



Final Report

Recommendations on the Use of Reclaimed Water

Reclaimed
Water
Task
Force

Prepared by
Oregon Water Resources Department

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Executive Summary

In 1995, the Legislative Assembly passed House Bill 2375, creating a task force to review issues involving the use of reclaimed water. When HB 2375 was initially considered by the 1995 Legislative Assembly, it proposed amending existing law relating to the use of the municipal reclaimed water. The bill would have allowed re-use of water initially diverted and used for industrial purposes. A consensus group working on the bill was unable to reach agreement on this issue during the legislative session, and instead recommended the creation of the task force.

HB 2375 directed the Water Resources Department (WRD), the Department of Environmental Quality (DEQ) and the Department of Agriculture (Ag) to work with individuals and groups interested in the use of reclaimed water in developing policy recommendations in a report to the Legislative Assembly. WRD formed a task force consisting of persons representing a broad range of water interests to assist in the development of recommendations on the use of reclaimed water. The task force met five times in 1996 and examined the use of reclaimed water in Oregon as well as other states.

Oregon statutes have allowed the use of reclaimed water by municipalities since 1991. Reclaimed water refers to water that has been used for municipal purposes and then after such use has been treated in a sewage treatment system. After treatment, the “reclaimed” water is then deemed suitable for beneficial use. The statutes exempt users of reclaimed water from water right permit requirements if the use of the reclaimed water is authorized by certain DEQ permits and other specific conditions are satisfied. Persons intending to make use of reclaimed water are required to file registrations with the WRD.

The task force meetings provided a forum for considerable discussion over the re-use of industrial wastewater. The task force focused on the legal and historic use of wastewater, and the policy implications of changing the law to allow an exemption from certain water right requirements for the re-

Recommendations:

Persons may re-use water without the requirement of a water right permit or transfer if:

- *the ground water is initially appropriated and used for industrial or confined animal feeding purposes;*
- *the ground water is re-used for irrigation purposes and the period of irrigation is a period during which the re-used water has never been discharged to the waters of the state; and*
- *the re-used water conforms to certain DEQ water quality permit requirements.*

use of that water. Confined animal feeding operation (CAFO) uses were added to the discussion when the committee learned that similar circumstances existed among dischargers with DEQ permits in both the industrial and agricultural community. The task force sought a means to allow wastewater to be re-used for irrigation purposes in a manner that would benefit irrigators while continuing industry and CAFO compliance with DEQ wastewater management requirements.

DEQ issues several permits regulating the discharge of wastewater. National Pollution Discharge Elimination System (NPDES) permits are issued to entities using water for industrial purposes that typically discharge wastewater into waterways. Land-application of the wastewater may also be allowed under this permit. When wastewater is discharged into a waterway, DEQ water quality standards must be met. Water Pollution Control Facility (WPCF) permits are also issued to industrial operations, but limit wastewater management practices to those that do not entail discharge to surface water, such as land-application. CAFO permits require the land-application of wastewater.

Consensus Recommendations: The task force report proposes legislative changes to allow the re-use of ground water provided that: 1) the ground water is initially appropriated and used for industrial or confined animal feeding purposes; 2) the ground water is re-used for irrigation purposes and the period of irrigation is a period during which the re-used water has never been discharged to the waters of the state; and 3) the re-used water conforms to certain DEQ water quality permit requirements. The proposal exempts the re-use of such water from water right permit and transfer requirements. In addition, the task force proposes to allow industrial users under a municipal water right to land-apply treated industrial wastewater, without having to return the water to the municipal system for treatment.

Some task force members expressed concern that downstream water users who depended on flows which included industrial wastewater would suffer injury if industries no longer returned that water into the stream. The task force addressed this problem by limiting their recommended legislative proposal to ground water industrial users and by limiting the land-application of such water to periods when that water had never historically been discharged into the waters of the state.

Majority Recommendations: A majority of the task force members agreed to two additional recommendations: 1) land-application of industrial/CAFO wastewater for irrigation purposes need not be limited to land with an underlying water right; and 2) the statute should allow industrial users under a municipal water right to land-apply treated industrial process water without having to return the water to the municipal system for treatment. This use would be subject to the terms of the municipal reclaimed water statute.

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I. Introduction

In 1995, Oregon's 68th Legislative Assembly passed House Bill 2375, creating a task force to review policy alternatives relating to the use of

HB 2375

This bill directed the Water Resources Department, the Department of Environmental Quality, and the Department of Agriculture to work with individuals and groups interested in the use of reclaimed water in developing policy recommendations in a report to the 68th Legislative Assembly.

reclaimed water. When it was initially considered by the Legislature, HB 2375 proposed to amend existing law relating to the use of municipal reclaimed water. The bill would have amended the municipal reclaimed water statute to allow the re-use of water initially diverted for industrial purposes. A consensus group working on the bill was unable to reach

agreement on this issue during the legislative session, and instead recommended the creation of the task force.

A. Task Force Directive

HB 2375 (1995 Legislative Assembly) directed the Water Resources Department (WRD), the Department of Environmental Quality (DEQ), and the Department of Agriculture (Ag) to work with individuals and groups interested in the use of reclaimed water in developing policy recommendations in a report to the 68th Legislative Assembly. The bill directed the task force report to assess and identify current and potential uses of reclaimed water in order to develop policy recommendations and proposed legislation.

WRD formed a task force consisting of persons representing a broad range of water interests to develop recommendations on the use of reclaimed water. The task force included representatives from the following organizations: WRD, DEQ, Ag, Oregon Department of Fish and Wildlife, Oregon Farm Bureau, Oregon Food Processors Council, League of Oregon Cities, Water For Life, WaterWatch of Oregon, Oregon Water Resources Council, and Northwest Food Processors.¹ The task force met five times during 1996. The meetings were recorded and tapes or minutes of the meetings are available on request.

¹ For a complete list of task force participants, see Attachment A.

B. Task Force Focus

In light of the interest in the re-use of industrial wastewater during the negotiations concerning HB 2375, the task force focused primarily on this subject. Two central issues drove the task force discussions. First, the group recognized that there was a large amount of industrial wastewater being disposed through land-application per DEQ requirements. Second, the same industrial wastewater represents a potentially valuable alternative water source for irrigators. Industrial wastewater, particularly wastewater from food processing plants, can be nutritionally-rich and useful for irrigation purposes. Chuck Norris, chair of the House Water Policy Committee during the 1995 legislative session, participated in the first meeting and urged the task force to develop recommendations that would lead to sensible means for the disposal of industrial wastewater while at the same time providing an additional source of water that can be re-used beneficially for irrigation purposes. He also asked that the task force provide assurances to water right holders that injury would not occur as a result of the group's recommendations. The task force determined that addressing this situation was a primary concern and that any recommendation for legislation should be focused to resolve the issue.

The task force focused on the legal and historic use of industrial wastewater and reviewed re-use of wastewater in other states. The re-use of water used for confined animal feeding operations (CAFO) was added to the discussion when the task force learned that CAFO wastewater could be used in the same manner as industrial wastewater. Despite the existence of the municipal reclaimed water statute, which allows the re-use of municipally treated wastewater that is initially used for municipal purposes, task force members agreed to develop the legislative proposal without using that statute as the primary vehicle. The group's reasons for this approach were two-fold: 1) consensus was unable to be reached on proposed amendments to the municipal reclaimed water statute in 1995, causing concern that a repeated attempt to change that law was not advisable; and 2) the task force was interested in the re-use of wastewater beyond water used for municipal purposes.

II. Background

A. Current Oregon Law Concerning the Re-use of Wastewater

The task force reviewed current Oregon law concerning the re-use of wastewater. Long-established Oregon case law allows irrigators to re-use their irrigation wastewater for the same original use and in the same place of use as provided under their water right. Re-use may occur so long as the irrigation wastewater is not allowed to return to a natural watercourse, thereby becoming waters of the state subject to subsequent appropriation by others.

More recently, the Legislature enacted a law providing some water users the ability to re-use certain water for new purpose not contemplated in the original water right. Oregon law has provided for this type of re-use under the municipal reclaimed water statute since

1991.² “Reclaimed water,” refers to water that has been used for municipal purposes and then after such use has been treated in a sewage treatment system. After treatment, the reclaimed water may then be determined suitable for beneficial use if it meets water quality standards established by DEQ. The statute exempts users of reclaimed water from water right permit requirements if the use of the reclaimed water is authorized by certain DEQ permits and other specific criteria are satisfied.

The effect of the re-use of municipal reclaimed water concerned some water right holders appropriating water downstream from wastewater discharges made by entities using water under a municipal water right. Their concern was that the reclaimed water statute would encourage entities to cease discharging wastewater into the natural water course, thereby “injuring” their water right by discontinuing return flows which they had historically depended upon to meet their water needs. Whether or not the cessation of wastewater discharge constitutes injury to downstream water users has been the topic of considerable discussion.³ To address this problem, the existing reclaimed water statute provides that, under certain conditions, downstream water right holders may be entitled to a preference to the use of the reclaimed water, provided they can demonstrate that the

Reclaimed Water

Refers to water that has been used for municipal purposes and then after such use has been treated in a sewage treatment system.

² ORS 537.131 and 537.132, see Attachment B.

³ For a more detailed discussion on this issue, please see the review in the report drafted by the law firm Stoel Rives on behalf of the Oregon Food Processors Council contained in Attachment C.

use of water under their water right is impaired by the cessation of wastewater discharge by the municipality.

Persons intending to make use of reclaimed water are required to file registrations with the Department. The Department is currently working with DEQ and the League of Oregon Cities to make certain that all users of reclaimed water are registered. A review of DEQ records indicates there are 77 entities land-applying wastewater appropriated under a municipal water right. The total amount of water is approximately 5.67 billion gallons per year. A total of 14,957 acres receives the wastewater. A complete list of these uses is provided in Attachment D.

B. Industrial and CAFO Uses

DEQ maintains a water pollution control program involving the issuance of wastewater discharge permits. The three types of permits pertaining to the discharge of wastewater are National Pollutant Discharge Elimination System (NPDES) permits, Confined Animal Feeding Operation (CAFO) permits, and Water Pollution Control Facility (WPCF) permits.

NPDES permits are issued to entities using water for industrial purposes that typically discharge wastewater into waterways. Land-application of the wastewater may also be allowed under this permit. When wastewater is discharged into a waterway, DEQ water quality standards must be met. WPCF permits are also issued to industrial operations, but limit wastewater management practices to those that do not entail discharge to surface water, such as land-application. CAFO permits require the land-application of wastewater.

According to DEQ records, there are 26 entities land-applying water appropriated under an industrial water right. The total amount of water is approximately 2.88 billion gallons per year. A total of 9,006 acres receives this water. A complete list of these uses is contained in Attachment E.

DEQ's requirement for the land-application of industrial wastewater is an alternative disposal method to discharging wastewater into the waters of the state. Under current law, the industries are limited to land-apply their wastewater on the same property listed in their underlying water right. If the industry wanted to re-use the wastewater for irrigation purposes, it would need to apply for a water right or transfer for that purpose. If an irrigator wanted to re-use the industrial wastewater for irrigation purposes, a new water right would be required. Given these limitations, some industries elect to manage their wastewater by containment and evaporation.

It is worth noting that industrial wastewater which is initially used for municipal purposes⁴ may be re-used for a new purpose and in a new place of use provided certain conditions are met under the existing reclaimed water statute.

C. Wastewater Re-use in Other States

Other states make use of reclaimed water and re-use wastewater to varying degrees. A review of reclaimed water law in other states is provided in a memorandum to the task force contained in Attachment F. In recent years, two factors have developed that make the re-use of reclaimed or used industrial process water more desirable. First, treatment of wastewater has improved to the point that the quality of the water to be re-used has become less of a concern for potential users of the water. Second, western states are finding that unappropriated water supplies are rapidly decreasing while competition for the remaining resource increases. Most states focus on the use of municipal wastewater discharged from treatment plants, but states are also beginning to examine the re-use of industrial wastewater. Montana encourages full re-use of water by allowing holders of appropriated rights to retain the right to salvaged water. Other states including Utah, Arizona, Washington, Nevada, and California encourage use of recycled water derived from a municipal water treatment facility. Additional analysis on this issue is contained in Attachment C.

⁴ "Municipal purposes," as used in the reclaimed water statute, is understood to include industrial uses of water obtained from municipal water right. WRD administrative rules broadly define "municipal water use" to include industrial water uses. (OAR 690-300-010(29))

III. Recommendations

The task force recommendations seek to develop a means for irrigators to gain better access to industrial and CAFO wastewater, while at the same time, assist industries and CAFO operators in complying with DEQ wastewater disposal requirements. The task force reached consensus agreement on most recommendations in this report. However, some recommendations received only majority support. The summary in section IV of this report lists which recommendations received consensus support and which recommendations received majority support.

Recommended legislative changes

Allow the re-use of ground water provided that:

- 1) the ground water is initially appropriated and used for industrial or confined animal feeding purposes
- 2) the ground water is re-used for irrigation purposes and the period of irrigation is a period during which the re-used water has never been discharged to the waters of the state
- 3) the re-used water conforms to certain DEQ water quality permit requirements.
- 4) allow industrial users under a municipal water right to land-apply treated industrial wastewater without having to return the water to the municipal system for treatment, provided that the wastewater meets DEQ standards.

permit and transfer requirements. In addition, the task force recommends permitting industrial users under a municipal water right to land-apply treated industrial process water without having to return the water to the municipal system for treatment. Attachment G contains a copy of HB 2095.

The task force agreed that there are significant benefits to allowing the re-use of ground water initially used for industrial and CAFO wastewater for irrigation purposes. First, the re-use of such water for irrigation purposes allows for the continued compliance with DEQ

The task force recommends legislative changes to allow the re-use of ground water provided that: 1) the ground water is initially appropriated and used for industrial or confined animal feeding purposes; 2) the ground water is re-used for irrigation purposes and the period of irrigation is a period during which the re-used water has never been discharged to the waters of the state; and 3) the re-used water conforms to certain DEQ water quality permit requirements. The proposal exempts the re-use of such water from water right

standards while creating an additional source of water for irrigators. Second, the alternative source of water for irrigators decreases the demand on unappropriated surface and ground water sources, helping to prevent further depletion of streamflows. A third benefit would result from this proposal: irrigators who mix discharge water with the water from their underlying water right would use less of the water available under their water right. This would promote conservation and provide additional water for instream purposes.

During the task force meetings, several issues arose which required special attention, helping to shape the task force recommendations.

A. Forfeiture

Wastewater may be mixed with fresh water to make the water suitable for irrigation use. In this situation, wastewater can be used to supplement an existing irrigation water right. Under Oregon law, the non-use of water under a water right for a period of five years may result in the loss or “forfeiture” of the water right. If no water from the underlying right is used for this period of time, forfeiture could occur.

One of the original ideas behind HB 2375 was to protect persons holding irrigation water rights from forfeiting their water rights because they were using wastewater from industries in lieu of water from their underlying

water right. The task force decided that the re-use of such wastewater for irrigation purposes in conjunction with or in lieu of water from an underlying water right ultimately served to conserve water normally used under the underlying water right. This can result in decreased depletion of surface water and ground water sources. HB 2095 proposes to protect this type of use from the forfeiture law (see Attachment G).

Forfeiture

Under Oregon law, the non-use of water under a water right for a period of five years may result in the loss or “forfeiture” of the water right.

B. Injury to Downstream Users

Some task force members expressed concern that downstream water users who depended on flows which included industrial discharge water would suffer injury if the industries no longer discharged that water into the stream. The task force addressed this problem by restricting the legislative proposal to industrial and CAFO users with ground water rights and by limiting the land-

application of such water to periods when that water had never historically been discharged into the waters of the state. By limiting the initial source to ground water, the proposal avoids the potential problems associated with discontinued return flows from a surface water appropriation. Furthermore, limiting the land-application of such water to periods when it had not been historically discharged into waters of the state effectively circumvents potential claims of injury from downstream users.

C. Tracking the Re-use

Considerable discussion and comments were offered regarding the location where the re-use of industrial/CAFO wastewater might be allowed. WRD is particularly concerned that the task force proposal not encourage “water spreading.” Water spreading occurs when a water right holder uses water on land not listed in the water right. A potential scenario for water spreading involves situations where an irrigator mixes water under a water right with industrial or CAFO wastewater and subsequently uses the water on land not contemplated in the water right. WRD does not consider this to be consistent with the law, nor do the task force recommendations sanction this type of activity. It is possible under the task force recommendations, however, for an irrigator to use industrial or CAFO wastewater on land with no underlying water right, provided that the wastewater is not mixed with water from a water right. It should be noted that the task force did not reach consensus on this issue. A minority of the group supports the concept that all re-use of industrial/CAFO wastewater should be limited to land with underlying water rights.

The task force agreed that it is important that WRD field staff are given advance notice and adequate information concerning the re-use of wastewater for irrigation purposes. WRD field staff need this information in order to track irrigation activities in their districts. DEQ agreed that a process could be established whereby information on the intended place of use for this water could be obtained for WRD as part of the DEQ permit process. WRD and DEQ have agreed to develop an attachment for the DEQ permittee that would list the informational requirements of WRD. DEQ can then pass this information to WRD. The information gathered through the DEQ permit attachment provides WRD notification of the re-use and sufficient information to determine whether the irrigation re-use takes place on lands with or without an underlying water right.

D. Modification of the Reclaimed Water Statute

When HB 2375 was initially considered by the Legislature, it proposed adding industrial uses to the exemption in the municipal reclaimed water statute. In this regard, conditions for use and mitigation for injury would have been identical. As mentioned above, the task force decided that the municipal reclaimed water statute did not adequately deal with the issues at hand and that the group should address the issue outside of the reclaimed water statute.

However, some industrial users obtain their water supplies from municipal suppliers. According to existing statutes, the wastewater must first pass through a municipal sewage treatment process before it can be eligible for re-use. The task force proposed to change the municipal sewage treatment requirement in the reclaimed water statute to allow industrial users to land-apply treated wastewater without having to return the water to the municipal system for treatment. In this situation, the wastewater will be subject to the same restrictions and injury safeguards as reclaimed water under current statutes. Most task force members agreed that the change simply addresses a situation not foreseen in the original legislation. A minority view expressed concern over the potential for increased harm to streamflows. Another minority opinion commented that any expansion of the municipal reclaimed water statute would exacerbate their concern over the effectiveness of the statute's current injury test. Section 1 of HB 2095 addresses this issue (see Attachment G).

IV. Summary

The task force was able to reach consensus on most issues addressed in this report. Majority support existed on issues where consensus could not be reached. Members of the task force agree that its recommendations recognize the need of industries to comply with DEQ water quality requirements while at the same time providing a means for irrigators to find new sources of water. The task force also agreed that the recommendations on the use of industrial and CAFO wastewater promotes conservation and assists in preserving instream flows by restricting the re-use to ground water that has never been previously discharged into the surface waters of the state.

The task force reached consensus on the following recommendations:

Persons may re-use water without the requirement of a water right permit or transfer if:

- the ground water is initially appropriated and used for industrial or confined animal feeding purposes;
- the ground water is re-used for irrigation purposes and the period of irrigation is a period during which the re-used water has never been discharged to the waters of the state; and
- the re-used water conforms to certain DEQ water quality permit requirements.

Additional consensus recommendations:

- The application and renewal forms required for DEQ discharge permits should be modified in order to provide WRD with the information necessary for WRD field staff to track the re-use of the water.
- Persons may rebut the presumption of forfeiture if the period of non-use occurred during a time in which the water right holder re-used industrial/CAFO wastewater or irrigation purposes.

A majority of task force members agreed on the following recommendations:

- Land-application of industrial/CAFO wastewater for irrigation purposes need not be limited to land with an underlying water right.
- Allow industrial users under a municipal water right to land-apply treated industrial process water without having to return the water to the municipal system for treatment. This use would be subject to the terms of the municipal reclaimed water statute.

V. Attachments

- A. List of Task Force Participants
- B. The Municipal Reclaimed Water Statute - ORS 537.131 and 537.132
- C. Stoel Rives Report on Use of Industrial Process Water prepared on behalf of the Oregon Food Processors Council
- D. List of Municipal Wastewater Re-use
- E. List of Industrial Wastewater Re-use
- F. Memorandum on Reclaimed Water Use in Other States
- G. HB 2095