation Activities

A total of 70 applications for ground water use in the Deschutes Basin are pending. Seven of these applications were filed after the rules were adopted by the Commission. Attachment 2 provides a general description of the pending applications and permits for which mitigation is required.

Four mitigation projects have been approved since adoption of the rules — three instream lease applications and one permanent instream transfer. Detailed information on approved and pending mitigation projects is listed in Attachment 3, including information on mitigation credits held in reserve for instream leases. Review of mitigation projects, including coordination with ODFW, DEQ, ODPR, DSL and DOA, has proceeded fairly smoothly. Department staff continue to look for opportunities to improve the review process as more mitigation projects are submitted for review.

Since the mitigation rules were adopted, one ground water permit has been issued by the Department (Attachment 2). This permit was issued to the Sisters School District for the irrigation of 50 acres at 0.625 cubic feet per second (cfs). The application had a mitigation obligation of 84.5 acre-feet (credits) in the Squaw Creek Zone of Impact. The District obtained the necessary mitigation credits from the DWE Mitigation Bank. The credits provided to the District by the DWE are based on instream leases. For each mitigation credit based on an instream lease (and time-limited transfer), the mitigation bank is required to maintain an equivalent number of mitigation credits in reserve. Attachment 3 lists mitigation credit activity by zone of impact, including the balance of credits that must be maintained in reserve for each of the approved mitigation credit projects based on instream leases. In the Squaw Creek Zone of

Impact, sufficient mitigation credits were available for use by Sisters School District and to maintain a reserve of credits.

In response to the Notice of Mitigation Obligation, several applicants have submitted mitigation proposals to either complete a mitigation project or obtain mitigation credits. Department staff have been providing assistance to applicants to help them better understand the mitigation program and how to mitigate for their proposed ground water uses. The DWE Mitigation Bank has been proactive in contacting applicants, discussing mitigation opportunities through the bank, and providing support to the Department in educating ground water applicants about the mitigation program. The Department continues to look for additional workshop and education opportunities, including coordinated opportunities with the DWE.

The Department is developing information to share with existing conditioned ground water permit holders regarding mitigation, similar to the Notice of Mitigation Obligation provided to ground water permit applicants. The Department anticipates that some existing ground water right holders may choose to provide mitigation in order to avoid any future regulation for scenic waterway flows.

In addition to the annual review of the mitigation program, the Commission will be reviewing the mitigation program prior to January 1, 2008, or upon reaching 150 cfs of the 200 cfs cap on new appropriations. As part of this review, the Commission will be evaluating the program to determine whether the 200 cfs cap should be lifted or otherwise modified. With the issuance of the Final Order and Permit for Sisters School District, approximately 199 cfs of the 200 cfs allocation cap remains to be appropriated.

D. Mitigation and Streamflow Monitoring

The Department has developed a draft plan to monitor ground water use, mitigation, and streamflows in the Deschutes Basin. The draft monitoring plan is provided as Attachment 4. The primary objective of the plan is to track whether scenic waterway flows and instream water right flows continue to be met on at least an equivalent or more frequent basis as compared to the long-term representative base period flows as determined by the Department. The purpose of the monitoring plan is to also ensure that the balance between ground water use in each zone of impact and mitigation is being maintained. In developing this monitoring plan, Department staff sought input from ODFW, DEQ, DSL and ODPR. The monitoring plan includes a streamflow modeling element, a database tracking element, and the incorporation of yearly streamflow gaging records. Streamflows will be monitored, in part, by zone of impact.

Since only one new ground water permit and four mitigation projects have been approved, the Department is not able to evaluate the effect of new ground water use and mitigation activity on streamflows. However, the program is currently producing positive benefits as more mitigation water has been approved and protected instream than needed for the single ground water permit issued.

The Department is developing additional tools to aid in streamflow monitoring and to help determine whether the objectives of the rules are being met. These tools are discussed in greater detail in the draft monitoring plan (Attachment 4). One tool under development is a streamflow monitoring computer model, which will use long-term representative base period flows to determine how streamflows are responding to new ground water use and mitigation activity. The Department is also developing a database to track, by zone of impact, new ground water use and mitigation activity including mitigation credit transactions.

Summary

Implementation of the Deschutes Ground Water Mitigation Rules and Deschutes Basin Mitigation Bank and Mitigation Credit Rules is proceeding smoothly. With review processes in place, the Department is able to move ground water applications through the permit application and mitigation processes. Implementation activities will continue, including the development of a ground water use and mitigation tracking database and a streamflow monitoring model. These additional tools will enable the Department to monitor streamflows, new ground water appropriations, and mitigation activity to assure that mitigation obligations are being met and maintained and to determine whether scenic waterway and instream water right flows are met on an equivalent or more frequent basis as compared to the long-term representative base period flows. The database tool will also help the Department track and evaluate the mitigation credit system.

Attachments:

1. General Zones of Impact Map
2. Summary of Existing and Pending Ground Water Appropriations with Required Mitigation
3. Summary of Mitigation Activity by Zone of Impact
4. Draft Monitoring Plan

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