

MEMORANDUM

TO: Water Resources Commission

FROM: Barry Norris, Administrator
Technical Services Division

SUBJECT: Agenda Item II, April 17, 2003
Water Resources Commission Work Session

Status Report on Water Measurement and Reporting

I. Issue Statement

In 1999 the Department developed and recommended to the Commission a strategy for improving water measurement and reporting statewide. In 2000 the Commission concurred with staff recommendations and encouraged staff to proceed with implementation of the strategy at an accelerated schedule, where possible. This staff report provides an update on the implementation of this statewide water management strategy, especially in light of recent Commission discussion on the role of water measurement in long-term water supply management.

II. Background

In January 2000 the Commission endorsed a strategy for statewide water measurement. This strategy included a program to inventory significant diversions and conduct field assessments of these diversions. The strategy also included improvements to a number of other water measurement and reporting programs conducted by the Department.

Significant Diversions

The Department's strategy for increasing measurement statewide has been to focus limited staff on the largest diversions and diversions with the greatest potential impact on streams. Staff began with a statewide inventory of significant surface water diversions.

Significant water diversions were characterized as:

1. Surface water diversions that are required by the Department to measure or report through a water right condition (see attachment 2); or

2. Surface water diversions without a water right condition measurement requirement that are:
 - a. Greater than 5 cfs; or
 - b. Greater than 10% of the lowest monthly 50% exceedance flow as defined in the Department's water availability model, and greater than 0.25 cfs.

Other Measurement Activities

In addition to the significant diversion inventory and field assessments, the water measurement strategy also set forth a plan to improve implementation of other measurement programs of the Department. These programs include measuring ground water points of appropriation; managing the well net program and water use reporting program; conducting ground water and surface water hydrology investigations; collecting pump test measurements; and producing streamflow records.

III. Discussion

Water Use Measurement

Since 1995 water right permits have included a condition requiring measurement and reporting of use based on the quantity of water diverted under the permit, as described in the internal management directive in Attachment 2. Currently there are 6,650 points of diversion that have a permit condition requiring a measuring device, an increase of 23% since January 2001; and there are 2,465 points of diversion that have a permit condition requiring water use reporting, an increase of 9% since January 2001. Currently approximately 8% of surface water and ground water rights statewide are required to measure, either by statute for public entities or by permit condition. The 8% of water rights currently required to measure account for about 46% of the water that can be diverted statewide.

Significant Diversion Inventory

To complete the significant diversion inventory, staff have initially focused on inventory work in high priority streamflow restoration watersheds. These watersheds, shown in Attachment 1, were identified jointly with Oregon Department of Fish and Wildlife (ODFW) as the watersheds with the greatest biological needs and greatest restoration opportunity. In 2001 staff completed the inventory of significant diversions in the 280 priority watersheds and identified approximately 1,600 significant diversions. From an examination of the data developed, about 10% of the direct flow diversions in priority basins were found to be significant, and they divert about 50% of the total direct flow diverted. Once the inventory was complete for these watersheds, staff began site investigations of the surface water diversions to assess their status and inventory their physical characteristics.

Since January 2001 the number of priority basins identified by the joint ODFW/WRD effort has increased to 293 and the number of significant diversions identified within those priority basins has increased to 2,908. In 2000, when the Commission endorsed the water measurement strategy, the goal was for all significant diversions identified on the inventory to be field-assessed by April of 2005. To facilitate the field assessment activities, a web application for data input and a PDA (Personal Digital Assistant – handheld computer) application for data collection have been developed for use by field staff. The inventory and field assessments are proceeding according to schedule, and staff believe this target is still achievable.

Water Distribution

Since January 2001 the Department has issued 278 headgate notices requiring the installation of headgates and measuring devices. These devices aid watermasters in the distribution of water. Three were required in the Umatilla Basin, 235 in the Powder Basin, 38 in the Malheur Lake Basin, one in the Rogue Basin, and one in the South Coast Basin.

Measurement Funding

Staff continue to work to identify funding opportunities for installation of measurement devices at those sites needing them. To that end, the Department supported legislation during the 2001 Legislative Session to establish a measuring device cost-share fund. This measurement device fund would provide match funds for measurement device installation and repair. Although no General Funds were appropriated for the fund, the Department continues to look for financial support for this program. Since 1998 the Department has administrated a similar measurement improvement fund for irrigation districts that are within Bureau of Reclamation (Bureau) project areas. This program, funded by the Bureau, has provided \$35,000 per year on a 50% grant match basis. This has been a successful program, funding \$166,000 for 15 measurement projects for 14 irrigation districts since January 2001 (\$83,000 grant and \$83,000 match). Unfortunately, the Bureau indicates that funds are no longer available, and the program will be discontinued. Sufficient funding for the Bureau program and the measuring device cost-share fund would greatly help the Department meet its 2005 goal for measurement of significant diversion.

Water Use Reporting

Another task identified in the 1999 water measurement strategy was to make the Water Use Reporting database available to the public on the Department's website. Water use data for governmental entities is available as planned. The number of governmental entities that are required to report water use annually to the Department remains fairly constant around 720.

Staff have also assessed the Water Use Reporting program to find ways to improve compliance with reporting requirements. Significant improvements have been made in both reporting and accuracy compliance. One step to improving compliance has been the use of follow-up reminder notices sent to the water user. The compliance rate for government entity reporting is currently about 75% before reminder letters are sent and 85% after the letters are sent. The number of

other water users who are required to report use by permit condition has increased from 696 in January 2001 to 766 today. The compliance rate for these users is about 55% before follow-up reminder letters and 72% after the letters are sent. Staff have also consolidated water use reporting data from all entities that report. Water use information from this central database is linked to a water right condition database to facilitate compliance crosschecking.

Staff have also noted increased compliance as the result of follow-up reminder notices to ground water users who are required to measure and report static ground water levels. In January 2001 ground water users were required to report the static level in 1,576 wells. Today, the number of wells required by condition to report static levels is 1,917. Compliance before follow-up reminder letters is about 38%, and 56% after reminder letters are sent.

While there have been significant improvements in reporting compliance, a number of water users do not report, even when Department staff expend the resources to provide follow-up reminder letters. In addition, recent staff reductions have made it necessary to suspend the use of follow-up notices for static ground water level reporting and the well pump test program has suffered as well.

Streamflow and Ground Water Measurement

The Department gathers and provides quality assurance on a variety of surface water data including gage flow at over 200 surface water gaging stations and miscellaneous measurements of surface water flow at various locations throughout the state. Department staff expend considerable effort in maintaining existing gaging stations and in collecting and analyzing these data. Because of limited staff resources for analyzing these data, backlogs have developed over time. Recently, the Department was successful in obtaining Oregon Watershed Enhancement Board (OWEB) funds to process 111 station-years in the John Day Basin. Although this is only about 8% of the total backlog, it is a major first step in testing the success of using outside contractors to help with the work.

Interested parties can access streamflow data through the Department's website. The Department has also developed a centralized ground water level database which is available on the Department's website. The information is linked to the well log database. This is a significant development in our efforts to tie all ground water measurements into a single easily-accessible location.

IV. Summary

The Department has made significant progress toward implementing the Commission's water measurement strategy. The inventory of significant diversions in high priority streamflow restoration watersheds is complete. Field staff are currently performing site visits of these diversions. These assessments should be complete in 2005. At that time, the Department will have the data necessary to develop a plan for requiring measurement.

Developing a funding source will be a key issue for requiring measurement. To that end, the Department continues to look for funds for the water measurement cost-share revolving fund established by the 2001 Legislature.

Other Department measurement activities such as water use reporting have been significantly improved in the last four years and have lead to increased reporting compliance among water users. However, staff reductions over the last two years have hampered pump test and static water level reporting efforts.

V. Recommendation

This is an informational report. No Commission action is required.

Attachments:

1. Map of Streamflow Restoration Priorities
2. Water Use Measurement, Recording, and Recording Internal Management Directive

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