

Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater



Idaho Department of Environmental Quality

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Organization of This Internet Version of the Reuse Guidance

The Web-based electronic reuse guidance is topic driven. Interested viewers may click on the topic of their choice in the table of contents for access to the latest guidance information. Other internal links within the topics allow viewers to move between topics on a limited basis.

Additionally, this will be the location in the Reuse Guidance that will outline the sections that have been modified in the past two years.

Date	Brief description of modifications	Sections modified
12/15/2005	Specific revisions to sections 1, 6.3, and 7, including creation of overall guidance Preface from introductory passages of Section 1; division of guidance into Parts A (slow rate land treatment of wastewater), B (high rate land treatment of wastewater), and C (other reuse); addition of reuse templates supplementary information for Section 1, addition of guidance index.	1, 6.3, 7
December 2006	Section 3 now contains material from Section 4 related to wastewater constituents and their descriptions Section 4 includes sections on runoff control and ground water impact modeling; and revisions of sections related to non-growing season loading, nitrogen loading, and constituent loading calculations. The theoretical background in Section 7 was bolstered.	3, 4, 7 Sept
Sept 2007	Section 2: Site Evaluation for Reuse and Land Treatment: An extensive revision of the previous Section 2 - Site Evaluation, Selection and Management. Includes environmental, social, and crop management site evaluation criteria. Also, Tables A-5, A-6, A-7, A-8 and Figures A-8 and A-9 relocated into Section 2. Section 6: Operations: A revision of the previous Section 6, including revised lagoon seepage criteria, buffer zone distances, water supply well protection criteria, and grazing management. All other section have corrected references and/or include materials previously in the appendices.	ALL

Preface

Note: Department of Environmental Quality (DEQ) guidance does not have the force of law or regulation, nor does it replace best professional judgment; it provides a starting point and assistance in the design of wastewater reclamation and reuse programs.

Introduction: From Land Application to Reuse

Land application involving land treatment of wastewater has long been recognized as a viable method of wastewater treatment, but, in some cases, it became apparent that surface and ground water contamination related to the wastewater land treatment system operation was occurring. Moreover, experience and a better understanding of how ground water contamination is related to activities on the land surface has raised awareness of the complexity surrounding land treatment methods. These and other issues were the driving forces in developing a wastewater land application permit program in Idaho.

The broader topic of *reuse* of wastewater, introduced in this version of the guidance, includes many other uses besides land treatment and land application. The future direction of the Land Application Permit Program will be to include these additional uses and to periodically update the rules and guidance as needed to address the demand.

Wastewater Land Application Permit (WLAP) Program History

The Wastewater Land Application Permit (WLAP) Program is an established and well developed state regulatory program. Together, the regulations and guidelines have helped establish parameters for workable land application permits that protected surface and ground water quality and met the treatment needs of the wastewater generator.

1988: Introduction of the Original Guidelines

The original program regulations became effective in April 1988, and the companion guidelines were finalized in March 1988. The 1988 guidelines were of necessity very general, focusing on broad considerations for both the design and evaluation of WLAP proposals. Five years into program implementation, however, it became apparent that some program components required more specificity for the second generation of permits to be issued in a fair and consistent manner, while still allowing flexibility for site specific conditions. Also, significant technical changes had been made regarding distances to public or private wells and ground water monitoring, and these changes needed to be made available to the permittee. The 1994 *Technical Interpretive Supplement* (described immediately below) made these technical advances available to the regulated community in addition to the 1988 guidelines.

1993: Expansion of the Original Guidelines

A WLAP technical work group, comprising agency, industry, municipalities, and technical consultants, was formed in September 1993 to expand the original guidelines

on four (4) selected issues of concern. The expansion, called the 1994 *Technical Interpretive Supplement*, included-supportive information on the following:

- Growing and non-growing season application rates
- Capture zone analysis and wellhead protection to determine minimum setback distances to public and private wells
- Buffer zones to protect the public
- Grazing on land application sites

Both the 1994 *Technical Interpretive Supplement* and the 1988 guidelines support and reinforce laws and regulations, but, by themselves, are not standards or mandates. Both were published in April of 1996, as a combined paper document called the *Handbook for Land Application of Municipal and Industrial Wastewater*.

2002: Development of New Guidance and Increased Internet Posting

In 2002, a significant amount of new guidance was developed for the reuse program, and more use was made of the Internet to provide this guidance to the public, the regulated community, and to DEQ internally. The inclusion of the new guidance was part of the continuing effort to ensure consistency in the reuse program and to involve public participation.

An effort to post all draft and final permits on the Internet was also initiated in 2002, and this effort will continue in the future to make the public and the permittees more aware of the directions of the program and to make permits more consistent across the state.

It is the intent of the program to use the Internet to continually update information and guidance via the DEQ Web site. Input from the public at large is welcome.

2004: Creation of the Web-Based Guidance

DEQ initiated a renewed public participation process in 2004 to provide for a consistent review of existing guidance and to establish a process for introducing and examining new guidance. With regard to this guidance, DEQ invited the public to form an advisory working group that would meet periodically to review existing and future reuse guidance, providing suggested updates, additions, deletions, or corrections.

DEQ intends to post the suggestions from this group on its Web site for a 30-day public comment period. Following that public comment period, the advisory working group will review public comment, modify the suggested changes if needed, and then submit the final suggested modifications to the Director of DEQ for a final decision on including them in the Reuse Guidance Document.

The advisory working group is open to the public at large and can introduce new suggested guidance to DEQ through its workings.

In May of 2004, DEQ created an electronic Web-based draft, which was simply a reorganization, by topic, of the *Handbook for Land Application of Municipal and Industrial Wastewater*, calling it the *Guidance for Land Application of Municipal and*

Industrial Wastewater. Since that time, DEQ has sought continued public input to update and make corrections to this initial Web-based document.

2005: Expansion of Scope to Include Reuse

As a part of the public process, and in anticipation of a name change from the *Wastewater Land Application Permit Rules* to *Reclamation and Reuse of Municipal and Industrial Wastewater Permit Rules (Reuse Rules)*, the name of this guidance is now ***Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater (Reuse Guidance)***. This name change will embrace future uses of reclaimed wastewater that may or may not have anything to do with land treatment or land application.

Current and Future Directions for the Reclamation and Reuse of Municipal and Industrial Wastewater

The *Reuse Rules* (IDAPA 58.01.17) apply to both new systems and existing systems:

- New systems must be designed to meet all requirements of the *Reuse Rules*. The *Reuse Guidance* provides assistance to meet the requirements of the rule, and should be used, therefore, by new systems to ensure compliance.
- Existing systems must meet the requirements of the rules and their permit. When a permit comes up for renewal, then the system must meet the requirements of the latest *Reuse Rules*. If a permittee has been experiencing operational or compliance problems with meeting permit conditions or water quality standards, the reuse guidance should be reviewed in order to help attain compliance.

In summary, the *Reuse Rules* address the treatment of municipal and industrial wastewater by different types of land application and treatment systems and other treatment requirements for higher classes of effluent.

Locations of the Rules

Applicants for reuse permits can find the applicable rules at the following locations:

- The *Reuse Rules* (IDAPA 58.01.17) can be located at the following address:

<http://adm.idaho.gov/adminrules/rules/idapa58/0117.pdf>

- The *Ground Water Quality Rule* (IDAPA 58.01.11), which has impact on reuse facilities, is located at the following address:

<http://adm.idaho.gov/adminrules/rules/idapa58/0111.pdf>

- The *Water Quality Standards and Wastewater Treatment Requirements* (IDAPA 58.01.02) can be located at the following address:

<http://adm.idaho.gov/adminrules/rules/idapa58/580102.pdf>

Opportunities to Comment on This Guidance

The *Reuse Guidance* is intended to be a dynamic information source, evolving as new technology becomes available or expanding as additional issues of concern are researched and developed. Given this focus on adapting to change, DEQ is interested in receiving comments on any issue that should be considered for future editions of this document.

Comments, suggestions, or issues of concern may be submitted to:

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