



AGENDA

IDAHO WATER RESOURCE BOARD

Board Meeting No. 4-19

May 7, 2019

1:00 p.m.

Idaho Water Center
Conference Room 648A
322 E. Front St.
BOISE

Brad Little
Governor

Roger W. Chase
Chairman
Pocatello
District 4

Jeff Raybould
Vice-Chairman
St. Anthony
At Large

Vince Alberdi
Secretary
Kimberly
At Large

Peter Van Der Meulen
Hailey
At Large

Albert Barker
Boise
District 2

John "Bert" Stevenson
Rupert
District 3

Dale Van Stone
Hope
District 1

Jo Ann Cole-Hansen
Lewiston
At Large

1. Roll Call
2. Administrative Rules*
3. Non-Action Items for Discussion
4. Next Meeting & Adjourn

* Action Item: A vote regarding this item may be made this meeting. Identifying an item as an action item on the agenda does not require a vote to be taken on the item.

Americans with Disabilities

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email nikki.regent@idwr.idaho.gov or by phone at (208) 287-4800.

Memorandum



To: Idaho Water Resource Board
From: Mat Weaver, Brian Patton, and Garrick Baxter
Date: May 6, 2019
Re: Administrative Rules

REQUIRED ACTION: *Adopt and authorize re-publishing of administrative rules under the IWRB's control as "Temporary and Proposed Rules" in the Idaho Administrative Bulletin. A resolution to this effect is attached.*

Background

The Idaho Water Resource Board (IWRB) is the executive branch entity with statutory oversight and authority over 12 chapters of Administrative Rules in IDAPA 37, including:

- IDAPA 37.01.01 Rules of Procedure of the IDWR
- IDAPA 37.02.01 Comprehensive State Water Plan Rules
- IDAPA 37.02.02 Funding Program Rules
- IDAPA 37.02.03 Water Supply Bank Rules
- IDAPA 37.02.04 Shoshone Bannock Tribal Water Supply Bank Rules
- IDAPA 37.03.03 Rules and Minimum Standards for the Construction and Use of Injection Wells
- IDAPA 37.03.04 Drilling for Geothermal Resources Rules
- IDAPA 37.03.05 Mines Tailing Impoundment Structures Rules
- IDAPA 37.03.06 Safety of Dams Rules
- IDAPA 37.03.07 Stream Channel Alteration Rules
- IDAPA 37.03.09 Well Construction Standards and Rules
- IDAPA 37.03.10 Well Driller Licensing Rules

Several other sets of rules related to water right processes are under control of the Director.

Issue at Hand

As stated in Idaho Code § 67-5292, "every adopted rule shall automatically expire on July 1 of the following year unless the rule is extended by statute" and the extension of Idaho's administrative rules by statute requires the Idaho Legislature to pass a bill every year reauthorizing Idaho's administrative rules for another year prior to adjourning the legislative session. The 2019 Legislature did not reauthorize all existing administrative rules as has been standard practice in the past, therefore all of Idaho's administrative rules will expire on July 1, 2019.

The Governor has directed the Division of Financial Management and all state executive agencies, including the IWRB and IDWR, to exercise necessary executive authority to minimize the impact on state agencies and the public by re-publishing existing rules by IDAPA chapter as both temporary and proposed rules concurrently in a special edition of the Idaho Administrative Bulletin in June 2019. The re-publication of Idaho's existing rules as temporary and proposed rules in the June 2019 Administrative Bulletin will ensure the temporary rules are in effect by July 1, 2019, and that proposed rules are scheduled for review and permanent adoption by the Idaho Legislature during its 2020 legislative session.

On a parallel track, Governor Little also signed Executive Order 2019-02, titled the Red Tape Reduction Act (RTRA), requiring each executive department to undertake a “critical and comprehensive review of the agency’s administrative rules to identify, costly, ineffective, or outdated regulations” for elimination by the end of fiscal year 2021. In fulfillment of the RTRA, IWRB and IDWR staff completed a comprehensive review of IDAPA 37 Titles 01, 02, and 03, and identified certain rules and rule subparts for elimination due to those certain rules and rule subparts being ineffective, outdated, contrary to existing Idaho Code, contrary to federal law, or contrary to current court rulings. The Governor has authorized executive agencies that have identified rules or subparts of rules to be eliminated as part of their RTRA review analysis to allow those rules to expire by default on July 1, 2019, by not republishing them as a temporary and proposed rule.

Recommendation

Staff’s recommendation to the IWRB is to adopt and re-publish all of the IWRB’s rules with the following exceptions:

- IDAPA 37.02.02 (*Funding Program Rules*).

These rules are proposed for elimination as they are largely a re-statement of Idaho Code and have been superseded by statute in many cases, require a Letter of Intent process within the loan application process that is ineffective and outdated, and do not include the IWRB’s Secondary Aquifer Planning Management & Implementation Fund.

- Rules 010.07, 010.15, 010.29, 010.30, 010.40, 010.48.a, 010.48.b, 010.49.e, 010.54, 010.56, 010.69, 010.70, 010.75, 010.90, 010.91, 010.92, 010.101, 025, 040.02.b, 040.02.d, and 045 of IDAPA 37.03.03, (*Rules of Minimum Standards for the Construction & Use of Injection Wells*).

The sub-rules proposed for elimination govern the Class 2 injection wells for the oil and gas industry. Class 2 injection wells are currently administered by the EPA, not the state. Now that the EPA has administrative authority of Class 2 injection wells in Idaho, these sub-rules are contrary to federal law.

- Rule 025.03 of IDAPA 37.03.04 (*Drilling for Geothermal Resources Rules*).

This rule is proposed for elimination because it merely restates fees that are defined in Statute Section 42-4003, and 42-4011, Idaho Code. In addition, the fees identified in the rules for production wells, exploratory wells, and injection wells are outdated and no longer consistent with the statutorily defined fee rates.

- Rules 058, 060, and 061 of IDAPA 37.03.07 (*Stream Channel Alteration Rules*).

The sub-rules proposed for elimination cover the use of gabions, dikes and levels, and jetties. These items are not used under these rules as standard practice.

Attachment(s):

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE RED TAPE
REDUCTION ACT AND REAUTHORIZING
IDAHO WATER RESOURCE BOARD
ADMINISTRATIVE RULES

RESOLUTION TO REPUBLISH SELECT
IDAHO WATER RESOURCE BOARD
ADMINISTRATIVE RULES AS TEMPORARY
AND PROPOSED RULES

1 WHEREAS, Governor Brad Little signed Executive Order 2019-02, titled the Red Tape
2 Reduction Act ("RTRA"), requiring each executive department to undertake a *"critical and*
3 *comprehensive review of the agency's administrative rules to identify costly, ineffective, or*
4 *outdated regulations"* for elimination by the end of fiscal year 2021; and
5

6 WHEREAS, the Idaho Water Resource Board ("IWRB") is the executive branch entity with
7 statutory oversight and authority over 12 chapters of Administrative Rules in IDAPA 37, including:

- 8 • IDAPA 37.01.01 Rules of Procedure of the Idaho Department of Water Resources
9 ("IDWR");
- 10 • IDAPA 37.02.01 Comprehensive State Water Plan Rules;
- 11 • IDAPA 37.02.02 Fund Programs Rules;
- 12 • IDAPA 37.02.03 Water Supply Bank Rules;
- 13 • IDAPA 37.02.04 Shoshone-Bannock Tribal Water Supply Bank Rules;
- 14 • IDAPA 37.03.03 Rules and Minimum Standards for the Construction and Use of
15 Injection Wells;
- 16 • IDAPA 37.03.04 Drilling for Geothermal Resources Rules;
- 17 • IDAPA 37.03.05 Mine Tailings Impoundment Structures Rules;
- 18 • IDAPA 37.03.06 Safety of Dams Rules;
- 19 • IDAPA 37.03.07 Stream Channel Alteration Rules;
- 20 • IDAPA 37.03.09 Well Construction Standards Rules;
- 21 • IDAPA 37.03.10 Well Driller Licensing Rules; and
22

23 WHEREAS, as stated in Idaho Code § 67-5292, *"every rule adopted and becoming effective*
24 *after June 30, 1990, shall automatically expire on July 1 of the following year unless the rule is*
25 *extended by statute"* and the extension of Idaho's administrative rules by statute requires the
26 Idaho Legislature to pass a bill every year reauthorizing Idaho's administrative rules for another
27 year prior to adjourning the legislative session; and
28

29 WHEREAS, at the adjournment of the 2019 regular legislative session the Idaho
30 Legislature did not reauthorize the existing administrative rules as they have done in the past,
31 and Idaho's administrative rules will expire on July 1, 2019; and
32

33 WHEREAS, the Governor has directed the Division of Financial Management and all state
34 executive agencies, including the IWRB and IDWR, to exercise necessary executive authority to
Resolution No. _____

35 minimize the impact on state agencies and the public by republishing existing rules by IDAPA
36 chapter as both temporary and proposed rules concurrently in a special edition of the Idaho
37 Administrative Bulletin in June 2019; and
38

39 WHEREAS, the republication of Idaho's existing rules as temporary and proposed rules
40 concurrently in the June 2019 Administrative Bulletin will ensure the temporary rules are in effect
41 by July 1, 2019, and that proposed rules are scheduled for review and permanent adoption by
42 the Idaho Legislature during its 2020 regular legislative session; and
43

44 WHEREAS, in fulfillment of the RTRA, IWRB and IDWR staff completed a comprehensive
45 review of IDAPA 37 Titles 01, 02, and 03, and identified certain rules and rule subparts for
46 elimination due to those certain rules and rule subparts being ineffective, outdated, contrary to
47 existing Idaho Code, contrary to federal law, or contrary to current court rulings; and
48

49 WHEREAS, the Governor has authorized executive agencies that have identified rules or
50 subparts of rules to be eliminated as part of their RTRA review analysis to allow those rules to
51 expire by default on July 1, 2019, by not republishing them as temporary and proposed rules; and
52

53 WHEREAS, letting a rule identified for elimination during the RTRA review analysis expire
54 on July 1, 2019, is a more efficient government process than undertaking formal rule making
55 under the RTRA process to eliminate a rule.
56

57 NOW, THEREFORE BE IT RESOLVED that the IWRB adopts the following previously
58 approved fee rules as temporary rules, except as modified below, effective June 30, 2019:

- 59 • 37.01.01, (*Rules of Procedure of the Idaho Department of Water Resources*);
- 60 • 37.02.03, (*Water Supply Bank Rules*);
- 61 • 37.03.03, (*Rules and Minimum Standards for the Construction & Use of Injection Wells*) –
62 all rules except rules: 010.07, 010.15, 010.29, 010.30, 010.40, 010.48.a, 010.48.b,
63 010.49.e, 010.54, 010.56, 010.69, 010.70, 010.75, 010.90, 010.91, 010.92, 010.101, 025,
64 040.02.b, 040.02.d, and 045;
- 65 • 37.03.04, (*Drilling for Geothermal Resources Rules*) – all rules except rules: 025.03;
- 66 • 37.03.05, (*Mines Tailings Impoundment Structures Rules*);
- 67 • 37.03.06, (*Safety of Dams Rules*);
- 68 • 37.03.07, (*Stream Channel Alteration Rules*) – all rules except rules 055.03, 055.05,
69 055.06, 058, 060, and 061, part of rule 056.07, and part of Appendix K;
- 70 • 37.03.09, (*Well Construction Standards Rules*); and
- 71 • 37.03.10, (*Well Driller Licensing Rules*).
72

73 NOW, THEREFORE BE IT RESOLVED that the IWRB authorizes the notice and republication
74 of the above referenced fee rules as temporary and proposed rules.
75

76 NOW, THEREFORE BE IT RESOLVED that the IWRB adopts the following previously
77 approved non-fee rules as temporary rules effective June 30, 2019:

- 78 • 37.02.01, (*Comprehensive State Water Plan Rules*);
- 79 • 37.02.03, (*Shoshone-Bannock Tribal Water Supply Bank Rules*).

80
81 NOW, THEREFORE BE IT RESOLVED that the IWRB authorizes the notice and republication
82 of the above referenced non-fee rules as temporary and proposed rules.

83
84 NOW, THEREFORE BE IT RESOLVED that the IWRB supports the expiration of IDAPA
85 37.02.02 Funding Programs Rules by not republishing the rule.

DATED this 7th day of May, 2019.

ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

Summary of IDWR's IDAPA 37 Administrative Rules (<https://adminrules.idaho.gov/rules/current/37/>)

RULE #	TITLE	DATE	Page Count	TOTAL WORD COUNT	RESTRICTIVE WORD COUNT	Authoritative Body	Authorizing Statues	Fee or Non-Fee	Recommendation	Eliminated Rules by Expiration
37.01.01	Rules of Procedure of the IDWR	2000	36	6,440	159	Board & Department	42-1701A(1); 42-1734(19); 42-1805(8); 67-2356; 67-5206(5)	Fee	Review complete. Take no action now. Revisit under RTRA review. Republish as is.	None
37.02.01	Comprehensive State Water Plan Rules	1993	8	3,123	62	Board	42-1734D; 67-5203	Non-Fee	Review complete. Take no action now. Revisit under RTRA review. Republish as is.	None
37.02.02	Funding Program Rules	1997	7	2,121	18	Board	42-1734; 42-1758	Fee	Do not republish.	Whole Chapter
37.02.03	Water Supply Bank Rules	1993	9	3,450	35	Board	42-1762	Fee	Take no action now. Revisit under RTRA review. Republish as is.	None
37.02.04	Shoshone Bannock Tribal Water Supply Bank Rules	1994	7	1,772	37	Board	42-1761; 42-1765	Non-Fee	Review complete. Take no action to revise. Republish as is.	None
37.03.01	Adjudication Rules	2009	12	5,573	120	Department	42-1414; 42-1805(8)	Fee	Review complete. Remove select rules. Republish w/ deletions.	025.08, 035.02.b.i, 035.02.c.i, 035.03.c.i, 035.04.b.i, 035.06.a, 035.06.b, and 035.07.a.
37.03.02	Beneficial Use Examination Rules	2012	13	5,355	95	Department	42-1805(8)	Fee	Review complete. Remove select rules. Republish w/ deletions.	010.12, 055.01, and parts of rules 002, 010.19, 025.01, 030.03, 030.08, 035.01.c, 035.01.g, 035.01.m, 035.01.p, 035.03.b, 045.01, and 050.02.b.
37.03.03	Rules and Minimum Standards for the Construction & Use of Injection Wells	2013	62	29,435	480	Board	42-3913; 42-3914; 42-3915	Fee	Review complete. Remove Class II rules. Republish w/ deletions.	010.07, 010.15, 010.29, 010.30, 010.40, 010.48.a, 010.48.b, 010.49.e, 010.54, 010.56, 010.69, 010.70, 010.75, 010.90, 010.91, 010.92, 010.101, 025, 040.02.b, 040.02.d, and 045.
37.03.04	Drilling for Geothermal Resources Rules	1993	13	6,257	139	Board	42-4001; 42-4015	Fee	Review complete. Remove select rules. Republish w/ deletions.	025.03
37.03.05	Mines Tailings Impoundment Structures Rules	1993	12	4,850	122	Board	42-1714	Fee	Take no action now. Revisit under RTRA review. Republish as is.	None
37.03.06	Safety of Dams Rules	1993	17	7,708	175	Board	42-1714; 42-1709; 42-1721	Fee	Take no action now. Revisit under RTRA review. Republish as is.	None
37.03.07	Stream Channel Alteration Rules	1993	36	8,695	208	Board	42-3803	Fee	Review complete. Remove select rules. Republish w/ deletions.	055.03, 055.05, 055.06, 058, 060, and 061, part of rules 056.07, and part of Appendix K.
37.03.08	Water Appropriation Rules	1993	25	11,468	152	Department	42-1805(8)	Fee	Review complete. Remove select rules. Republish w/ deletions.	035.03.a, 035.03.b.xv, 040.01.e, 040.02.d, 050.07, and parts of rules 030.01.c, 030.03.a, 030.03.c, 035.01.a, 035.01.b, 035.02.a, 035.03.b.ii, 035.04.a, 040.02.a.i, 040.02.a.ii, 045.02.b.iii, and 050.02.
37.03.09	Well Construction Standards and Rules	2009	40	13,225	230	Board	42-238(12)	Fee	Review complete. Take no action to revise. Republish as is.	None

Summary of IDWR's IDAPA 37 Administrative Rules (<https://adminrules.idaho.gov/rules/current/37/>)

RULE #	TITLE	DATE	Page Count	TOTAL WORD COUNT	RESTRICTIVE WORD COUNT	Authoritative Body	Authorizing Statutes	Fee or Non-Fee	Recommendation	Eliminated Rules by Expiration
37.03.10	Well Driller Licensing Rules	2000	15	6,420	109	Board	42-238(6)	Fee	Review complete. Take no action to revise. Republish as is.	None
37.03.11	Rules for Conjunctive Management of Surface and Ground Water Resources	1994	13	6,405	44	Department	42-603	Non-Fee	Review complete. Take no action now. Revisit under RTRA review. Republish as is.	None
37.03.12	IDWR Water Distribution Rules Water District 34	1994	14	7,070	75	Department	42-603	Non-Fee	Review complete. Remove select rules. Republish w/ deletions.	010.05, 010.14, 020, 035.02, 035.03, 035.06, 035.07, 040.01.a, 040.07, 045, 050, 055.01, 055.02, 055.03, and 055.04, and parts of rules 025.01, 040.01, 040.03.a, 040.03.b, and 055.06.

**IDAPA 37
TITLE 02
CHAPTER 02**

37.02.02 – FUNDING PROGRAMS RULES

000. LEGAL AUTHORITY (RULE 0).

This chapter is adopted by the Idaho Water Resource Board under the legal authority of Sections 42-1734 and 42-1758, Idaho Code. (3-20-97)

001. TITLE, SCOPE AND CITATION (RULE 1).

These rules shall be cited as IDAPA 37.02.02, Rules of the Idaho Water Resource Board, Title 02, Chapter 02, “Funding Programs Rules.” These rules implement Sections 42-1750 to 42-1758, Idaho Code, providing for the establishment and use of the Revolving Development Account, and Section 42-2760, Idaho Code, providing for the establishment and use of the Water Management Account. These rules set forth the purposes for which moneys may be allocated from the two (2) accounts and the procedures to be followed in applying for and processing requests for money from the accounts. (3-20-97)

002. ADMINISTRATIVE APPEALS (RULE 2).

Persons may be entitled to appeal final agency actions authorized under this chapter pursuant to Section 67-5270, Idaho Code, and IDAPA 37.01.01, “Rules of Procedure of the Idaho Department of Water Resources.” (3-20-97)

003. WRITTEN INTERPRETATIONS (RULE 3).

The Water Resource Board may have written statements that pertain to the interpretation of the rules of this chapter, or to the documentation of compliance with the rules of this chapter. If available, written statements can be inspected and copied at cost at the Department of Water Resources, 1301 N. Orchard, Boise, Idaho 82706. (3-20-97)

004. CATCHLINES (RULE 4).

Catchlines within this chapter are not to be used in the interpretation of the rules. (3-20-97)

005. -- 024. (RESERVED)

025. PURPOSE OF THE WATER MANAGEMENT ACCOUNT (RULE 25).

01. Purpose. The Idaho Water Resource Board (Board) may make loans or grants from the Water Management Account for new water projects or the rehabilitation of existing water projects limited to the following purposes: (3-20-97)

- a.** Reclamation; (7-1-93)
- b.** Upstream storage; (7-1-93)
- c.** Offstream storage; (7-1-93)
- d.** Aquifer recharge; (7-1-93)
- e.** Reservoir site acquisition and protection; (7-1-93)
- f.** Water supply; (3-20-97)

- g.** Water quality; (3-20-97)
- h.** Recreation; and (3-20-97)
- i.** Water resource studies, including feasibility studies for qualifying projects. (3-20-97)

02. Expenditures. Expenditures may be made from the account to provide public monies for participation in any project constructed with funds from the Revolving Development Account. (7-1-93)

03. Grants and Loans. Grants and loans may be made by the Board from the account for any project in the public interest that satisfies the criteria of Subsection 025.01. No grant for a single project shall exceed fifty thousand dollars (\$50,000) without legislative approval. (3-20-97)

04. Investigations and Studies. The Board may make grants and loans for investigations and studies related to qualified water projects. A commitment for a grant or loan to conduct an investigation or study carries no guarantee of further financial assistance from the Board. (3-20-97)

05. Matching Grants. The Board may require matching funds or specify other conditions on any grant or loan from the Account. (3-20-97)

026. -- 029. (RESERVED)

030. PURPOSE OF REVOLVING DEVELOPMENT ACCOUNT (RULE 30).

The Board may make loans from the Revolving Development Account to financially assist and support the development of the water resources of this state through the construction of water projects, including the rehabilitation, improvement, or extension of existing systems. No loans can be made from the Revolving Development Account to finance feasibility studies except as part of the overall project cost. (3-20-97)

01. Major Items. Major items to be considered by the Board in setting loan priorities include the following: (3-20-97)

- a.** Emergency Nature. The emergency nature of the project; (7-1-93)
- b.** Utilization. The utilization of unappropriated surface and ground waters; (7-1-93)
- c.** Benefits. The economic, environmental, and water conservation benefits of the project compared to the cost of the project; and (3-20-97)
- d.** Public Nature and Benefits. The public nature and benefits of the project. (7-1-93)

02. Maximum Loan Amount. No loan for a single project shall exceed five hundred thousand dollars (\$500,000) without legislative approval. (3-20-97)

031. -- 034. (RESERVED)

035. LETTER OF INTENT (RULE 35).

01. Notification. Any applicant desiring a loan or grant should notify the Idaho Water Resource Board by a letter of intent. This letter should include the following information: (3-20-97)

- a.** Name, address, and telephone number of sponsoring group and principal representative; (7-1-93)
- b.** Project title or name, location, and brief description (including maps or plans); (7-1-93)
- c.** Preliminary estimate of project costs and approximate financial requirements; (7-1-93)

- d. Brief justification for project or general benefits to be realized; (7-1-93)
- e. Statement of applicant's willingness to provide project data and information and to prepare engineering and economic feasibility studies of the project if deemed necessary by the Board; and (3-20-97)
- f. Additional information as needed to fully explain the intent of the project or study. (3-20-97)

02. Receipt of Letter of Intent. The letter of intent must be received twenty-eight (28) calendar days before the Board meeting at which action is to be taken and should be addressed to: Chairman, Idaho Water Resource Board, 1301 North Orchard Street, Boise, Idaho 83706. The Chairman can waive the twenty-eight (28) day period upon a determination that the public interest is best served by the early consideration of the request.(3-20-97)

03. Method of Review. The Director of the Department of Water Resources shall review the applicant's letter for the Board to determine if: (7-1-93)

- a. Preliminary analysis indicates that the applicant has the ability to repay a loan if granted; (7-1-93)
- b. The project is in conformance with the State Water Plan and all applicable provisions of law; (7-1-93)
- c. Preliminary analysis indicates that project benefits, including social and environmental, outweigh project costs. (7-1-93)

04. Request Application. If the Director finds that the applicant and the project meet the above criteria, the Director may request that the applicant submit additional information for a final loan or grant application. (3-20-97)

05. Inform in Writing. If the Director finds that the applicant or the project does not meet the necessary criteria, the Director shall inform the applicant in writing, listing the reasons for finding against the applicant. (3-20-97)

06. Hearing. The applicant may seek a hearing before the Board to review the Director's decision by filing a petition for review pursuant to the Rules for Practice and Procedure, before the Department of Water Resources. The petition shall be filed with the Director within twenty-eight (28) days of the date of mailing of the decision to the applicant. (3-20-97)

036. -- 039. (RESERVED)

040. FIELD REVIEW (RULE 40).

After receipt and evaluation of the letter of intent, the Director may, contact the applicant to schedule a field review of the project. Department staff, and, when deemed necessary by the Chairman, a Board member will visit the site with the applicant or their representative and other interested parties. (3-20-97)

041. -- 044. (RESERVED)

045. APPLICATION REQUIREMENTS (RULE 45).

01. Preparation. The applicant shall be responsible for providing the necessary data for presentation to the Board. The applicant may apply for a loan or grant from the Water Management Account to conduct necessary investigations or feasibility studies separate from the funding request for the proposed project. (3-20-97)

02. Contents. Application for project or study funding shall include all or part of the following: (3-20-97)

- a. Project data or a feasibility study for the construction, operation and maintenance of the proposed project, including information as to its expected costs and benefits; (3-20-97)

- b.** A legal description of the project area, including a map showing the layout of the project, and the location and number of acres, residences, or other points served by the project; (3-20-97)
- c.** A copy of the legal description of the property being offered as security for the loan, together with a map on which the proposed security is identified; (3-20-97)
- d.** A discussion of the water required to satisfy project needs including a description of the source and amounts of the supply, rights to the water, and water quality; (3-20-97)
- e.** An itemized cost estimate of the proposed project (an estimate from a commercial supplier, contractor, or engineer is preferred); (3-20-97)
- f.** Proof of ownership, easements or agreements, showing that the applicant holds or can acquire all lands, rights-of-way and water rights necessary for the construction and operation of the proposed project; (3-20-97)
- g.** Information that demonstrates that the project complies with applicable local land use regulations and other applicable regulations and ordinances, including permits or letters of authorization; (7-1-93)
- h.** A description of the organization sponsoring the project - including the name, type of organization, brief history of organization, powers and authority under state law, taxing or assessing authority, financial status, organization by-laws, articles of incorporation, and physical assets; (3-20-97)
- i.** For municipal borrowers, a letter from the borrowers' legal counsel affirming that the constitutional issue of borrowing has been satisfactorily resolved; (3-20-97)
- j.** An application fee of two percent (2%) of the loan amount or one hundred dollars (\$100), whichever is more, to cover initial costs of application review may be charged for loans. This fee must be received before Board action. The fee may be financed in the loan and it is refundable in part or in total if the loan is not approved. (3-20-97)
- k.** Project authorization by the applicant's governing body as required by law or as required by the applicant's by-laws. (3-20-97)

046. -- 049. (RESERVED)

050. BOARD ACTION (RULE 50).

01. Prepare Resolution. If a loan or grant is to be obligated, the Board will prepare a resolution committing the funds. The resolution may include findings of fact with respect to: (3-20-97)

- a.** The project or study does not conflict with the Idaho State Water Plan; (3-20-97)
- b.** The proposed project or study is feasible from an engineering and legal standpoint and is financially justified; (3-20-97)
- c.** The applicant is qualified; (3-20-97)
- d.** There is reasonable assurance that the applicant can and will repay the loan. (3-20-97)

02. Other. The board's resolution will identify the applicant, the purpose of the loan or grant, specify the maximum amount of the loan or grant, the interest rate and repayment period, and other conditions to be placed on the loan or grant. (3-20-97)

03. Analysis and Consideration. During the board meeting, the staff analysis will be presented and the Board will then consider its resolution. The Board may approve, deny, or approve with conditions, or refer the

application to the Director for further analysis.

(3-20-97)

051. -- 054. (RESERVED)

055. LOAN OR GRANT AGREEMENT (RULE 55).

01. General. The Board will enter into a contract with the applicant for a loan or grant from the Water Management Account or Revolving Development Account, specifying the loan or grant amount, loan or grant disbursement schedule, loan repayment schedule, and other terms, including items covering security and project operation and maintenance. The loan or grant agreement will contain provisions protecting the Idaho Water Resource Board investment in case of forfeiture of contract terms by the applicant.

(3-20-97)

02. Modification of Interest Rate. During the course of the loan agreement the Board may take action to reduce the interest rate to be applied to the unpaid principal during the remaining term of the agreement.

(3-20-97)

03. Approval. All contract documents developed as part of the loan or grant agreement will be approved by the Attorney General's office or other legal counsel engaged in accordance with the Board's by-laws.

(7-1-93)

04. Additional Fees. The Board may charge the applicant the amount required to reimburse the Board for costs that exceed the application fee incurred in connection with the application and loan processing. The applicant shall be advised of these additional costs before they are incurred.

(3-20-97)

056. -- 059. (RESERVED)

060. LOAN SECURITY (RULE 60).

01. General. The state of Idaho shall secure any loan with a lien on project property as required by Section 42-1756(e) of Idaho Code. The Board may require additional security for loans from the Revolving Development Account and security for loans from the Water Management Account as it deems necessary. The additional security may be a mortgage, deed of trust, or other security agreement upon the applicant's property, which may include, but is not limited to, the following types of property associated with the project: project facilities, equipment, easements, real property, and water rights. The Board may at the applicants expense require verification of asset value by an independent appraiser. The lien shall be valid until the loan is paid in full or otherwise discharged by the Board.

(3-20-97)

02. Reserve Account. The Board may require a loan reserve account equal to one (1) year's loan payment. The applicant shall have two (2) years from the date the Board approves the loan to establish the reserve account in full. The Board, at its option, may choose to not require the reserve, adjust the reserve amount, or adjust the time given to establish the reserve.

(3-20-97)

03. Early Payment. At the applicant's option, the applicant may choose to make an early loan payment rather than establish a loan reserve account. If the applicant chooses the early payment option, the applicant shall make an early loan payment within two (2) years of the date the Board approved the loan. The Board, at the Board's option, may choose to not require an early payment, adjust the payment amount, or adjust the time given to make the early payment.

(3-20-97)

061. -- 064. (RESERVED)

065. PROJECT APPROVAL (RULE 65).

At the completion of the project, a final review of the project may be made with the sponsor to determine if the project has been satisfactorily completed before disbursement of the final loan or grant payment.

(3-20-97)

066. -- 999. (RESERVED)

**IDAPA 37
TITLE 03
CHAPTER 03**

**37.03.03 – RULES AND MINIMUM STANDARDS FOR THE CONSTRUCTION
AND USE OF INJECTION WELLS**

000. LEGAL AUTHORITY.

This Chapter is adopted under the legal authority of Sections 42-3913, 42-3914, and 42-3915, Idaho Code. (5-3-03)

001. TITLE AND SCOPE.

01. Title. These rules will be cited as IDAPA 37.03.03 “Rules and Minimum Standards for the Construction and Use of Injection Wells.” (5-3-03)

02. Scope. These rules and minimum standards are for construction and use of injection wells in the state of Idaho. Upon promulgation, these rules apply to all injection wells (see Rule Subsection 035.01). The construction and use of Class I, II, III, IV, or VI injection wells are prohibited by these rules. Class IV wells are also prohibited by federal law. These rules and minimum standards for construction and use of injection wells shall apply to all injection wells in the state of Idaho, except in Indian lands. All injection wells shall be permitted and constructed in accordance with the “Well Construction Standards Rules” found in IDAPA 37.03.09 which are authorized under Section 42-238, Idaho Code. (4-4-13)

03. Rule Coverage. In the event that a portion of these rules is less stringent than the minimum requirements for injection wells as established by Federal regulations, the correlative Federal requirement will be used to regulate the injection well. (4-4-13)

04. Variance of Methods. The Director may approve the use of a different testing method or technology if it is no less protective of human health and the environment, will not allow the migration of injected fluids into a USDW, meets the intent of the rule and yields information or data consistent with the original method or technology required. A request for review by the Director must be submitted in writing by the applicant, permit holder, or operator and be included with all pertinent information necessary for the Director to evaluate the proposed testing method or technology. (4-4-13)

002. WRITTEN INTERPRETATIONS (RULE 2).

Written interpretations of these rules, if any, in the form of explanatory comments accompanying the notice of proposed rulemaking, the review of comments submitted in the adoption of these rules, and any declaratory rulings issued subsequent to adoption of these rules are available from the Idaho Department of Water Resources, P.O. Box 83720, Boise, Idaho 83720-0098. (5-3-03)

003. ADMINISTRATIVE APPEALS (RULE 3).

Challenges to these rules may be filed pursuant to Title 67, Chapter 52, Idaho Code, or actions taken under these rules may be appealed pursuant to Title 42, Chapter 39, or Section 42-1701A, Idaho Code. (5-3-03)

004. INCORPORATION BY REFERENCE (RULE 4).

01. Incorporated Document. IDAPA 37.03.03 adopts and incorporates by reference those ground water quality standards found in Section 200 of IDAPA 58.01.11, “Ground Water Quality Rule,” of the Department of Environmental Quality. (5-3-03)

02. Document Availability. Copies of the incorporated document may be found at the central office of the Idaho Department of Water Resources, 322 East Front Street, Boise, Idaho, 83720-0098 or online through the department or state websites. (5-3-03)

005. OFFICE – OFFICE HOURS – MAILING ADDRESS AND STREET ADDRESS (RULE 5).

01. Office Hours. Office hours are 8 a.m. to 5 p.m., Mountain Time, Monday through Friday, except holidays designated by the state of Idaho. (5-3-03)

02. Mailing Address. The mailing address for the central office is Idaho Department of Water Resources, 322 East Front Street, Boise, Idaho, 83720-0098. (Mailing addresses are subject to change.) (5-3-03)

03. Street Address. The central office of the Idaho Department of Water Resources is located at 322 East Front Street, Boise, Idaho, 83720-0098. (Street addresses are subject to change.) (5-3-03)

006. PUBLIC RECORDS ACT COMPLIANCE.

Any records associated with these rules are subject to the provisions of the Idaho Public Records Act, Title 74, Chapter 1, Idaho Code. Unless provided otherwise by statute, all records associated with these rules are open for inspection including the name and address of any applicant or permittee and information pertaining to the existence, absence, or level of contaminants in drinking water. (4-4-13)

007. -- 009. (RESERVED)

010. DEFINITIONS.

01. Abandonment. See “permanent decommission.” (4-4-13)

02. Abandoned Well. See “permanent decommission.” (4-4-13)

03. Agricultural Runoff Waste. Excess surface water from agricultural fields generated during any agricultural operation, including runoff of irrigation tail water, as well as natural drainage resulting from precipitation, snowmelt, and floodwaters, and is identical to the statutory phrase “irrigation waste water” found in Idaho Code 42-3902. (4-4-13)

04. Applicant. Any owner or operator submitting an application for permit to construct, modify or maintain an injection well to the Director of the Department of Water Resources. (7-1-93)

05. Application. The standard Department forms for applying for a permit, including any additions, revisions or modifications to the forms. (4-4-13)

06. Aquifer. Any formation that will yield water to a well in sufficient quantities to make production of water from the formation reasonable for a beneficial use, except when the water in such formation results solely from fluids deposited through an injection well. (5-3-03)

~~**07. Area of Review.** The area surrounding an injection well described according to the criteria set forth in Subsection 045.07 of these rules. (4-4-13)~~

08. Beneficial Use. One (1) or more of the recognized beneficial uses of water including but not limited to, domestic, municipal, irrigation, hydropower generation, industrial, commercial, recreation, aquifer recharge and storage, stockwatering and fish propagation uses, as well as other uses which provide a benefit to the user of the water as determined by the Director. Industrial use as used for purposes of these rules includes, but is not limited to, manufacturing, mining and processing uses of water. (5-3-03)

09. Best Management Practice (BMP). A practice or combination of practices that are more effective than other techniques at preventing or reducing contamination of ground water and surface water by injection well operation. (4-4-13)

10. Casing. A pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mud fluid into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole. (4-4-13)

11. Cementing. The operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing. (4-4-13)

12. Cesspool. An injection well that receives sanitary waste without benefit of a treatment system or treatment device such as a septic tank. Cesspools sometimes have open bottom and/or perforated sides. (4-4-13)

13. Coliform Bacteria. All of the aerobic and facultative anaerobic, gram-negative, non-spore forming, rod-shaped bacteria that either ferment lactose broth with gas formation within forty-eight (48) hours at thirty-five degrees Celsius (35C), or produce a dark colony with a metallic sheen within twenty-four (24) hours on an Endo-type medium containing lactose. (7-1-93)

14. Confining Bed. A body of impermeable or distinctly less permeable material stratigraphically adjacent to one (1) or more aquifers. (4-4-13)

~~**15. Confining Zone.** A geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone. (4-4-13)~~

16. Construct. To create a new injection well or to convert any structure into an injection well. (7-1-93)

17. Contaminant. Any physical, chemical, biological, or radiological substance or matter. (4-4-13)

18. Contamination. The introduction into the natural ground water of any physical, chemical, biological, or radioactive material that may: (4-4-13)

a. Cause a violation of Idaho Ground Water Quality Standards found in IDAPA 58.01.11 “Ground Water Quality Rule” or the federal drinking water quality standards, whichever is more stringent; or (4-4-13)

b. Adversely affect the health of the public; or (4-4-13)

c. Adversely affect a designated or beneficial use of the State’s ground water. Contamination includes the introduction of heated or cooled water into the subsurface that will alter the ground water temperature and render the local ground water less suitable for beneficial use. (4-4-13)

19. Conventional Mine. An open pit or underground excavation for the production of minerals. (4-4-13)

20. Decommission. To remove a well from operation such that injection through the well is not possible. See “permanent decommission” and “unauthorized decommission”. (4-4-13)

21. DEQ. The Idaho Department of Environmental Quality. (5-3-03)

22. Deep Injection Well. An injection well which is more than eighteen (18) feet in vertical depth below land surface. (4-4-13)

23. Department. The Idaho Department of Water Resources. (7-1-93)

24. Director. The Director of the Idaho Department of Water Resources. (7-1-93)

25. Disposal Well. A well used for the disposal of waste into a subsurface stratum. (4-4-13)

26. Draft Permit. A prepared document indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." Permit conditions, compliance schedules, and monitoring requirements are typically included in a "draft permit". A notice of intent to terminate a permit, and a notice of intent to deny a permit are types of "draft permits." A denial of a request for modification, revocation and reissuance, or termination is not a "draft permit." (4-4-13)

27. Drilling Fluid. Any number of liquid or gaseous fluids and mixtures of fluids and solids (such as solid suspensions, mixtures and emulsions of liquids, gases, and solids) used in operations to drill boreholes into the earth. (4-4-13)

28. Drywell. An injection well completed above the water table so that its bottom and sides are typically dry except when receiving fluids. (5-3-03)

~~**29. Emergency Permit.** A UIC "permit" issued in accordance with Subsection 045.09 of these rules. (4-4-13)~~

~~**30. EPA.** The United States Environmental Protection Agency. (5-3-03)~~

31. Endangerment. Injection of any fluid which exceeds Idaho ground water quality standards, or federal drinking water quality standards, whichever is more stringent, that may result in the presence of any contaminant in ground water which supplies or can reasonably be expected to supply any public or non-public water system, and if the presence of such contaminant may result in such a system not complying with any ground water quality standard or may otherwise adversely affect the health of persons or result in a violation of ground water quality standards that would adversely affect beneficial uses. (4-4-13)

32. Exempted Aquifer. An "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" USDW but which has been exempted according to the procedures in Section 025 of these rules and been recategorized as "other" according to the procedures in IDAPA 58.01.11 "Ground Water Quality Rule". (4-4-13)

33. Existing Injection Well. An "injection well" other than a "new injection well." (4-4-13)

34. Experimental Technology. A technology which has not been proven feasible under the conditions in which it is being tested. (4-4-13)

35. Facility or Activity. Any UIC "injection well," or another facility or activity that is subject to regulation under the UIC program. (4-4-13)

36. Fault. A surface or zone of rock fracture along which there has been displacement. (4-4-13)

37. Flow Rate. The volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel. (4-4-13)

38. Fluid. Any material or substance which flows or moves, whether in a semisolid, liquid, sludge, gaseous or any other form or state. (7-1-93)

39. Formation. A body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface. (4-4-13)

~~**40. Formation Fluid.** Fluid present in a "formation" under natural conditions as opposed to introduced fluids. (4-4-13)~~

41. Generator. Any person, by site location, whose act or process produces hazardous waste identified or listed in 40 CFR part 261. (4-4-13)

42. Ground Water. Any water that occurs beneath the surface of the earth in a saturated formation of rock or soil. (5-3-03)

43. Ground Water Quality Standards. Standards found in IDAPA 58.01.11, “Ground Water Quality Rule,” Section 200. (5-3-03)

44. Hazardous Waste. Any substance defined by IDAPA 58.01.05, “Rules and Standards for Hazardous Waste;”.

45. Indian Lands. “Indian Country” as defined in 18 U.S.C. 1151. That section defines Indian Country as: (4-4-13)

a. All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (4-4-13)

b. All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and (4-4-13)

c. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (4-4-13)

46. Individual Subsurface Sewage Disposal System. For the purpose of these rules, any standard or alternative disposal system which injects sanitary waste from single family residential septic systems, or non-residential septic systems which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than twenty (20) people a day. (4-4-13)

47. Improved Sinkhole. A naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface. (4-4-13)

48. Injection. The subsurface emplacement of fluids through an injection well, ~~but excludes the following:~~ (4-4-13)

~~a. The underground injection of natural gas for purposes of storage; (4-4-13)~~

~~b. The underground injection of fluids or propping agents, other than diesel fuels, pursuant to hydraulic fracturing operations related to oil, gas, or geothermal activities. (4-4-13)~~

49. Injection Well. Any feature that is operated to allow injection which also meets at least one (1) of the following criteria: (4-4-13)

a. A bored, or driven shaft whose depth is greater than the largest surface dimension; (4-4-13)

b. A dug hole whose depth is greater than the largest surface dimension; (4-4-13)

c. An improved sinkhole; or (4-4-13)

d. A subsurface fluid distribution system. (4-4-13)

~~e. Provided however, that “injection well” does not mean or include any well used for oil, gas, or geothermal production activities, other than one into which diesel fuels are injected pursuant to hydraulic fracturing operations (4-11-15)~~

50. Injection Zone. A geological “formation”, or those sections of a formation receiving fluids through an “injection well.” (4-4-13)

51. IWRB. Idaho Water Resource Board. (5-3-03)

52. Large Capacity Cesspools. Any cesspool used by a multiple dwelling, community or regional system for the disposal of sanitary wastes (for example: a duplex or an apartment building) or any cesspool used by or intended to be used by twenty (20) or more people per day (for example: a rest stop, campground, restaurant or church). (5-3-03)

53. Large Capacity Septic System. Class V wells that are used to inject sanitary waste through a septic tank and do not meet the criteria of an individual subsurface sewage disposal system. (4-4-13)

~~**54. Lithology.** The description of rocks on the basis of their physical and chemical characteristics. (4-4-13)~~

55. Maintain. To allow, either expressly or by implication, an injection well to exist in such condition as to accept or be able to accept fluids. Unless a well has been permanently decommissioned pursuant to the criteria contained in these rules it is considered to be capable of accepting fluids. (4-4-13)

~~**56. Mechanical Integrity.** The condition or status of an injection well and its physical components as they relate to the flow of fluids inside or outside the injection well. A well is said to have mechanical integrity if there is no significant leak in the casing, tubing, or packer, and there is no significant fluid movement into a underground source of drinking water through vertical channels adjacent to the wellbore. (4-4-13)~~

57. Modify. To alter the construction of an injection well, but does not include cleaning or redrilling operations which neither deepen nor increase the dimensions of the well. (7-1-93)

58. Motor Vehicle Waste Disposal Wells. Injection wells that receive or have received fluids from vehicle repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (transmission and muffler repair shop), or any facility that does any vehicular repair work. (5-3-03)

59. New Injection Well. An “injection well” which began to be used for injection after a UIC program for the State applicable to the well is approved or prescribed. (4-4-13)

60. Open-Loop Heat Pump Return Wells. Injection wells that receive surface water or ground water that has been passed through a heat exchange system for cooling or heating purposes. (4-4-13)

61. Operate. To allow fluids to enter an injection well by action or inaction of the operator. (7-1-93)

62. Operator. Any individual, group of individuals, partnership, company, corporation, municipality, county, state agency, taxing district, federal agency or other entity that operates or proposes to operate any injection well. (7-1-93)

63. Owner. Any individual, group of individuals, partnership, company, corporation, municipality, county, state agency, taxing district, federal agency or other entity owning land on which any injection well exists or is proposed to be constructed. (7-1-93)

64. Packer. A device lowered into a well to produce a fluid-tight seal. (4-4-13)

65. Perched Aquifer. Ground water separated from an underlying main body of ground water by an unsaturated zone. (7-1-93)

66. Permanent Decommission. The discontinuance of use of an injection well in a method approved by the Director such that the injection well no longer has the capacity to inject fluids and the upward or downward

migration of fluid is prevented. This also includes the disposal and proper management of any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the injection well in accordance with all applicable Federal, State, and local regulations and requirements. (4-4-13)

67. Permit. An authorization, license, or equivalent control document issued by the Department. (4-4-13)

68. Person. Any individual, association, partnership, firm, joint stock company, trust, political subdivision, public or private corporation, state or federal governmental department, agency or instrumentality, or any other legal entity which is recognized by law. (4-4-13)

~~**69. Plugging.** The act or process of stopping the flow of water, oil or, gas, or other fluids into or out of a formation through a borehole or well penetrating that formation. (4-4-13)~~

~~**70. Plugging Record.** A systematic listing of permanent or temporary decommissioning of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures. (4-4-13)~~

71. Point of Beneficial Use. The top or surface of a USDW, directly below an injection well, where water is available for a beneficial use. (4-4-13)

72. Point of Diversion for Beneficial Use. A location such as a producing well or spring where ground water is taken under control and diverted for a beneficial use. (7-1-93)

73. Point of Injection. The last accessible sampling point prior to waste being released into the subsurface environment through an injection well. For example, the point of injection for a Class V septic system might be the distribution box. For a drywell, it is likely to be the well bore itself. (4-4-13)

74. Pressure. The total load or force per unit area acting on a surface. (4-4-13)

~~**75. Project.** A group of wells in a single operation. (4-4-13)~~

76. Radioactive Material. Any material, solid, liquid or gas which emits radiation spontaneously. Radioactive geologic materials occurring in their natural state are not included. (7-1-93)

77. Radioactive Waste. Any fluid which contains radioactive material in concentrations which exceed those established for discharges to water in an unrestricted area by 10 CFR 20.1302.(b)(2)(i) and Table 2 in Appendix B of 10 CFR 20. (5-3-03)

78. RCRA. The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976. (4-4-13)

79. Remediation Project. Use of an injection well for the removal, treatment or isolation of a contaminant from ground water through actions or the removal or treatment of a contaminant in ground water as approved by the Director. (4-4-13)

80. Residential (Domestic) Activities. Human activities that generate liquid or solid waste in any public, private, industrial, commercial, municipal, or other facility. (4-4-13)

81. Sanitary Waste. Any fluid generated through residential (domestic) activities, such as food preparation, cleaning and personal hygiene. This term does not include industrial, municipal, commercial, or other non-residential process fluids. (4-4-13)

82. Schedule of Compliance. A schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with the standards. (7-1-93)

83. Septic System. An injection well that is used to inject sanitary waste below the surface. A septic system is typically comprised of a septic tank and subsurface fluid distribution system or disposal system. (5-3-03)

84. Shallow Injection Well. An injection well which is less than or equal to eighteen (18) feet in vertical depth below land surface. (7-1-93)

85. Site. The land or water area where any “facility or activity” is physically located or conducted, including adjacent land used in connection with the facility or activity. (4-4-13)

86. State. The state of Idaho. (7-1-93)

87. Stratum (plural strata). A single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material. (4-4-13)

88. Subsidence. The lowering of the natural land surface in response to: Earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting (Hydrocompaction); oxidation of organic matter in soils; or added load on the land surface. (4-4-13)

89. Subsurface Fluid Distribution System. An assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground. (4-4-13)

~~**90. Surface Casing.** The largest diameter permanent pipe string set and sealed following setting of the conductor pipe. (4-4-13)~~

~~**91. Total Dissolved Solids.** The total dissolved (filterable) solids as determined by the use of the method specified in 40 CFR part 136. (4-4-13)~~

~~**92. Transferor.** The owner or operator transferring ownership and/or operational control of the well. (4-4-13)~~

93. UIC. The Underground Injection Control program under Part C of the Safe Drinking Water Act, including an “approved State program.” (4-4-13)

94. Unauthorized Decommission. The decommissioning of any injection well that has not received the approval of the Department prior to decommissioning, or was not decommissioned in a method approved by the Director. These wells may have to be properly decommissioned when discovered by the Director to ensure that the well prevents commingling of aquifers or is no longer capable of injection. (4-4-13)

95. Underground Injection. See “injection.” (4-4-13)

96. Underground Source of Drinking Water (USDW). An aquifer or its portion: (4-4-13)

a. Which: (4-4-13)

i. Supplies any public water system; or (4-4-13)

ii. Contains a sufficient quantity of ground water to supply a public water system; or (4-4-13)

(1) Currently supplies drinking water for human consumption; or (4-4-13)

(2) Contains fewer than ten thousand (10,000) mg/l total dissolved solids; and (4-4-13)

b. Which is not an exempted aquifer. (4-4-13)

~~97.96~~ Unreasonable Contamination. Endangerment of a USDW or the health of persons or other beneficial uses by injection. See “endangerment.” (4-4-13)

98. USDW. Underground Source of Drinking Water. (4-4-13)

~~99.97~~ Water Quality Standards. Refers to those standards found in Idaho Department of Environmental Quality Rules, IDAPA 58.01.02, “Water Quality Standards” and IDAPA 58.01.11, “Ground Water Quality Rule.” (5-3-03)

~~100.98~~ Well. For the purposes of these rules, “well” means “injection well.” (5-3-03)

~~101.99 Well Monitoring.~~ ~~The measurement, by on-site instruments or laboratory methods, of the quality of water in a well.~~ (4-4-13)

011. -- 014. (RESERVED)

015. VIOLATIONS, FORMAL NOTIFICATION AND ENFORCEMENT.

01. Violations. It shall be a violation of these rules for any owner or operator to: (7-1-93)

a. Fail to comply with a permit or authorization, or terms or conditions thereof; (5-3-03)

b. Fail to comply with applicable standards for water quality; (7-1-93)

c. Fail to comply with any permit application notification or filing requirement; (7-1-93)

d. Knowingly make any false statement, representation or certification in any application, report, document or record filed pursuant to these rules, or terms and conditions of an issued permit; (7-1-93)

e. Falsify, tamper with or knowingly render inaccurate any monitoring device or method required to be maintained or utilized by the terms and conditions of an issued permit; (7-1-93)

f. Fail to respond to any formal notification of a violation when a response is required; or (5-3-03)

g. Decommission a well in an unauthorized manner. (4-4-13)

02. Additional. It shall be a violation of these rules for any person to construct, operate, maintain, convert, plug, decommission or conduct any other activity in a manner which results or may result in the unauthorized injection of a hazardous waste or of a radioactive waste by an injection well. (4-4-13)

03. Formal Notification. Formal notification of violations may be communicated to the owner or operator with a letter, a notice of violation, a compliance or enforcement order or other appropriate means. (7-1-93)

04. Enforcement. Violation of any of the provisions of the Injection Well Act (Chapter 39, Title 42, Idaho Code) or of any rule, regulation, standard or criteria pertaining to the Injection Well Act may result in the Director initiating an enforcement action as provided under Chapters 17 and 39, Title 42, Idaho Code. (4-4-13)

016. -- 019. (RESERVED)

020. HEARING BEFORE THE WATER RESOURCE BOARD.

01. General. All hearings before the ~~Idaho Water Resource Board~~**IWRB** shall be conducted in accordance with Chapter 52, Title 67, Idaho Code, at a place convenient to the owner and/or operator. For purposes of such hearings, the ~~Idaho Water Resource Board~~**IWRB** or its designated hearing officer shall have power to administer oaths, examine witnesses, and issue in the name of the said Board subpoenas requiring testimony of witnesses and the production of evidence relevant to any matter in the hearing. Judicial review of the final

determination by the ~~Idaho Water Resource Board~~IWRB may be secured by the owner by filing a petition for review as prescribed by Chapter 52, Title 67, Idaho Code, in the District Court of the county where the injection well is situated or proposed to be located. The petition for review shall be served upon the Chairman of the ~~Idaho Water Resource Board~~IWRB and upon the Attorney General. (7-1-93)

02. Hearings on Conditional Permits, Disapproved Applications, or Petitions for Exemption. Any owner or operator aggrieved by the approval or disapproval of an application, or by conditions imposed upon a permit, or any person aggrieved by the Director's decision on a petition for exemption under Section 025 of these rules, shall be afforded an opportunity for a hearing before the ~~Idaho Water Resource Board~~IWRB or its designated hearing officer. Written notice of such grievance shall be transmitted to the Director within thirty (30) days after receipt of notice of such approval, disapproval or conditional approval. Such hearing shall be held for the purpose of determining whether the permit shall be issued, whether the conditions imposed in a permit are reasonable, whether a change in circumstances warrants a change in conditions imposed in a valid permit, or whether the Director's decision on a petition for exemption should not be changed. (4-4-13)

03. Hearings on Permit Cancellations. When the Director has reason to believe the operation of an injection well for which a permit has been issued is interfering with the right of the public to withdraw water for beneficial uses, or is causing unreasonable contamination of a drinking or other ground water source as provided for in Title 42, Chapter 39, Idaho Code, the permit may be canceled by the Director. Prior to the cancellation of such permit there shall be a hearing before the Water Resource Board for the purpose of determining whether or not the permit should be canceled. At such hearing, the Director shall be the complaining party. At least thirty (30) days prior to the hearing, a notice, which shall be in accordance with Chapter 52, Title 67, Idaho Code, shall be sent by certified mail to the owner or operator whose permit is proposed to be canceled. The Board shall affirm, modify, or reject the Director's decision and make its decision in the form of an order to the Director. (7-1-93)

021. -- 024. (RESERVED)

~~025. EXEMPTION FROM DRINKING WATER SOURCE DESIGNATION.~~

~~**01. General.** Most aquifers in Idaho are likely to fit within the definition of "underground source of drinking water." Some portions of these aquifers, however, may be isolated or contain water of such quality that they will not be utilized as drinking water sources. Other deep ground water systems may contain water of such poor quality that they will not be used for drinking water. Under the authorities of section 1805, Title 42, Idaho Code, the Director may determine "the most effective means by which these water resources may be applied for the benefit of the people of this state." As such, these aquifers, portions of aquifers and deep ground water systems may be employed in the best interests of Idaho as disposal sites for certain contaminants, as authorized for disposal under these rules. However, injection must be consistent with the requirements of the Ground Water Quality Act of 1989 and the Idaho Ground Water Quality Plan. (4 4 13)~~

~~**02. Petition Process for Aquifer Exemptions.** The Department or any other person or entity may petition to exempt an aquifer from the designation as a drinking water source. The Department and the Idaho Department of Environmental Quality have jurisdictional responsibilities for processing a petition for aquifer exemption. Once the Department has processed and approved the aquifer exemption, and the Idaho Department of Environmental Quality has processed and approved the aquifer re-categorization, the U.S. Environmental Protection Agency must also approve the exemption for the process to be considered complete. The applicant must submit information to the Department and to the Idaho Department of Environmental Quality and may do so at the same time so each agency's process occurs concurrently. The petition process is broken down into the following general steps: (4 4 13)~~

~~**a.** The petition for aquifer exemption shall be submitted to the Department and must contain the general information found in Subsection 025.05 and the pertinent specific information found in Subsection 025.06 of these rules. To be considered for exemption by the Department, an aquifer must meet the criteria set forth in Subsection 025.04 of these rules. Once the petition has been reviewed by the Department, the applicant and the Idaho Department of Environmental Quality will be notified as to whether or not the aquifer meets the criteria for exemption. If the aquifer does not meet the criteria, the petition will be denied and the applicant will be informed of the reasons for the denial. If the aquifer meets the criteria for exemption, the Department will review the information submitted and~~

determine if the geologic and hydrogeologic characteristics will allow for the proposed injection activities while preventing degradation to adjacent USDW's. If the geologic and hydrogeologic characteristics are not conducive to preventing degradation to adjacent USDW's, the petition will be denied and the applicant and IDEQ will be informed of the reason for denial, thereby terminating the process for both agencies. If the Department intends to approve a petition for exemption, an opportunity for public input will be provided. If, after the public input period, the Department does not intend to approve the petition, the Department will deny the petition and inform the applicant and IDEQ of the reasons for denial, thereby terminating the process for both agencies. If, after the public input period, the Department intends to approve the petition, the Department will hold approval of the exemption pending the outcome of IDEQ's aquifer re-categorization process. If the aquifer re-categorization process fails, the Department will deny the petition for exemption. (4 4 13)

~~b.~~ The petition for aquifer re-categorization shall be submitted to the Idaho Department of Environmental Quality and must contain the information found in the petition process of IDAPA 58.01.11 "Ground Water Quality Rule". The Idaho Department of Environmental Quality will determine if the information submitted is sufficient enough to be submitted to their Environmental Quality Board for review. If the information submitted is not sufficient, IDEQ will deny the petition and inform the applicant and the Department of the reasons for denial, thereby terminating the process for both agencies. If the information submitted is sufficient but the Environmental Quality Board does not approve the petition and does not instruct staff to initiate negotiated rulemaking, IDEQ will deny the petition and inform the applicant and the Department of the reason for denial, thereby terminating the process for both agencies. If the Environmental Quality Board approves the petition, IDEQ staff will initiate the negotiated rulemaking process with opportunity for public input. (4 4 13)

~~c.~~ Upon a successful aquifer re-categorization by IDEQ and an issuance of an intent to approve the exemption by the Department, the Department will submit its approval recommendation to the U.S. EPA, which will include information regarding the successful aquifer re-categorization, a description of the aquifer to be exempted as per section 025.03 of these rules, and information submitted by the applicant for review and final approval. Upon U.S. EPA approval, the Department will notify the applicant and IDEQ of the approved aquifer exemption. (4 4 13)

~~03. Identification of Underground Sources of Drinking Water and Exempted Aquifers.~~ (4 4 13)

~~a.~~ The Director may identify (by narrative description, illustrations, maps, or other means) and shall protect as underground sources of drinking water, all aquifers and parts of aquifers which meet the definition of "underground source of drinking water" in Section 010 of these rules, except to the extent there is an applicable aquifer exemption under Paragraph 025.03.b. of this rule. If an aquifer has not been specifically identified by the Director, it is an underground source of drinking water if it meets the definition in Section 010 of these rules. (4 4 13)

~~b.~~ The Director may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Director proposes to designate as exempted aquifers using the criteria in Subsection 025.04 of these rules. (4 4 13)

~~c.~~ Subsequent to program approval or promulgation, the Director may, after notice and opportunity for a public hearing, identify additional exempted aquifers. For approved State programs exemption of aquifers identified: (4 4 13)

~~i.~~ Under Paragraph 025.04.b. shall be treated as a program revision under Section 40 CFR 145.32; (4 4 13)

~~ii.~~ Under Paragraph 025.04.c. shall become final if the Director submits the exemption in writing to the U.S. Environmental Protection Agency and the U.S. Environmental Protection Agency has not disapproved the designation within the timeframe set forth in 40 CFR 144.7.b.3. Any disapproval by the U.S. Environmental Protection Agency shall state the reasons and shall constitute final Agency action for purposes of judicial review. (4 4 13)

~~04. Criteria for Exempted Aquifers.~~ An aquifer or a portion thereof which meets the criteria for an

~~“underground source of drinking water” in Section 010 may be determined under Subsection 025.03 of these rules to be an “exempted aquifer” for Class II wells if it meets the criteria in Paragraphs 025.04.a. through 025.04.c. of these rules.~~ (4 4 13)

~~a. It does not currently serve as a source of drinking water; and~~ (4 4 13)

~~b. It cannot now and will not in the future serve as a source of drinking water because:~~ (4 4 13)

~~i. It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.~~ (4 4 13)

~~ii. It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;~~ (4 4 13)

~~iii. It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or~~ (4 4 13)

~~c. The total dissolved solids content of the ground water is more than three thousand (3,000) and less than ten thousand (10,000) mg/l and it is not reasonably expected to supply a public water system.~~ (4 4 13)

~~**05. General Information to be Submitted with a Petition for Exemption.** Applicants requesting exemptions must provide the following general information:~~ (4 4 13)

~~a. A map of the proposed exempted area in a format acceptable to the director. The map must show the boundaries of the area to be exempted, the topography, and other natural surface features and surface water locations. Any map which precisely delineates the proposed exempted area is acceptable.~~ (4 4 13)

~~b. A written description of the proposed exempted aquifer including:~~ (4 4 13)

~~i. Name of formation of aquifer.~~ (4 4 13)

~~ii. Subsurface depth or elevation of zone.~~ (4 4 13)

~~iii. Vertical confinement from other underground sources of drinking water.~~ (4 4 13)

~~iv. Thickness of proposed exempted aquifer.~~ (4 4 13)

~~v. Area of exemption (e.g., acres, square miles, etc.).~~ (4 4 13)

~~vi. A water quality analysis of the horizon to be exempted.~~ (4 4 13)

~~c. In addition to the above descriptive information concerning the aquifer, all exemption requests must demonstrate that the aquifer “... does not currently serve as a source of drinking water.” as per Paragraph 025.04.a. of these rules. To demonstrate this, the applicant must survey the proposed exempted area to identify any water supply wells which tap the proposed exempted aquifer. The area to be surveyed should cover the exempted zone and a buffer zone outside the exempted area. The buffer zone should extend a minimum of a one-quarter (1/4) mile from the boundary of the exempted area. Any water supply wells located should be identified on the map showing the proposed exempted area. If no water supply wells would be affected by the exemption, the request should state that a survey was conducted and no water supply wells are located which tap the aquifer to be exempted within the proposed area. If the exemption pertains to only a portion of an aquifer, a demonstration must be made that the waste will remain in the exempted portion. Such a demonstration should consider among other factors, the pressure in the injection zone, the waste volume, injected waste characteristics (i.e., specific gravity, persistence, etc.) in the life of the facility. The model described in Subparagraph 045.07.a.ii. of these rules or a comparable aquifer model acceptable to the Director shall be used in this demonstration.~~ (4 4 13)

~~06. Specific Information to be Submitted with a Petition for Exemption. (4 4 13)~~

~~a. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Subparagraph 025.04.b.i. of these rules. If the proposed exemption is to allow a Class II enhanced oil recovery well operation to continue, the fact that it has a history of hydrocarbon or mineral production will be sufficient proof that this standard is met. Many times it may be necessary to slightly expand an existing well field to recover minerals or hydrocarbons. In this case, the applicant must show only that the exemption request is for expanding the previously exempted aquifer and state his reasons for believing that there are commercially producible quantities of minerals within the expanded area. (4 4 13)~~

~~i. For Class II wells, a demonstration of commercial producibility shall be made as follows: (4 4 13)~~

~~(1) For a Class II well to be used for enhanced oil recovery processes in a field or project containing aquifers from which hydrocarbons were previously produced, commercial producibility shall be presumed by the Director upon a demonstration by the applicant of historical production having occurred in the project area or field. (4 4 13)~~

~~(2) For Class II wells not located in a field or project containing aquifers from which hydrocarbons were previously produced, information such as logs, core data, formation description, formation depth, formation thickness and formation parameters such as permeability and porosity shall be considered by the Director, to the extent such information is available. (4 4 13)~~

~~ii. Exemptions relating to any new Class II wells which will be injecting into a producing or previously produced horizon should include the following types of information: (4 4 13)~~

~~(1) Production history of the well if it is a former production well which is being converted. (4 4 13)~~

~~(2) Description of any drill stem tests run on the horizon in question. This should include information on the amount of oil and water produced during the test. (4 4 13)~~

~~(3) Production history of other wells in the vicinity which produce from the horizon in question. (4 4 13)~~

~~(4) Description of the project, if it is an enhanced recovery operation including the number of wells and their location. (4 4 13)~~

~~b. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Subparagraph 025.04.b.ii. of these rules. Consideration of an aquifer exemption request under this provision would depend on the availability of alternative supplies, the adequacy of alternatives to meet present and future needs, and a demonstration that there are major costs for treatment and or development associated with the use of the aquifer. The economic evaluation, submitted by the applicant, should consider the above factors, and these that follow: (4 4 13)~~

~~i. Distance from the proposed exempted aquifer to public water supplies. (4 4 13)~~

~~ii. Current sources of water supply for potential users of the proposed exempted aquifer. (4 4 13)~~

~~iii. Availability and quality of alternative water supply sources. (4 4 13)~~

~~iv. Analysis of future water supply needs within the general area. (4 4 13)~~

~~v. Depth of proposed exempted aquifer. (4 4 13)~~

~~vi. Quality of the water in the proposed exempted aquifer. (4 4 13)~~

~~vii. Costs to develop the proposed exempted aquifer as a water supply source including any treatment~~

~~costs and costs to develop alternative water supplies. This should include costs for well construction, transportation, and water treatment for each source. (4 4 13)~~

~~c. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Subparagraph 025.04.b.iii. of these rules. Economic considerations will factor into the Director's decision on aquifer exemption requests under this section. Unlike the previous section, the economics involved are controlled by the cost of technology to render water fit for human consumption. Treatment methods can usually be found to render water potable. However, costs of that treatment may often be prohibitive either in absolute terms or compared to the cost to develop alternative water supplies. The Directors evaluation of aquifer exemption requests under this section will consider the following information submitted by the applicant: (4 4 13)~~

~~i. Concentrations and types of contaminants in the aquifer. (4 4 13)~~

~~ii. Source of contamination. (4 4 13)~~

~~iii. Whether contamination source has been abated. (4 4 13)~~

~~iv. Extent of contaminated area. (4 4 13)~~

~~v. Probability that the contaminant plume will pass the through proposed exempted area. (4 4 13)~~

~~vi. Ability of treatment to remove contaminants from ground water. (4 4 13)~~

~~vii. Chemical content of proposed injected fluids. (4 4 13)~~

~~viii. Current water supply in the area. (4 4 13)~~

~~ix. Alternative water supplies. (4 4 13)~~

~~x. Costs to develop current and probable future water supplies, cost to develop water supply from proposed exempted aquifer. This should include well construction costs, transportation costs, water treatment costs, etc. (4 4 13)~~

~~xi. Projections on future use of the proposed aquifer. (4 4 13)~~

~~d. The following information shall be submitted with a petition for exemption for an aquifer meeting the criteria in Paragraph 025.04.c. of these rules. An application under this provision must include information about the quality and availability of water from the aquifer proposed for exemption. Also, the exemption request must analyze the potential for public water supply use of the aquifer. This may include: a description of current sources of public water supply in the area, a discussion of the adequacy of current water supply sources to supply future needs, population projections, economy, future technology, and a discussion of other available water supply sources within the area. (4 4 13)~~

0256. -- 029. (RESERVED)

030. SEVERABILITY.

The provisions of these rules are severable. If any provisions or the application of such provisions to any person or circumstance is declared invalid for any reason, such declaration shall not affect the validity or remaining portions of these rules. (7-1-93)

031. -- 034. (RESERVED)

035. CLASSIFICATION OF INJECTION WELLS.

01. Classification of Injection Wells. For the purposes of these rules, injection wells are classified as follows: (7-1-93)

- a.** Class I: (4-4-13)
 - i. Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one-quarter (1/4) mile of the well bore, an underground source of drinking water. (4-4-13)
 - ii. Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one-quarter (1/4) mile of the well bore, an underground source of drinking water. (4-4-13)
 - iii. Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one-quarter (1/4) mile of the well bore. (4-4-13)
- b.** Class II. Wells used to inject fluids: (4-4-13)
 - i. Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants, dehydration stations, or compressor stations which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection. (4-4-13)
 - ii. For enhanced recovery of oil or natural gas; and (4-4-13)
 - iii. For storage of hydrocarbons which are liquid at standard temperature and pressure. (4-4-13)
- c.** Class III. Wells used to inject fluids for extraction of minerals including: (4-4-13)
 - i. Mining of sulfur by the Frasch process; (4-4-13)
 - ii. In situ production of uranium or other metals; this category includes only in-situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V. (4-4-13)
 - iii. Solution mining of salts or potash. (4-4-13)
- d.** Class IV: (4-4-13)
 - i. Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water. (4-4-13)
 - ii. Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water. (4-4-13)
 - iii. Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under Subparagraphs 035.01.a.i. or 035.01.d.i. or 035.01.d.ii. of this rule (e.g., wells used to dispose of hazardous waste into or above a formation which contains an aquifer which has been exempted pursuant to Section 025 of these rules). (4-4-13)
- e.** Class V -- All injection wells not included in Classes I, II, III, IV, or VI. (4-4-13)
- f.** Class VI. (4-4-13)
 - i. Wells that are not experimental in nature that are used for geologic sequestration of carbon dioxide

beneath the lowermost formation containing a USDW; or (4-4-13)

ii. Wells used for geologic sequestration of carbon dioxide that have been granted a waiver of the injection depth requirements pursuant to requirements at 40 CFR Section 146.95; or (4-4-13)

iii. Wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to Section 025 of these rules. (4-4-13)

02. Subclassification. Class V wells are subclassified as follows: (7-1-93)

a. 5A5-Electric Power Generation. (7-1-93)

b. 5A6-Geothermal Heat. (7-1-93)

c. 5A7-Heat Pump Return. (7-1-93)

d. 5A8-Aquaculture Return Flow. (7-1-93)

e. 5A19-Cooling Water Return. (7-1-93)

f. 5B22-Saline Water Intrusion Barrier. (7-1-93)

g. 5D2-Storm Runoff. (7-1-93)

h. 5D3-Improved Sinkholes. (7-1-93)

i. 5D4-Industrial Storm Runoff. (7-1-93)

j. 5F1-Agricultural Runoff Waste. (7-1-93)

k. 5G30-Special Drainage Water. (7-1-93)

l. 5N24¹-Radioactive Waste Disposal. (4-4-13)

m. 5R21-Aquifer Recharge. (7-1-93)

n. 5S23-Subsidence Control. (7-1-93)

o. 5W9-Untreated Sewage. (7-1-93)

p. 5W10-Cesspools. (7-1-93)

q. 5W11-Septic Systems (General). (7-1-93)

r. 5W12-Waste Water Treatment Plant Effluent. (4-4-13)

s. 5W20-Industrial Process Water. (7-1-93)

t. 5W31-Septic Systems (Well Disposal). (7-1-93)

u. 5W32-Septic System (Drainfield). (7-1-93)

v. 5X13-Mine Tailings Backfill. (7-1-93)

w. 5X14-Solution Mining. (7-1-93)

- x. 5X15-In-Situ Fossil Fuel Recovery. (7-1-93)
- y. 5X16-Spent Brine Return Flow. (7-1-93)
- z. 5X25-Experimental Technology. (7-1-93)
- aa. 5X26-Aquifer Remediation. (7-1-93)
- bb. 5X27-Other Wells. (7-1-93)
- cc. 5X28¹-Motor Vehicle Waste Disposal Wells. (4-4-13)
- dd. 5X29-Abandoned Water Wells. (5-3-03)

¹ The construction and operation of wells in these subclasses is currently illegal in Idaho.

036. -- 039. (RESERVED)

040. AUTHORIZATIONS, PROHIBITIONS AND EXEMPTIONS.

01. Authorizations. Construction and use of Class V deep injection wells may be authorized by permit as approved by the Director in accordance with these rules. (4-4-13)

02. Prohibitions. (4-4-13)

a. These rules prohibit the permitting, construction, or use of any Class I, II, III, IV, or VI injection well. (4-4-13)

~~b. Any underground injection through a class II injection well, except as authorized by permit issued under the UIC program, is prohibited. The construction or use of any class II injection well required to have a permit is prohibited until the permit has been issued. (4 4 13)~~

~~e.b.~~ No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows or causes the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary or secondary drinking water regulation, under IDAPA 58.01.11, "Ground Water Quality Rule," Section 200 or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of Paragraph 040.02.c. are met. (4-4-13)

~~d. For Class II wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, or degradation of the ground water quality is detected and deemed significant by the Department, except as authorized under these rules, the Director shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with Subsection 057.02, or the permit may be terminated under Subsection 057.03 if cause exists, or appropriate enforcement action may be taken if the permit has been violated. (4 4 13)~~

~~e.c.~~ Notwithstanding any other provision of this section, the Director may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons. (4-4-13)

~~f.d.~~ Construction of large capacity cesspools, motor vehicle waste disposal wells, radioactive waste

disposal wells, and untreated sewage disposal wells is prohibited. Construction and use of other Class V shallow injection wells are authorized by these rules without permit provided that: (4-4-13)

i. Required inventory information is submitted to the Director pursuant to Subsection 070.01 of this rule. (4-4-13)

ii. Use of the shallow injection well shall not result in unreasonable contamination of a USDW or cause a violation of surface or ground water quality standards that would affect a beneficial use. (4-4-13)

~~g.e.~~ Class IV injection wells used to inject contaminated ground water that has been treated and is being reinjected into the same formation from which it was drawn are not prohibited by these rules if such injection is approved by EPA, or ~~a State~~Idaho, pursuant to provisions for cleanup of releases under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601–9657, or pursuant to requirements and provisions under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 through 6987. (4-4-13)

~~h.f.~~ All large capacity cesspools must be properly decommissioned by January 1, 2005. A cease and desist order may be issued to the owner or the operator when a large capacity cesspool is found to be a threat to the ground water resources as described in Paragraph 070.01.c. (4-4-13)

~~i.g.~~ All motor vehicle waste disposal wells must be properly decommissioned by January 1, 2005. A cease and desist order may be issued to the owner or the operator when a motor vehicle waste disposal well is found to be a threat to the ground water resources as described in Paragraph 070.01.c. (4-4-13)

~~j.h.~~ The Construction, operation or maintenance of any non-experimental Class V geologic sequestration well is prohibited. (4-4-13)

~~k.i.~~ Owners or operators of shallow injection wells are prohibited from injecting into the well upon failure to submit inventory information in a timely manner pursuant to Paragraph 070.01.a. of these rules. (4-4-13)

03. Exemptions. (4-4-13)

a. The UIC inventory and fee requirements of these rules do not apply to individual subsurface sewage disposal system wells. These systems are, however, subject to the permitting and fee requirements of IDAPA 58.01.03 “Individual/Subsurface Sewage Disposal Rules,” Title 39, Chapter 1 and Title 39, Chapter 36, Idaho Code. (4-4-13)

b. State or local government entities are exempt from the permit requirements of these rules for wells associated with highway and street construction and maintenance projects, but shall submit shallow injection well inventory information for said wells and shall comply with all other requirements of these rules. (4-4-13)

c. Mine tailings backfill (5X13) wells are authorized by rule as part of mining operations. They are therefore exempt from the ground water quality standards and permitting requirements of these rules provided that their use is limited to the injection of mine tailings only. The use of any 5X13 well(s) shall not result in water quality standards at points of diversion for beneficial use being exceeded or otherwise affect a beneficial use. Should water quality standards be exceeded or beneficial uses be affected, the Director may order the wells to be put under the permit requirements of these rules, or the wells may be required to be remediated or closed. As a condition of their use, the Director may require the construction and sampling of monitoring wells by the owner/operator. 5X13 wells are subject to the inventory requirements of Subsection 070.01. (4-4-13)

~~041. – 044. (RESERVED)~~

~~045. CLASS II: APPLICATION INFORMATION~~

7

- ~~01. Application For A Permit. (4 4 13)~~
- ~~a. Application. (4 4 13)~~
- ~~i. Any person who requires a permit shall complete, sign, and submit to the Director an application for each permit required under this section. (4 4 13)~~
- ~~ii. The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit found in Subsection 045.02 of these rules and the signature and certification requirements found in Subsection 045.03 of these rules. (4 4 13)~~
- ~~b. The Director shall review for administrative completeness every application for permit to operate an injection well. The Director shall notify the applicant whether the application is administratively complete within ten (10) business days of its receipt. If the application is administratively incomplete, the Director shall list the information necessary to make the application administratively complete and submit this with the notification. The purpose of this review is to determine if the applicant has submitted all of the appropriate forms and information necessary to perform a review for completeness in section 045.01.c. There will be no technical analysis of the details contained in the permit application as part of this review. (4 4 13)~~
- ~~c. The Director shall review for completeness every application for permit. Each application for permit submitted for a new UIC injection well should be reviewed for completeness by the Director within 60 days of its receipt. Each application for permit submitted for an existing injection well should be reviewed for completeness within 60 days of receipt. Upon completing the review, the Director shall notify the applicant in writing whether the application is complete. If the application is incomplete, the Director shall list the information necessary to make the application complete. When the application is for an existing UIC injection well the Director shall specify in the notice of deficiency a date for submitting the necessary information. The Director shall notify the applicant that the application is complete upon receiving this information. After the application is completed, the Director may request additional information from an applicant but only when necessary to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete. (4 4 13)~~
- ~~d. If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under the applicable statutory provision IDWR housekeeping as determined by the Director. (4 4 13)~~
- ~~e. If the Director decides that a site visit is necessary for any reason in conjunction with the processing of an application, he or she shall notify the applicant and a date shall be scheduled. (4 4 13)~~
- ~~f. The effective date of an application is the date on which the Director notifies the applicant that the application is complete as provided in Paragraph 045.01.c. of this rule. (4 4 13)~~
- ~~g. For each application for a new UIC injection well the Director shall, no later than the effective date of the application, prepare and mail to the applicant a project decision schedule. The schedule shall specify target dates by which the Director intends to:~~
- ~~i. Prepare a draft permit; (4 4 13)~~
- ~~ii. Give public notice; (4 4 13)~~
- ~~iii. Complete the public comment period, including any public hearing; and (4 4 13)~~
- ~~iv. Issue a final permit. (4 4 13)~~
- ~~02. Application For A Permit; Authorization By Permit. (4 4 13)~~
- ~~a. Permit application. All injection activities including construction of an injection well are prohibited~~

~~until the owner or operator is authorized by permit. Procedures for applications, issuance and administration of emergency permits are found exclusively in Subsection 045.09. (4 4 13)~~

~~b. When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit. (4 4 13)~~

~~c. Time to apply. Any person who performs or proposes an underground injection for which a permit is or will be required shall submit an application to the Director in accordance with the UIC program. For new injection wells, the application shall be submitted within a reasonable time before construction is expected to begin. (4 4 13)~~

~~d. Completeness. The Director shall not issue a permit before receiving a complete application for a permit except for emergency permits. An application for a permit is complete when the Director receives an application form with all of the information requirements listed in Paragraph 045.02.e., and Subsections 045.03 through 045.08, and Subsection 045.10 and any supplemental information which are completed to his satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. (4 4 13)~~

~~e. Information requirements. All applicants for Class II permits shall provide the following information to the Director, using the application form provided by the Director. (4 4 13)~~

~~i. Name, mailing address, and location of the facility for which the application is submitted. (4 4 13)~~

~~ii. Permit processing fee. (4 4 13)~~

~~iii. Up to four (4) SIC codes which best reflect the principal products or services provided by the facility. (4 4 13)~~

~~iv. The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity. (4 4 13)~~

~~v. Whether the facility is located on Indian lands. (4 4 13)~~

~~vi. Documentation that the applicant has the right to conduct operations at the proposed site. (4 4 13)~~

~~vii. A topographic map (or other map if a topographic map is unavailable) extending one (1) mile beyond the property boundaries of the source depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, and other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a quarter mile of the facility property boundary, or within the area of review, whichever is greater. (4 4 13)~~

~~viii. A brief description of the nature of the injection activity. (4 4 13)~~

~~ix. The applicant shall identify and submit on a list with the permit application the names and addresses of all owners of record of land within one quarter (1/4) mile of the facility boundary. The applicant shall also submit an affidavit certifying that all owners of record of land within one quarter (1/4) mile of the facility boundary have been notified in writing of the proposed injection well. A copy of this notice shall be submitted with the affidavit. This requirement may be waived by the Director where the site is located in a populous area and the Director determines that the requirement would be impracticable. (4 4 13)~~

~~x. A determination of the regional ground water flow direction and gradient in the USDW(s) above the injection zone. (4 4 13)~~

~~xi. A plugging and abandonment plan that meets the requirements of Subsection 054.03 of these rules and is acceptable to the Director. (4 4 13)~~

~~_____ f. _____ Recordkeeping. Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under Subsection 045.02 for a period of at least three (3) years from the date the application is signed. (4 4 13)~~

~~_____ 03. _____ Signatories to Permit Applications and Reports. (4 4 13)~~

~~_____ a. _____ Applications. All permit applications, except those submitted for Class II wells (see Paragraph 045.03.b. of this rule), shall be signed as follows: (4 4 13)~~

~~_____ i. _____ For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means; (4 4 13)~~

~~_____ (1) _____ A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (4 4 13)~~

~~_____ (2) _____ The manager of one (1) or more manufacturing, production, or operating facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty five (\$25) million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.~~

~~_____ Note: The Department does not require specific assignments or delegations of authority to responsible corporate officers identified in Subparagraph 045.03.a.i.(1). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Subparagraph 045.03.a.i.(2) rather than to specific individuals. (4 4 13)~~

~~_____ ii. _____ For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or (4 4 13)~~

~~_____ iii. _____ For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (4 4 13)~~

~~_____ (1) _____ The chief executive officer of the agency, or (4 4 13)~~

~~_____ (2) _____ A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. (4 4 13)~~

~~_____ b. _____ Reports. All reports required by permits, other information requested by the Director, and all permit applications submitted for Class II wells under Subsection 045.02 shall be signed by a person described in Paragraph 045.03.a. of this rule, or by a duly authorized representative of that person. A person is a duly authorized representative only if: (4 4 13)~~

~~_____ i. _____ The authorization is made in writing by a person described in Paragraph 045.03.a. of this rule; (4 4 13)~~

~~_____ ii. _____ The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and (4 4 13)~~

~~_____ iii. _____ The written authorization is submitted to the Director. (4 4 13)~~

~~c. Changes to authorization. If an authorization under Paragraph 045.03.b. of this rule is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Paragraph 045.03.b. of this rule must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative. (4 4 13)~~

~~d. Certification. Any person signing a document under Paragraph 045.03.a. or 045.03.b. of this rule shall make the following certification:~~

~~I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (4 4 13)~~

~~04. Bonding. (4 4 13)~~

~~a. Individual Bond. The Director shall require, as a condition of every Class II injection well permit, that every person who engages in the construction, modification, testing, or operation of a well provide evidence of good and sufficient security in the form of a bond, letter of credit, or other surety acceptable to the Director that ensures that the applicant perform the duties required by this chapter and properly decommission any well covered by such permit. Good and sufficient security for each injection well shall be an amount of ten thousand dollars (\$10,000) plus one dollar (\$1) per foot of depth. The bond shall be conditioned upon the performance of the owner's or operator's duty to comply with the rules of the Water Resource Board, with respect to the drilling, maintaining, operating, and plugging of each well. The bond shall remain in force and effect until the plugging and decommissioning of said well is approved by the Director or the security is released by the Director. Well decommissioning shall include reclamation of the well site so that the site is left in a stable, non eroding condition with no impact to any ground water or surface water sources of the State. The Director may impose additional bonding on an owner or operator given sufficient reason, such as non-compliance, unusual conditions, or other circumstances that suggest a particular well has potential risk or liability in excess of that normally expected. (4 4 13)~~

~~05. Information to Be Considered By The Director. This section sets forth the information which must be considered by the Director in authorizing Class II wells. Certain maps, cross sections, tabulations of wells within the area of review, and other data may be included in the application by reference provided they are current, readily available to the Director (for example, in the permitting agency's files) and sufficiently identified to be retrieved. All the information in this section is to be submitted to the Director. (4 4 13)~~

~~a. Prior to the issuance of a permit for the construction or conversion of a new Class II well the applicant shall submit the following: (4 4 13)~~

~~i. Information required in Subsection 045.02; (4 4 13)~~

~~ii. A map showing the injection well or project area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name and location of all existing producing wells, injection wells, decommissioned wells, dry holes, and water wells. The map must also show surface bodies of waters, mines (surface and subsurface), quarries and other pertinent surface features including residences and roads, and faults if known or suspected. Only information of public record and pertinent information known to the applicant is required to be included on this map. This requirement does not apply to existing Class II wells. This requirement does not apply to permit renewals; and (4 4 13)~~

~~iii. A tabulation of data reasonably available from public records or otherwise known to the applicant on all wells within the area of review included on the map required under Subparagraph 045.05.a.ii. of this rule which penetrate the proposed injection zone or, in the case of Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review which penetrate formations affected by the increase in pressure. Such data shall include a description of each well's type, construction, date drilled, location, depth, record~~

of plugging and complete, and any additional information the Director may require. In cases where the information would be repetitive and the wells are of similar age, type, and construction the Director may elect to only require data on a representative number of wells. (4 4 13)

~~iv. Proposed operating data: (4 4 13)~~

~~(1) Average and maximum daily rate and volume of fluids to be injected. (4 4 13)~~

~~(2) Average and maximum injection pressure; and (4 4 13)~~

~~(3) Source and an appropriate analysis of the chemical and physical characteristics of the injection fluid. (4 4 13)~~

~~v. Appropriate geological data on the injection zone and confining zone including lithologic description, geological name, thickness and depth; (4 4 13)~~

~~vi. Geologic name and depth to bottom of all underground sources of drinking water which may be affected by the injection; (4 4 13)~~

~~vii. Schematic or other appropriate drawings of the surface and subsurface construction details of the well to show compliance with Subsection 045.06 of these rules; (4 4 13)~~

~~viii. In the case of new injection wells the corrective action proposed to be taken by the applicant under the National Pollutant Discharge Elimination System in Title 40 Code of Federal Regulations 122.44; (4 4 13)~~

~~ix. A certificate that the applicant has assured through a performance bond or other appropriate means, the resources necessary to close plug or abandon the well; (4 4 13)~~

~~x. Proposed formation testing program to obtain the information required by Paragraph 045.06.e., unless such information is already available; (4 4 13)~~

~~xi. Proposed stimulation program; (4 4 13)~~

~~xii. Proposed injection procedure; (4 4 13)~~

~~xiii. Proposed contingency plans, if any, to cope with well failures so as to prevent migration of contaminating fluids into an underground source of drinking water; (4 4 13)~~

~~xiv. Plans for meeting the monitoring requirements of Paragraph 054.01.b. (4 4 13)~~

~~**b.** Prior to operating a Class II well the owner/operator must submit the following information: (4 4 13)~~

~~i. All available logging and testing program data on the well; (4 4 13)~~

~~ii. A demonstration of mechanical integrity pursuant to Subsection 054.02; (4 4 13)~~

~~iii. The anticipated maximum pressure and flow rate at which the permittee will operate. (4 4 13)~~

~~iv. The information specified in Paragraph 045.06.e. of these rules; (4 4 13)~~

~~v. The actual injection procedure; and (4 4 13)~~

~~vi. For new wells the status of corrective action on defective wells in the area of review. (4 4 13)~~

~~**c.** Prior to the plugging and abandonment of a Class II well the owner/operator must provide the~~

following information: (4 4 13)

i. The type, and number of plugs to be used; (4 4 13)

ii. The placement of each plug including the elevation of top and bottom; (4 4 13)

iii. The type, grade, and quantity of cement to be used; (4 4 13)

iv. The method of placement of the plugs; and (4 4 13)

v. The procedures to meet the requirements of Subsection 054.03 of these rules. (4 4 13)

06. Construction Requirements. (4 4 13)

a. All new Class II wells shall be sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of open faults or fractures within the area of review. (4 4 13)

b. Requirements. (4 4 13)

i. All Class II injection wells shall be cased and cemented to prevent movement of fluids into or between underground sources of drinking water. The casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered: (4 4 13)

(1) Depth to the injection zone; (4 4 13)

(2) Depth to the bottom of all USDWs; and (4 4 13)

(3) Estimated maximum and average injection pressures; (4 4 13)

ii. In addition the Director may consider information on: (4 4 13)

(1) Nature of formation fluids; (4 4 13)

(2) Lithology of injection and confining zones; (4 4 13)

(3) External pressure, internal pressure, and axial loading; (4 4 13)

(4) Hole size; (4 4 13)

(5) Size and grade of all casing strings; and (4 4 13)

(6) Class of cement. (4 4 13)

c. The requirements in Paragraph 045.06.b. of this rule need not apply to existing or newly converted Class II wells located in existing fields if: (4 4 13)

i. Regulatory controls for casing and cementing existed for those wells at the time of drilling and those wells are in compliance with those controls; and (4 4 13)

ii. Well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons. (4 4 13)

d. Appropriate logs and other tests shall be conducted during the drilling and construction of new Class II wells. A descriptive report interpreting the results of that portion of those logs and tests which specifically relate to

~~(1) an USDW and the confining zone adjacent to it, and (2) the injection and adjacent formations shall be prepared by a knowledgeable log analyst and submitted to the director. At a minimum, these logs and tests shall include: (4 4 13)~~

~~i. Deviation checks on all holes constructed by first drilling a pilot hole and then enlarging the pilot hole, by reaming or another method. Such checks shall be at sufficiently frequent intervals to assure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling. (4 4 13)~~

~~ii. Such other logs and tests as may be needed after taking into account the availability of similar data in the area of the drilling site, the construction plan, and the need for additional information that may arise from time to time as the construction of the well progresses. In determining which logs and tests shall be required the following shall be considered by the Director in setting logging and testing requirements: (4 4 13)~~

~~(1) For surface casing intended to protect underground sources of drinking water in areas where the lithology has not been determined: (4 4 13)~~

~~(a) Electric and caliper logs before casing is installed; and (4 4 13)~~

~~(b) A cement bond, temperature, or density log after the casing is set and cemented. (4 4 13)~~

~~(2) For intermediate and long strings of casing intended to facilitate injection: (4 4 13)~~

~~(a) Electric porosity and gamma ray logs before the casing is installed; (4 4 13)~~

~~(b) Fracture finder logs; and (4 4 13)~~

~~(c) A cement bond, temperature, or density log after the casing is set and cemented. (4 4 13)~~

~~c. At a minimum, the following information concerning the injection formation shall be determined or calculated for new Class II wells or projects: (4 4 13)~~

~~i. Fluid pressure; (4 4 13)~~

~~ii. Estimated fracture pressure; (4 4 13)~~

~~iii. Physical and chemical characteristics of the injection zone. (4 4 13)~~

~~**07. Area of Review.** The area of review for each injection well or each field, project or area of the State shall be determined according to either Paragraph 045.07.a. or 045.07.b. of this rule. The Director may solicit input from the owners or operators of injection wells within the State as to which method is most appropriate for each geographic area or field. (4 4 13)~~

~~a. Zone of endangering influence. (4 4 13)~~

~~i. The zone of endangering influence shall be: (4 4 13)~~

~~(1) That area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water. (4 4 13)~~

~~ii. Computation of the zone of endangering influence may be based upon the parameters listed below and should be calculated for an injection time period equal to the expected life of the injection well or pattern. The following modified equation illustrates one form which the mathematical model may take:~~

$$r = [(2.25KHt) / (S10^x)]^{0.5}$$

where:

$$r = \sqrt{(4\pi KH)(h_w - h_{bo} * S_p G_p) / (2.3Q)}$$

=

r = Radius of endangering influence from injection well (length)

K = Hydraulic conductivity of the injection zone (length/time)

H = Thickness of the injection zone (length)

T = Time of injection (time)

S = Storage coefficient (dimensionless)

Q = Injection rate (volume/time)

h_{bo} = Observed original hydrostatic head of injection zone (length)-
measured from the base of the lowermost underground
source of drinking water

h_w = Hydrostatic head of underground source of drinking water
(length) measured from the base of the lowest underground
source of drinking water

$S_p G_p$ = Specific gravity of fluid in the injection zone (dimensionless)

π = 3.142 (dimensionless)

The above equation is based on the following assumptions:-

- (1) The injection zone is homogeneous and isotropic;
- (2) The injection zone has infinite area extent;
- (3) The injection well penetrates the entire thickness of the injection zone;
- (4) The well diameter is infinitesimal compared to "r" when injection time is longer than a few minutes; and
- (5) The emplacement of fluid into the injection zone creates instantaneous increase in pressure.

(4 4 13)

b. Fixed radius.

(4 4 13)

i. A fixed radius around the well of not less than one fourth (1/4) mile may be used.

(4 4 13)

ii. In determining the fixed radius, the following factors shall be taken into consideration: Chemistry of injected and formation fluids; hydrogeology; population and ground water use and dependence; and historical practices in the area.

(4 4 13)

c. If the area of review is determined by a mathematical model pursuant to Paragraph 045.07.a. of this rule, the permissible radius is the result of such calculation even if it is less than one fourth (1/4) mile. In these instances, the Director has the discretion to review the area of review analysis and impose the fixed radius method if the model results yield a small radius that is unrealistic.

(4 4 13)

08. Corrective Action.

(4 4 13)

~~_____ a. _____ Coverage. Applicants for Class II injection well permits shall identify the location of all known wells within the injection well's area of review which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review penetrating formations affected by the increase in pressure. For such wells which are improperly sealed, completed, or decommissioned, the applicant shall also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluid into underground sources of drinking water ("corrective action"). Where the plan is adequate, the Director shall incorporate it into the permit as a condition. Where the Director's review of an application indicates that the permittee's plan is inadequate (based on the factors in Paragraph 045.08.c. of this rule), the Director shall require the applicant to revise the plan, prescribe a plan for corrective action as a condition of the permit under Paragraph 045.08.b. of this rule, or deny the application. (4 4 13)~~

~~_____ b. _____ Requirements. (4 4 13)~~

~~_____ i. _____ New injection wells. No owner or operator of a new injection well may begin injection until all required corrective action has been taken. (4 4 13)~~

~~_____ ii. _____ Injection pressure limitation. The Director may require as a permit condition that injection pressure be so limited that pressure in the injection zone does not exceed hydrostatic pressure at the site of any improperly completed or decommissioned well within the area of review. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation can be part of a compliance schedule and last until all other required corrective action has been taken. (4 4 13)~~

~~_____ c. _____ In determining the adequacy of corrective action proposed by the applicant and in determining the additional steps needed to prevent fluid movement into underground sources of drinking water, the following criteria and factors shall be considered by the Director: (4 4 13)~~

~~_____ i. _____ Nature and volume of injected fluid; (4 4 13)~~

~~_____ ii. _____ Nature of native fluids or by-products of injection; (4 4 13)~~

~~_____ iii. _____ Potentially affected population; (4 4 13)~~

~~_____ iv. _____ Geology; (4 4 13)~~

~~_____ v. _____ Hydrology; (4 4 13)~~

~~_____ vi. _____ History of the injection operation; (4 4 13)~~

~~_____ vii. _____ Completion and plugging records; (4 4 13)~~

~~_____ viii. _____ Decommissioning procedures in effect at the time the well was decommissioned; and (4 4 13)~~

~~_____ ix. _____ Hydraulic connections with underground sources of drinking water. (4 4 13)~~

~~_____ 09. _____ Emergency Permits. (4 4 13)~~

~~_____ a. _____ Coverage. Notwithstanding any other provision of this section, the Director may temporarily permit a specific underground injection if: (4 4 13)~~

~~_____ i. _____ An imminent and substantial endangerment to the health of persons will result unless a temporary emergency permit is granted; or (4 4 13)~~

~~_____ ii. _____ A substantial and irretrievable loss of oil or gas resources will occur unless a temporary emergency permit is granted to a Class II well; and (4 4 13)~~

~~_____ (1) _____ Timely application for a permit could not practicably have been made; and (4 4 13)~~

~~_____ (2) _____ The injection will not result in the movement of fluids into underground sources of drinking water;
or _____ (4 4 13)~~

~~_____ iii. _____ A substantial delay in production of oil or gas resources will occur unless a temporary emergency
permit is granted to a new Class II well and the temporary authorization will not result in the movement of fluids into
an underground source of drinking water; and _____ (4 4 13)~~

~~_____ (1) _____ Timely application for a permit could not practically have been made. _____ (4 4 13)~~

~~_____ b. _____ Requirements for issuance. _____ (4 4 13)~~

~~_____ i. _____ Any temporary permit under Subparagraph 045.09.a.i. of this rule shall be for no longer term than
required to prevent the hazard. _____ (4 4 13)~~

~~_____ ii. _____ Any temporary permit under Subparagraph 045.09.a.ii. of this rule shall be for no longer than 90
days, except that if a permit application has been submitted prior to the expiration of the 90-day period, the Director
may extend the temporary permit until final action on the application. _____ (4 4 13)~~

~~_____ iii. _____ Any temporary permit under Subparagraph 045.09.a.iii. of this rule shall be issued only after a
complete permit application has been submitted and shall be effective until final action on the application. _____ (4 4 13)~~

~~_____ iv. _____ Notice of any temporary permit under Subsection 045.09 shall be published in accordance with
Subsection 048.04 within ten (10) days of the issuance of the permit. _____ (4 4 13)~~

~~_____ v. _____ The temporary permit under this section may be either oral or written. If oral, it must be followed
within five (5) calendar days by a written temporary emergency permit. _____ (4 4 13)~~

~~_____ vi. _____ The Director shall condition the temporary permit in any manner he or she determines is necessary
to ensure that the injection will not result in the movement of fluids into an underground source of drinking water.
_____ (4 4 13)~~

~~_____ 10. _____ Request for Variance. _____ (4 4 13)~~

~~_____ a. _____ When injection does not occur into, through or above an underground source of drinking water, the
Director may consider a well or project with a request for variance from the requirements for area of review, operation,
monitoring, and reporting than required in these rules to the extent that the reduction in requirements will not result in
an increased risk of movement of fluids into an underground source of drinking water. _____ (4 4 13)~~

~~_____ b. _____ When injection occurs through or above an underground source of drinking water, but the radius of
endangering influence when computed under Paragraph 045.07.a. is smaller or equal to the radius of the well, the
Director may authorize a well or project with less stringent requirements for operation, monitoring, and reporting than
required in these rules to the extent that the reduction in requirements will not result in an increased risk of movement
of fluids into an underground source of drinking water. _____ (4 4 13)~~

~~_____ c. _____ When reducing requirements under Paragraph 045.10.a. or 045.10.b. of this rule, the Director shall
prepare a fact sheet under Subsection 048.02 explaining the reasons for the action. _____ (4 4 13)~~

~~_____ 11. _____ Contingency Plan~~

~~. The applicant shall submit a contingency plan(s) which describes how the fluids, that were intended to be injected,
will be disposed of in the case that this injection well being applied for is unusable for injection under these rules at
some point during its operating life. _____ (4 4 13)~~

~~046. — 047. — (RESERVED)~~

~~048. — CLASS II: APPLICATION PROCESSING.~~

~~01. Draft Permits. (4 4 13)~~

~~a. Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit or to deny the application. (4 4 13)~~

~~b. If the Director tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. See Paragraph 048.01.d. The applicant may request to meet with the Director, or a designated representative, to review application deficiencies and be given the opportunity to correct the deficiencies prior to initiating the public notice found in Subsection 048.04. If the Director's final decision (Subsection 048.07) is that the tentative decision to deny the permit application was incorrect, he or she shall withdraw the notice of intent to deny and proceed to prepare a draft permit under Paragraph 048.01.e. of this rule. (4 4 13)~~

~~c. If the Director decides to prepare a draft permit, he or she shall prepare a draft permit that contains the following information: (4 4 13)~~

~~i. All conditions under Subsection 051.01; (4 4 13)~~

~~ii. All compliance schedules under Subsection 051.03; (4 4 13)~~

~~iii. All monitoring requirements under Subsection 051.04; and (4 4 13)~~

~~iv. Permit conditions under Subsection 051.02; (4 4 13)~~

~~d. All draft permits prepared under this section shall be accompanied by a fact sheet (Subsection 048.02), and shall be based on the administrative record (Subsection 048.03), publicly noticed (Subsection 048.04) and made available for public comment (Subsection 048.05). The Director shall give notice of opportunity for a public hearing (Subsection 048.05), issue a final decision (Subsection 048.07) and respond to comments (Subsection 048.08). (4 4 13)~~

~~02. Fact Sheet. (4 4 13)~~

~~a. A fact sheet shall be prepared for every draft permit. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person. (4 4 13)~~

~~b. The fact sheet shall include, when applicable: (4 4 13)~~

~~i. A brief description of the type of facility or activity which is the subject of the draft permit; (4 4 13)~~

~~ii. The type and quantity of wastes, fluids, or pollutants which are proposed to be injected; (4 4 13)~~

~~iii. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record; (4 4 13)~~

~~iv. Reasons why any requested variances or alternatives to required standards do or do not appear justified; (4 4 13)~~

~~v. A description of the procedures for reaching a final decision on the draft permit including: (4 4 13)~~

~~(1) The beginning and ending dates of the comment period under Subsection 048.04 and the address where comments will be received; (4 4 13)~~

~~(2) Procedures for requesting a hearing and the nature of that hearing; and (4 4 13)~~

- ~~_____ (3) Any other procedures by which the public may participate in the final decision. _____ (4 4 13)~~
- ~~_____ vi. Name and telephone number of a person to contact for additional information. _____ (4 4 13)~~
- ~~_____ **03. Administrative Record for Draft Permits.** _____ (4 4 13)~~
- ~~_____ a. The provisions of a draft permit prepared under Subsection 048.01 shall be based on the administrative record defined in Subsection 048.03. _____ (4 4 13)~~
- ~~_____ b. For preparing a draft permit under Subsection 048.01, the record shall consist of: _____ (4 4 13)~~
- ~~_____ i. The application, if required, and any supporting data furnished by the applicant; _____ (4 4 13)~~
- ~~_____ ii. The draft permit or notice of intent to deny the application or to terminate the permit; _____ (4 4 13)~~
- ~~_____ iii. A fact sheet (Subsection 048.02); _____ (4 4 13)~~
- ~~_____ iv. All documents cited in the statement of basis or fact sheet; and _____ (4 4 13)~~
- ~~_____ v. Other documents contained in the supporting file for the draft permit. _____ (4 4 13)~~
- ~~_____ c. Material readily available at the Department or published material that is generally available, and that is included in the administrative record under Paragraphs 048.03.b. and 048.03.c. of this rule, need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the fact sheet. _____ (4 4 13)~~
- ~~_____ d. This section applies to all draft permits when public notice was given after the effective date of these rules. _____ (4 4 13)~~
- ~~_____ **04. Public Notice of Permit Actions and Public Comment Period.** _____ (4 4 13)~~
- ~~_____ a. Scope. _____ (4 4 13)~~
- ~~_____ i. The Director shall give public notice that the following actions have occurred: _____ (4 4 13)~~
- ~~_____ (1) A permit application has been tentatively denied under Paragraph 048.01.b.; _____ (4 4 13)~~
- ~~_____ (2) A draft permit has been prepared under Paragraph 048.01.c.; _____ (4 4 13)~~
- ~~_____ (3) A hearing has been scheduled under Subsection 048.06; or _____ (4 4 13)~~
- ~~_____ (4) An appeal has been granted in accordance with the requirements of the statutes listed in Section 003 of these rules. _____ (4 4 13)~~
- ~~_____ ii. No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under Paragraph 057.01.b. Written notice of that denial shall be given to the requester and to the permittee. _____ (4 4 13)~~
- ~~_____ iii. Public notices may describe more than one (1) permit or permit actions. _____ (4 4 13)~~
- ~~_____ b. Timing. _____ (4 4 13)~~
- ~~_____ i. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under Paragraph 048.04.a. of this rule shall allow at least thirty (30) days for public comment. Commenters may request additional time to comply with the requirements of Subsection 060.01 and must demonstrate~~

the need for such time. (4 4 13)

ii. Public notice of a public hearing shall be given at least thirty (30) days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two (2) notices may be combined.) (4 4 13)

c. Methods. Public notice of activities described in Subparagraph 048.04.a.i. of this rule shall be given by the following methods: (4 4 13)

i. By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under Paragraph 048.04.c. may waive his or her rights to receive notice for any classes and categories of permits); (4 4 13)

(1) The applicant; (4 4 13)

(2) Any other agency which the Director knows has issued or is required to issue a permit for the same facility or activity; (4 4 13)

(3) Persons on a mailing list developed by: (4 4 13)

(a) Including those who request in writing to be on the list; (4 4 13)

(b) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and (4 4 13)

(c) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (4 4 13)

(4) Other Agencies; (4 4 13)

(a) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and (4 4 13)

(b) To each State agency having any authority under State law with respect to the construction or operation of such facility. (4 4 13)

(5) Owners or operators of oil or gas wells that are in the same reservoir or field as the proposed well. (4 4 13)

ii. By placing a legal notice in a newspaper of general circulation in the county in which the well is located; and (4 4 13)

iii. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or legal notice in a newspaper of general circulation in the county in which the well is located, or any other forum or medium to elicit public participation. (4 4 13)

d. Contents: (4 4 13)

i. All public notices. All public notices issued under this part shall contain the following minimum information: (4 4 13)

(1) Name and address of the office processing the permit action for which notice is being given; (4 4 13)

(2) Name and address of the permittee or permit applicant and, if different, of the facility or activity

regulated by the permit; (4 4 13)

(3) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit; (4 4 13)

(4) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application; and (4 4 13)

(5) A brief description of the comment procedures required by Subsections 048.05 and 048.06 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing and other procedures by which the public may participate in the final permit decision. (4 4 13)

(6) The location of the administrative record required by Subsection 048.03, the times at which the record will be open for public inspection, and a statement that all data submitted by the applicant is available as part of the administrative record. (4 4 13)

(7) Any additional information considered necessary or proper. (4 4 13)

ii. Public notices for hearings. In addition to the general public notice described in Subparagraph 048.04.d.i. of this rule, the public notice of a hearing under Subsection 048.06 shall contain the following information: (4 4 13)

(1) Reference to the date of previous public notices relating to the permit; (4 4 13)

(2) Date, time, and place of the hearing; (4 4 13)

(3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures. (4 4 13)

c. In addition to the general public notice described in Subparagraph 048.04.d.i. of this rule, all persons identified in Subparagraphs 048.04.e.i.(1), 048.04.e.i.(2), 048.04.e.i.(3), and 048.04.e.i.(4) of this rule shall be mailed a copy of the fact sheet or statement of basis, the permit application and the draft permit. (4 4 13)

05. Public Comments and Requests For Public Hearings. During the public comment period provided under Subsection 048.04, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in Subsection 048.08. (4 4 13)

06. Public Hearings. (4 4 13)

a. Basis and notice. The Director may conduct a fact finding hearing or investigative hearing in accordance with section 42-3907, Idaho Code. (4 4 13)

i. The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit(s); (4 4 13)

ii. The Director may also hold a public hearing at his or her discretion, whenever, for instance, such a hearing might clarify one (1) or more issues involved in the permit decision; (4 4 13)

iii. Public notice of the hearing shall be given as specified in Subsection 048.04. (4 4 13)

b. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under Subsection 048.04 shall automatically be extended to the close of any

public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing. (4 4 13)

07. Issuance and Effective Date Of Permit. (4 4 13)

a. After the close of the public comment period under Subsection 048.04 on a draft permit, the Director shall issue a final permit decision. The Director shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit. (4 4 13)

b. A final permit decision shall become effective immediately after the service of notice of the decision unless: (4 4 13)

i. A later effective date is specified in the decision; or (4 4 13)

ii. An Administrative Appeal is initiated in accordance with Section 003 of these rules. (4 4 13)

08. Response to Comments. (4 4 13)

a. At the time that any final permit decision is issued under Subsection 048.07, the Director shall issue a response to comments that will be made available to the public upon request. This response shall: (4 4 13)

i. Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and (4 4 13)

ii. Briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing. (4 4 13)

b. Any documents cited in the response to comments shall be included in the administrative record for the final permit decision as defined in Subsection 048.09. If new points are raised or new material supplied during the public comment period, the Department may document its response to those matters by adding new materials to the administrative record. (4 4 13)

09. Administrative Record for Final Permit. (4 4 13)

a. The Director shall base final permit decisions under Subsection 048.07 on the administrative record defined in this section. (4 4 13)

b. The administrative record for any final permit shall consist of the administrative record for the draft permit and: (4 4 13)

i. All comments received during the public comment period provided under Subsection 048.04; (4 4 13)

ii. Any written materials submitted at such a hearing; (4 4 13)

iii. The response to comments required by Subsection 048.08 and any new material placed in the record under that section; (4 4 13)

iv. Other documents contained in the supporting file for the permit; and (4 4 13)

v. The final permit. (4 4 13)

vi. Recordings of any contested case hearing initiated under the Administrative Appeals process as per Section 003 of these rules. (4 4 13)

~~_____ c. _____ The additional documents required under Paragraph 048.09.b. of this rule should be added to the record as soon as possible after their receipt or publication by the Agency. The record shall be complete on the date the final permit is issued. (4 4 13)~~

~~_____ d. _____ This section applies to permits when the draft permit was subject to the administrative record requirements of Subsection 048.03. (4 4 13)~~

~~_____ e. _____ Material readily available at the Department, or published materials which are generally available and which are included in the administrative record under the standards of this section or of Subsection 048.08 (“Response to comments”), need not be physically included in the same file as the rest of the record as long as it is specifically referred to in the statement of basis or fact sheet or in the response to comments. (4 4 13)~~

~~_____ 10. _____ Duration of Permits. (4 4 13)~~

~~_____ a. _____ UIC permits for Class II wells shall be issued for a period up to the operating life of the facility. The Director shall review each issued Class II well UIC permit at least once every five (5) years to determine whether it should be modified, revoked and reissued, terminated or a minor modification made as provided in Subsection 057.02, 057.03, or 057.04. (4 4 13)~~

~~_____ b. _____ Except as provided in Subsection 057.05, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section. (4 4 13)~~

~~_____ c. _____ The Director may issue any permit for a duration that is less than the full allowable term under this section and the reason(s) for this determination will be added to the back file for this facility. (4 4 13)~~

~~_____ 11. _____ Criteria for Establishing Permitting Priorities~~

~~. In determining priorities for setting times for owners or operators to submit applications for authorization to inject under the procedures of Subsection 045.02 of these rules, the Director shall base these priorities upon consideration of the following factors: (4 4 13)~~

~~_____ a. _____ Injection wells known or suspected to be contaminating underground sources of drinking water; (4 4 13)~~

~~_____ b. _____ Likelihood of contamination of underground sources of drinking water; (4 4 13)~~

~~_____ c. _____ Potentially affected population; (4 4 13)~~

~~_____ d. _____ Injection wells violating existing State requirements; (4 4 13)~~

~~_____ e. _____ Coordination with the issuance of permits required by other State or Federal permit programs; (4 4 13)~~

~~_____ f. _____ Age and depth of the injection well; and (4 4 13)~~

~~_____ g. _____ Expiration dates of existing State permits, if any. (4 4 13)~~

~~049. -- 050. (RESERVED)~~

~~051. CLASS II: PERMIT CONDITIONS.~~

~~_____ 01. _____ Conditions Applicable to All Permits. The following conditions apply to all UIC permits. All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit. (4 4 13)~~

~~_____ a. _____ Duty to comply. The permittee must comply with all conditions of this permit. Any permit~~

~~noncompliance constitutes a violation of these rules and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit under Subsection 045.09.~~ (4 4 13)

~~b. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.~~ (4 4 13)

~~c. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.~~ (4 4 13)

~~d. Duty to mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.~~ (4 4 13)

~~e. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.~~ (4 4 13)

~~f. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.~~ (4 4 13)

~~g. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.~~ (4 4 13)

~~h. Duty to provide information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.~~ (4 4 13)

~~i. Inspection and entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:~~ (4 4 13)

~~i. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;~~ (4 4 13)

~~ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;~~ (4 4 13)

~~iii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and~~ (4 4 13)

~~iv. Sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location.~~ (4 4 13)

~~j. Monitoring and records.~~ (4 4 13)

~~i. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.~~ (4 4 13)

~~ii. The permittee shall retain records of all monitoring information, including the following:~~ (4 4 13)

~~_____ (1) _____ Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time; and _____ (4 4 13)~~

~~_____ (2) _____ The nature and composition of all injected fluids until three (3) years after the completion of any plugging and abandonment procedures specified under Subparagraph 051.02.a.v. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period. The owner or operator shall continue to retain the records after the three (3) year retention period unless he delivers the records to the Director or obtains written approval from the Director to discard the records. _____ (4 4 13)~~

~~_____ iii. _____ Records of monitoring information shall include: _____ (4 4 13)~~

~~_____ (1) _____ The date, exact place, and time of sampling or measurements; _____ (4 4 13)~~

~~_____ (2) _____ The individual(s) who performed the sampling or measurements; _____ (4 4 13)~~

~~_____ (3) _____ The date(s) analyses were performed; _____ (4 4 13)~~

~~_____ (4) _____ The individual(s) who performed the analyses; _____ (4 4 13)~~

~~_____ (5) _____ The analytical techniques or methods used; and _____ (4 4 13)~~

~~_____ (6) _____ The results of such analyses. _____ (4 4 13)~~

~~_____ k. _____ Signatory requirement. All applications, reports, or information submitted to the Director shall be signed and certified. (See Subsection 045.03) _____ (4 4 13)~~

~~_____ l. _____ Reporting requirements: _____ (4 4 13)~~

~~_____ i. _____ Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. _____ (4 4 13)~~

~~_____ ii. _____ Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. _____ (4 4 13)~~

~~_____ iii. _____ Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. (See Subsection 057.06; in some cases, modification or revocation and reissuance is mandatory.) _____ (4 4 13)~~

~~_____ iv. _____ Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit. _____ (4 4 13)~~

~~_____ v. _____ Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date. _____ (4 4 13)~~

~~_____ vi. _____ Twenty four (24) hour reporting. Any information shall be provided orally within twenty four hours (24) from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The permittee shall report any~~

~~noncompliance which may endanger health or the environment, including: (4 4 13)~~

~~(1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW; or (4 4 13)~~

~~(2) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs. (4 4 13)~~

~~vii. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Subparagraphs 051.01.l.i., 051.01.l.iv., 051.01.l.v., and 051.01.l.vi. of this rule, at the time monitoring reports are submitted. The reports shall contain the information listed in Subparagraph 051.01.l.vi. of this rule. (4 4 13)~~

~~viii. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information. (4 4 13)~~

~~m. Requirements prior to commencing injection. A new injection well may not commence injection until construction is complete, and (4 4 13)~~

~~i. The permittee has submitted notice of completion of construction to the Director; and (4 4 13)~~

~~ii. Review. (4 4 13)~~

~~(1) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or (4 4 13)~~

~~(2) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within thirteen (13) days of the date of the notice in Subparagraph 051.01.m.i. of this rule, in which case prior inspection or review is waived and the permittee may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well. (4 4 13)~~

~~n. The permittee shall notify the Director at such times as the permit requires before conversion or decommissioning the well. (4 4 13)~~

~~o. A Class II permit shall include conditions which meet the applicable requirements of Subsection 054.03 to ensure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the plan meets the requirements of Subsection 054.03, the Director shall incorporate the plan into the permit as a permit condition. Where the Director's review of an application indicates that the permittee's plan is inadequate, the Director may require the applicant to revise the plan, prescribe conditions meeting the requirements of Paragraph 051.01.o., or deny the permit. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not decommissioning. (4 4 13)~~

~~p. Plugging and abandonment report. Within 60 days after plugging a well or at the time of the next quarterly report (whichever is less) the owner or operator shall submit a report to the Director. If the quarterly report is due less than fifteen (15) days before completion of plugging, then the report shall be submitted within 60 days. The report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either: (4 4 13)~~

~~i. A statement that the well was plugged in accordance with the plan previously submitted to the Director; or (4 4 13)~~

~~ii. Where actual plugging differed from the plan previously submitted, an updated version of the plan on the form supplied by the Director, specifying the differences. (4 4 13)~~

~~q. Duty to establish and maintain mechanical integrity. (4 4 13)~~

~~i. The owner or operator of a Class II well permitted under this part shall establish mechanical integrity prior to commencing injection or on a schedule determined by the Director. Thereafter the owner or operator of Class II wells must maintain mechanical integrity as defined in Subsection 054.02. The Director may require by written notice that the owner or operator comply with a schedule describing when mechanical integrity demonstrations shall be made. The frequency for establishing mechanical integrity shall be at least once every five (5) years during the life of the injection well. (4 4 13)~~

~~ii. When the Director determines that a Class II well lacks mechanical integrity pursuant to Subsection 054.02 he/she shall give written notice of his/her determination to the owner or operator. Unless the Director requires immediate cessation, the owner or operator shall cease injection into the well within 48 hours of receipt of the Director's determination. The Director may allow plugging of the well pursuant to the requirements of Subsection 054.03 or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between USDWs caused by the lack of mechanical integrity. The owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to Subsection 054.02. (4 4 13)~~

~~iii. The Director may allow the owner or operator of a well which lacks mechanical integrity, as described by Paragraph 054.02.a., to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between USDWs. The resumption of injection under this rule can be authorized for up to one (1) year. The operator can request an additional one (1) year extension. A maximum of two (2) years is allowed under this rule. (4 4 13)~~

~~02. Establishing Permit Conditions. (4 4 13)~~

~~a. In addition to conditions required in Subsection 051.01, the Director shall establish conditions, as required on a case by case basis under Subsection 048.10, and Paragraph 051.03.a., Subsection 051.04. Permits shall contain the following requirements, when applicable. (4 4 13)~~

~~i. Construction requirements as set forth in Subsection 045.06. Existing wells shall achieve compliance with such requirements according to a compliance schedule established as a permit condition. The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application. No construction may commence until a permit has been issued containing construction requirements (see Paragraph 040.02.b.). New wells shall be in compliance with these requirements prior to commencing injection operations. Changes in construction plans during construction may be approved by the Director as minor modifications (Subsection 057.04). No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director. (4 4 13)~~

~~ii. Corrective action as set forth in Subsection 045.08. (4 4 13)~~

~~iii. Operation requirements; the permit shall establish any maximum injection volumes and/or pressures necessary to assure that fractures are not initiated in the confining zone, that injected fluids do not migrate into any underground source of drinking water, that formation fluids are not displaced into any underground source of drinking water, and to assure compliance with the Subsection 054.01 operating requirements. (4 4 13)~~

~~iv. Monitoring and reporting requirements as set forth in Subsection 054.01. The permittee shall be required to identify types of tests and methods used to generate the monitoring data. Monitoring of the nature of injected fluids shall comply with applicable analytical methods cited and described in table I of 40 CFR 136.3 or in appendix III of 40 CFR part 261 or in certain circumstances by other methods that have been approved by the Director. (4 4 13)~~

~~v. After a cessation of operations of two (2) years the owner or operator shall plug and abandon the well in accordance with the plan unless he: (4 4 13)~~

~~(1) Provides notice to the Director; (4 4 13)~~

~~_____ (2) _____ Describes actions or procedures, satisfactory to the Director, that the owner or operator will take to ensure that the well will not endanger USDWs during the period of temporary inactivity. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the Director. (4 4 13)~~

~~_____ vi. _____ Financial responsibility. _____ (4 4 13)~~

~~_____ (1) _____ The permittee, including the transferor of a permit, is required to demonstrate and maintain financial responsibility, as described in Subsection 045.04 of these rules, and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director until: _____ (4 4 13)~~

~~_____ (a) _____ The well has been plugged and abandoned in accordance with an approved plugging and abandonment plan pursuant to Paragraph 051.01.o. and Subsection 054.03, and submitted a plugging and abandonment report pursuant to Paragraph 051.01.p.; or _____ (4 4 13)~~

~~_____ (b) _____ The well has been converted in compliance with the requirements of Paragraph 051.01.n.; or _____ (4 4 13)~~

~~_____ (c) _____ The transferor of a permit has received notice from the Director that the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well. _____ (4 4 13)~~

~~_____ (2) _____ The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as a financial statement or other materials acceptable to the Director as described in Subsection 045.04 of these rules. The Director may on a periodic basis require the holder of a lifetime permit to submit an estimate of the resources needed to plug and abandon the well revised to reflect inflation of such costs, and a revised demonstration of financial responsibility, if necessary. _____ (4 4 13)~~

~~_____ vii. _____ Mechanical integrity. A permit for any Class II well or injection project which lacks mechanical integrity shall include a condition prohibiting injection operations until the permittee shows to the satisfaction of the Director under Subsection 054.02 that the well has mechanical integrity. _____ (4 4 13)~~

~~_____ viii. _____ Additional conditions. The Director shall impose on a case by case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water. _____ (4 4 13)~~

~~_____ ix. _____ If the collection and reporting of new or existing data to establish the background water quality of USDWs in the area of review has not been required, and subsequently performed, under any other permit regulating the injection well or project, the Director will require this data be collected and background water quality established as a permit condition to be satisfied prior to injecting fluids into the injection well. The Director will specify the sampling locations, potential need for the construction of new monitoring wells, sampling frequencies, sampling duration, and analytes to be sampled for. _____ (4 4 13)~~

~~_____ b. _____ Other applicable requirements. _____ (4 4 13)~~

~~_____ i. _____ In addition to conditions required in all permits the Director shall establish conditions in permits as required on a case by case basis, to provide for and assure compliance with all applicable requirements of these rules. _____ (4 4 13)~~

~~_____ ii. _____ An applicable requirement is a statutory or regulatory requirement which takes effect prior to final administrative disposition of the permit. An applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in Subsection 057.02. _____ (4 4 13)~~

~~_____ iii. _____ New or reissued permits, and to the extent allowed under Subsection 057.02 modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in Subsection 051.02. (4 4 13)~~

~~_____ c. _____ Incorporation. All permit conditions shall be incorporated either expressly or by reference. If~~

incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit. (4 4 13)

03. Schedule of Compliance. (4 4 13)

a. General. The permit may, when appropriate, specify a schedule of compliance leading to compliance with these rules (4 4 13)

i. Time for compliance. Any schedules of compliance shall require compliance as soon as possible, and in no case later than three (3) years after the effective date of the permit. (4 4 13)

ii. Interim dates. Except as provided in Subparagraph 051.03.b.i.(2) of this rule, if a permit establishes a schedule of compliance which exceeds one (1) year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement. (4 4 13)

(1) The time between interim dates shall not exceed one (1) year. (4 4 13)

(2) If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date. (4 4 13)

iii. Reporting. The permit shall be written to require that if Subparagraph 051.03.a.i. of this rule is applicable, progress reports be submitted no later than thirty (30) days following each interim date and the final date of compliance. (4 4 13)

b. Alternative schedules of compliance. A permit applicant or permittee may cease conducting regulated activities (by plugging and abandonment) rather than continue to operate and meet permit requirements as follows: (4 4 13)

i. If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued: (4 4 13)

(1) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or (4 4 13)

(2) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit. (4 4 13)

ii. If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements. (4 4 13)

iii. If the permittee is undecided whether to cease conducting regulated activities, the Director may issue or modify a permit to contain two (2) schedules as follows: (4 4 13)

(1) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities; (4 4 13)

(2) One schedule shall lead to timely compliance with applicable requirements; (4 4 13)

(3) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements; (4 4 13)

(4) Each permit containing two (2) schedules shall include a requirement that after the permittee has made a final decision under Subparagraph 051.03.b.iii.(1) of this rule it shall follow the schedule leading to compliance

if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities. (4 4 13)

iv. The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Director, such as a resolution of the board of directors of a corporation. (4 4 13)

04. Requirements for Recording and Reporting of Monitoring Results.

All permits shall specify: (4 4 13)

a. Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate); (4 4 13)

b. Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring; (4 4 13)

c. Applicable reporting requirements based upon the impact of the regulated activity and as specified in Paragraph 054.01.c. Reporting shall be no less frequent than specified in the above regulations. (4 4 13)

052. 053. (RESERVED)

054. CLASS II: OPERATING REQUIREMENTS.

01. Operating, Monitoring, and Reporting Requirements. (4 4 13)

a. Operating requirements. Operating requirements shall, at a minimum, specify that: (4 4 13)

i. Injection pressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure during injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to the USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into an underground source of drinking water. (4 4 13)

ii. Injection between the outermost casing protecting underground sources of drinking water and the well bore shall be prohibited. (4 4 13)

b. Monitoring requirements. Monitoring requirements shall, at a minimum, include: (4 4 13)

i. Monitoring of the nature of injected fluids at time intervals sufficiently frequent to yield data representative of their characteristics; (4 4 13)

ii. Observation and recording of injection pressure, flow rate, and cumulative volume at reasonable intervals no greater than thirty (30) days, or at the following frequencies, whichever is more stringent: (4 4 13)

(1) Weekly for produced fluid disposal operations; (4 4 13)

(2) Monthly for enhanced recovery operations; (4 4 13)

(3) Daily during the injection of liquid hydrocarbons and injection for withdrawal of stored hydrocarbons; and (4 4 13)

(4) Daily during the injection phase of cyclic steam operations. And recording of one observation of injection pressure, flow rate and cumulative volume at reasonable intervals no greater than thirty (30) days. (4 4 13)

iii. A demonstration of mechanical integrity pursuant to Subsection 054.02 at least once every five (5) years during the life of the injection well; (4 4 13)

~~iv. Maintenance of the results of all monitoring until the next permit review (see Subparagraph 051.02.a.iv.); and (4 4 13)~~

~~v. Hydrocarbon storage and enhanced recovery may be monitored on a field or project basis rather than on an individual well basis by manifold monitoring. Manifold monitoring may be used in cases of facilities consisting of more than one (1) injection well, operating with a common manifold. Separate monitoring systems for each well are not required provided the owner/operator demonstrates that manifold monitoring is comparable to individual well monitoring. (4 4 13)~~

~~c. Reporting requirements. (4 4 13)~~

~~i. Reporting requirements shall at a minimum include an annual report to the Director summarizing the results of monitoring required under Paragraph 054.01.b. of this rule. Such summary shall include monthly records of injected fluids, and any major changes in characteristics or sources of injected fluid. Previously submitted information may be included by reference. (4 4 13)~~

~~ii. Owners or operators of hydrocarbon storage and enhanced recovery projects may report on a field or project basis rather than an individual well basis where manifold monitoring is used. (4 4 13)~~

~~**02. Mechanical Integrity. (4 4 13)**~~

~~a. An injection well has mechanical integrity if: (4 4 13)~~

~~i. There is no significant leak in the casing, tubing or packer; and (4 4 13)~~

~~ii. There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore. (4 4 13)~~

~~b. One (1) of the following methods must be used to evaluate the absence of significant leaks under Subparagraph 054.01.a.i. of this rule: (4 4 13)~~

~~i. Following an initial pressure test, monitoring of the tubing casing annulus pressure with sufficient frequency to be representative, as determined by the Director, while maintaining an annulus pressure different from atmospheric pressure measured at the surface; or (4 4 13)~~

~~ii. Pressure test with liquid or gas; (4 4 13)~~

~~(1) The casing must be tested at a surface pressure of one thousand five hundred (1,500) psig or at a surface pressure of point twenty five (0.25) psi/foot multiplied by the true vertical depth of the packer, whichever is greater, but the casing may not be subjected to a hoop stress that will exceed seventy percent (70%) of the minimum yield strength of the casing. (4 4 13)~~

~~(2) Criteria for a passing MIT are that the test pressure must show a stabilizing pressure trend, the test pressure may not decline more than ten percent (10%) from the actual test pressure, and the initial pressure is at or above the required test pressure. (4 4 13)~~

~~c. One (1) of the following methods must be used to determine the absence of significant fluid movement under Subparagraph 054.02.a.ii. of this rule: (4 4 13)~~

~~i. The results of a temperature or noise log, radioactive tracer survey, oxygen activation/water flow log, or equivalent log suite preapproved by the Director; or (4 4 13)~~

~~ii. Cementing records, cement bond log, ultrasonic imaging tool, or equivalent log preapproved by the Director, demonstrating the presence of adequate cement to prevent such migration. (4 4 13)~~

~~d. The Director may allow the use of a test to demonstrate mechanical integrity other than those listed~~

in Paragraph 054.02.b. and Subparagraph 054.02.c.ii. of this rule if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. The method must have prior approval of the Director. (4 4 13)

~~e. In conducting and evaluating the tests enumerated in this section or others to be allowed by the Director, the owner or operator and the Director shall apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the Director, he shall include a description of the test(s) and the method(s) used. In making his/her evaluation, the Director shall review monitoring and other test data submitted since the previous evaluation. (4 4 13)~~

~~f. The Director may require additional or alternative tests if the results presented by the owner or operator under Paragraph 054.02.c are not satisfactory to the Director to demonstrate that there is no movement of fluid into or between USDWs resulting from the injection activity. (4 4 13)~~

~~g. The owner/operator must give the Director, or his designee, the opportunity to observe the mechanical integrity test by notifying the Department at least five (5) business days prior to the initiation of the test. (4 4 13)~~

~~03. Plugging and Abandoning Class II Wells. (4 4 13)~~

~~a. Prior to permanently decommissioning Class II wells, the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water. (4 4 13)~~

~~b. Placement of the cement plugs shall be accomplished by one (1) of the following: (4 4 13)~~

~~i. The Balance method; (4 4 13)~~

~~ii. The Dump Bailer method; (4 4 13)~~

~~iii. The Two Plug method; or (4 4 13)~~

~~iv. An alternative method approved by the Director, which will reliably provide a comparable level of protection to underground sources of drinking water. (4 4 13)~~

~~c. The well to be decommissioned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director, prior to the placement of the cement plug(s). (4 4 13)~~

~~055. -- 056. (RESERVED)~~

~~057. CLASS II: ACTIONS ON APPROVED PERMITS.~~

~~01. Modification, Revocation and Reissuance, or Termination of Permits. (4 4 13)~~

~~a. Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in Subsections 057.02 and 057.03. All requests shall be in writing and shall contain facts or reasons supporting the request. (4 4 13)~~

~~b. If the Director decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. (4 4 13)~~

~~c. Modification. (4 4 13)~~

~~i. If the Director tentatively decides to modify or revoke and reissue a permit under Subsection 057.02,~~

he shall prepare a draft permit under Subsection 048.01 incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of revoked and reissued permits the Director shall require the submission of a new application. (4 4 13)

ii. In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued. (4 4 13)

iii. "Minor modifications" as defined in Subsection 057.04 are not subject to the requirements of this section. (4 4 13)

d. Termination.

If the Director tentatively decides to terminate a permit under Subsection 057.03, he or she shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under Subsection 048.01. (4 4 13)

e. All draft permits (including notices of intent to terminate) prepared under this section shall be based on the administrative record as defined in Subsection 048.03. (4 4 13)

02. Causes for Modification or Revocation and Reissuance of Permits.

When the Director receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see Subsection 051.01), receives a request for modification or revocation and reissuance under Subsection 057.01, or conducts a review of the permit file) he or she may determine whether or not one (1) or more of the causes listed in Paragraphs 057.02.a. and 057.02.b. of this rule for modification or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of Paragraph 057.02.c. of this section, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See Subparagraph 057.01.c.ii. If cause does not exist under this section or Subsection 057.04, the Director shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in Subsection 057.04 for "minor modifications" the permit may be modified without a draft permit or public review. Otherwise, a draft permit must be prepared. (4 4 13)

a. Causes for modification. For Class II wells the following are causes for revocation and reissuance as well as modification. (4 4 13)

i. Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit. (4 4 13)

ii. New regulations. The standards or regulations on which the permit was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit was issued. (4 4 13)

iii. Compliance schedules. The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy. See also Paragraph 057.04.c. (4 4 13)

b. Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit: (4 4 13)

i. Cause exists for termination under Subsection 057.03, and the Director determines that modification

or revocation and reissuance is appropriate. (4 4 13)

ii. The Director has received notification (as required in the permit, see Paragraph 057.04.d.) of a proposed transfer of the permit. A permit also may be modified to reflect a transfer after the effective date of an automatic transfer (Paragraph 057.06.b.) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee. (4 4 13)

iii. A determination that the waste being injected is a hazardous waste as defined in Title 39, Chapter 4403 of the Idaho Code either because the definition has been revised, or because a previous determination has been changed. (4 4 13)

c. Facility siting. Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance. (4 4 13)

03. Causes For Termination of Permits. (4 4 13)

a. The Director may terminate a permit during its term, or deny a permit renewal application for the following causes: (4 4 13)

i. Noncompliance by the permittee with any condition of the permit; (4 4 13)

ii. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or (4 4 13)

iii. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; (4 4 13)

b. The Director shall follow the applicable procedures in Subsection 020.03 and Subsection 057.01 in terminating any permit under this section. (4 4 13)

04. Minor Modifications of Permits.

Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section. Any permit modification not processed as a minor modification under this section must be made for cause and with a draft permit and public notice as required in Subsections 048.01 and 048.04. Minor modifications may only: (4 4 13)

a. Correct typographical errors; (4 4 13)

b. Require more frequent monitoring or reporting by the permittee; (4 4 13)

c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or (4 4 13)

d. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director. (4 4 13)

e. Change quantities or types of fluids injected, so long as they are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification. (4 4 13)

f. Change construction requirements approved by the Director pursuant to Subparagraph 051.02.a.i. (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of this

~~Section and Subsection 045.06. (4 4 13)~~

~~g. Amend a plugging and abandonment plan which has been updated under Subparagraph 051.02.a.v. (4 4 13)~~

~~**05. Continuation of Expiring Permits. (4 4 13)**~~

~~a. The conditions of an expired permit continue in force until the effective date of a new permit if: (4 4 13)~~

~~i. The permittee has submitted a timely application which is a complete application for a new permit; and (4 4 13)~~

~~ii. The permittee has submitted all supplemental information requested by the Director; and IDWR suggested revision. (4 4 13)~~

~~iii. The Director, through no fault of the permittee does not issue a new permit with an effective date on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints). (4 4 13)~~

~~b. Effect. Permits continued under this section remain fully effective and enforceable. (4 4 13)~~

~~c. Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the Director may choose to do any or all of the following: (4 4 13)~~

~~i. Initiate enforcement action based upon the permit which has been continued; (4 4 13)~~

~~ii. Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit; (4 4 13)~~

~~iii. Issue a new permit with appropriate conditions; or (4 4 13)~~

~~iv. Take other actions authorized by these regulations. (4 4 13)~~

~~d. State continuation. An EPA issued permit does not continue in force beyond its time expiration date under Federal law if at that time a State is the permitting authority. A State authorized to administer the UIC program may continue either EPA or State issued permits until the effective date of the new permits, if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State issued new permit. (4 4 13)~~

~~**06. Transfer of Permits. (4 4 13)**~~

~~a. Transfers by modification. Except as provided in Paragraph 057.06.b. of this rule, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under Subparagraph 057.02.b.ii.), or a minor modification made (under Paragraph 057.04.d.), to identify the new permittee. (4 4 13)~~

~~b. Automatic transfers. As an alternative to transfers under Paragraph 057.06.a. of this rule, any UIC permit for a well not injecting hazardous waste or injecting carbon dioxide for geologic sequestration may be automatically transferred to a new permittee if: (4 4 13)~~

~~i. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date referred to in Subparagraph 057.06.b.ii. of this rule; (4 4 13)~~

~~ii. The notice includes a written agreement between the existing and new permittees containing a~~

~~specific date for transfer of permit responsibility, coverage, and liability between them, and the notice demonstrates that the financial responsibility requirements of Subparagraph 051.02.a.vi. will be met by the new permittee; and~~
(4 4 13)

~~iii. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this paragraph may also be a minor modification under Subsection 057.04. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Subparagraph 057.06.b.ii. of this rule.~~
(4 4 13)

~~**07. Records.**~~

~~The Director may require, by written notice on a selective well-by-well basis, an owner or operator of an injection well to establish and maintain records, make reports, conduct monitoring, and provide other information as is deemed necessary to determine whether the owner or operator has acted or is acting in compliance with these rules.~~
(4 4 13)

~~**058. — 059. (RESERVED)**~~

~~**060. CLASS II: GENERAL PROVISIONS.**~~

~~**01. Obligation to Raise Issues and Provide Information During The Public Comment Period.**
All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Director's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under Subsection 048.04. Any supporting materials which are submitted shall be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, or other generally available reference materials. Commenters shall make supporting materials not already included in the administrative record available to the Department as directed by the Director. (A comment period longer than 30 days may be necessary to give commenters a reasonable opportunity to comply with the requirements of this section. Additional time shall be granted under Subsection 048.04 to the extent that a commenter who requests additional time demonstrates the need for such time.)~~
(4 4 13)

~~**02. Stays of Contested Permit Conditions.**~~
(4 4 13)

~~**a. Stays.**~~
(4 4 13)

~~i. If an Administrative Appeal of a permit under Section 003 of these rules is filed, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. Uncontested permit conditions shall be stayed only until the date specified in Subparagraph 060.02.a.ii.(1) of this rule. If the permit involves a new injection well, the applicant shall be without a permit for the proposed new injection well pending final agency action.~~
(4 4 13)

~~ii. Uncontested conditions.~~
(4 4 13)

~~(1) Uncontested conditions which are not severable from those contested shall be stayed together with the contested conditions. The Director shall identify the stayed provisions of permits for existing injection wells. All other provisions of the permit for the existing injection well become fully effective and enforceable 30 days after the date of the notification required in Subparagraph 060.02.a.ii.(2) of this rule.~~
(4 4 13)

~~(2) The Director shall, as soon as possible after receiving a petition for review, notify the applicant and all other interested parties of the uncontested (and severable) conditions of the final permit that will become fully effective enforceable obligations of the permit as of the date specified in Subparagraph 060.02.a.ii.(1) of this rule.~~
(4 4 13)

~~**b. Any facility or activity holding an existing permit must:**~~
(4 4 13)

~~i. Comply with the conditions of that permit during any modification or revocation and reissuance proceeding under Subsection 057.01; and (4 4 13)~~

~~ii. To the extent conditions of any new permit are stayed under Subsection 060.02, comply with the conditions of the existing permit which correspond to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed. (4 4 13)~~

~~**03. Effect of A Permit. (4 4 13)**~~

~~a. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege. (4 4 13)~~

~~b. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. (4 4 13)~~

~~**04. Noncompliance and Program Reporting By The Director.**~~

~~The Director shall prepare quarterly and annual reports as detailed below. The Director shall submit any reports required under this section to EPA. (4 4 13)~~

~~a. Quarterly reports. The Director shall submit quarterly narrative reports for facilities as follows: (4 4 13)~~

~~i. Format. The report shall use the following format: (4 4 13)~~

~~(1) Provide an alphabetized list of permittees. When two (2) or more permittees have the same name, the lowest permit number shall be entered first. (4 4 13)~~

~~(2) For each entry on the list, include the following information in the following order: (4 4 13)~~

~~(a) Name, location, and permit number of the noncomplying permittees. (4 4 13)~~

~~(b) A brief description and date of each instance of noncompliance for that permittee. Instances of noncompliance may include one (1) or more the kinds set forth in Subparagraph 060.04.a.ii. of this rule. When a permittee has noncompliance of more than one (1) kind, combine the information into a single entry for each such permittee. (4 4 13)~~

~~(c) The date(s) and a brief description of the action(s) taken by the Director to ensure compliance. (4 4 13)~~

~~(d) Status of the instance(s) of noncompliance with the date of the review of the status or the date of resolution. (4 4 13)~~

~~(e) Any details which tend to explain or mitigate the instance(s) of noncompliance. (4 4 13)~~

~~ii. Instances of noncompliance to be reported. Any instances of noncompliance within the following categories shall be reported in successive reports until the noncompliance is reported as resolved. Once noncompliance is reported as resolved it need not appear in subsequent reports. (4 4 13)~~

~~(1) Failure to complete construction elements. When the permittee has failed to complete, by the date specified in the permit, an element of a compliance schedule involving either planning for construction or a construction step (for example, begin construction, attain operation level); and the permittee has not returned to compliance by accomplishing the required elements of the schedule within 30 days from the date a compliance schedule report is due under the permit. (4 4 13)~~

~~(2) Modifications to schedules of compliance. When a schedule of compliance in the permit has been~~

~~modified under Subsections 057.02 or 057.04 because of the permittee's noncompliance. (4 4 13)~~

~~(3) Failure to complete or provide compliance schedule or monitoring reports. When the permittee has failed to complete or provide a report required in a permit compliance schedule (for example, progress report or notice of noncompliance or compliance) or a monitoring report; and the permittee has not submitted the complete report within 30 days from the date it is due under the permit for compliance schedules, or from the date specified in the permit for monitoring reports. (4 4 13)~~

~~(4) Deficient reports. When the required reports provided by the permittee are so deficient as to cause misunderstanding by the Director and thus impede the review of the status of compliance. (4 4 13)~~

~~(5) Noncompliance with other permit requirements. Noncompliance shall be reported in the following circumstances: (4 4 13)~~

~~(a) Whenever the permittee has violated a permit requirement (other than reported under Subparagraph 060.04.a.ii.(1) or 060.04.a.ii.(2) of this rule), and has not returned to compliance within forty five (45) days from the date reporting of noncompliance was due under the permit; or (4 4 13)~~

~~(b) When the Director determines that a pattern of noncompliance exists for a facility permittee over the most recent four (4) consecutive reporting periods. This pattern includes any violation of the same requirement in two (2) consecutive reporting periods, and any violation of one (1) or more requirements in each of four (4) consecutive reporting periods; or (4 4 13)~~

~~(c) When the Director determines significant permit noncompliance or other significant event has occurred, such as a migration of fluids into a USDW. (4 4 13)~~

~~(6) All other. Statistical information shall be reported quarterly on all other instances of noncompliance by facilities with permit requirements not otherwise reported under Paragraph 060.04.a. of this rule. (4 4 13)~~

~~**b. Annual reports. (4 4 13)**~~

~~i. Annual noncompliance report. Statistical reports shall be submitted by the Director on UIC permittees indicating the total number reviewed, the number of noncomplying permittees, the number of enforcement actions, and number of permit modifications extending compliance deadlines. The statistical information shall be organized to follow the types of noncompliance listed in Paragraph 060.04.a. of this rule. (4 4 13)~~

~~ii. In addition to the annual noncompliance report, the Director shall: (4 4 13)~~

~~(1) Submit each year a program report to EPA (in a manner and form prescribed by EPA) consisting of: (4 4 13)~~

~~(a) A detailed description of the State's implementation of its program; (4 4 13)~~

~~(b) Suggested changes, if any to the program description which are necessary to reflect more accurately the State's progress in issuing permits; (4 4 13)~~

~~(c) An updated inventory of active underground injection operations in the State. (4 4 13)~~

~~**c. Schedule. (4 4 13)**~~

~~i. For all quarterly reports. On the last working day of May, August, November, and February, the Director shall submit to EPA information concerning noncompliance with permit requirements by facilities in the State in accordance with the following schedule. (4 4 13)~~

~~ii. For all annual reports. The period for annual reports shall be for the calendar year ending December 31, with reports completed and available to the public no more than 60 days later. (4-4-13)~~

061041. -- 069. (RESERVED)

070. CLASS V: CRITERIA AND STANDARDS.

01. Class V Shallow Injection Well Requirements. (4-4-13)

a. Authorization. As a condition of authorization, all owners or operators of shallow Class V injection wells, including improved sinkholes used for aquifer recharge, that dispose of nonhazardous and nonradioactive wastes are required to submit a Shallow Injection Well Inventory Form to the Department no later than thirty (30) days prior to commencement of construction for each new well or no later than thirty (30) days after the discovery of an existing injection well that has not previously been inventoried with the Department. Forms are available from any Department office or at the Department website at <http://www.idwr.idaho.gov>. State or local government entities shall submit the following inventory information for wells associated with highway and street construction and maintenance projects. (4-4-13)

- i. Facility name and location; and (7-1-93)
- ii. County in which the injection well(s) is (are) located; and (7-1-93)
- iii. Ownership of the well(s); and (7-1-93)
- iv. Name, address and phone number of legal contact; and (7-1-93)
- v. Type or function of the well(s); and (7-1-93)
- vi. Number of wells of each type; and (7-1-93)
- vii. Operational status of the well(s). (7-1-93)

b. Inventory Fees. For shallow injection wells constructed after July 1, 1997, the Shallow Injection Well Inventory Form shall be accompanied by a fee as specified in Section 42-3905, Idaho Code, payable to the Department of Water Resources. State or local government entities are exempt from Shallow Injection Well Inventory Form filing fees for wells associated with highway and street construction and maintenance, but shall comply with all other requirements of these rules. (4-4-13)

c. Permit Requirements. If operation of a shallow Class V injection well is causing or may cause unreasonable contamination of a USDW, or cause a violation of the ground water quality standards at a place of beneficial use, the Director shall require immediate cessation of the injection activity. Where a Class V injection well is owned or operated by an entity other than a state or local entity involved in highway and street construction and maintenance, the Director may authorize continued operation of the well through a permit that specifies the terms and conditions of acceptable operation. (4-4-13)

d. Permanent Decommission. Owners or operators of shallow injection wells shall notify the Director not less than thirty (30) days prior to permanent decommissioning of any shallow injection well. Permanent decommissioning shall be accomplished in accordance with procedures approved by the Director. (4-4-13)

e. Inter-Agency Cooperation. The Department may seek the assistance of other government agencies, including cities and counties, health districts, highway districts, and other departments of state government to inventory, monitor and inspect shallow injection wells, where local assistance is needed to prevent deterioration of ground water quality, and where injection well operation overlaps with water quality concerns of other agencies or local governing entities. Assistance is to be negotiated through a memorandum of understanding between the Department and the local entity, agency, or department, and is subject to the approval of the Director. (5-3-03)

- 02. Class V Deep Injection Well Requirements.** (4-4-13)
- a. Application Requirements.** (4-4-13)
- i. No person shall continue to maintain or use an unauthorized injection well after the effective date given in Section 42-3903, Idaho Code, unless a permit therefor has been issued by the Director. No injection well requiring a permit under Subsection 070.02 shall be constructed, modified or maintained after the effective date given in Section 42-3903, Idaho Code, unless a permit therefor has been issued by the Director. No injection well requiring a permit shall continue to be used after the expiration of the permit issued for such well unless another application for permit therefor has been received by the Director. All applications for permit shall be on forms furnished by the Director. (4-4-13)
- ii. Each application for permit to construct, modify or maintain an injection well, as required by these rules, shall be accompanied by a filing fee as specified in Section 42-3905, Idaho Code, payable to the Department of Water Resources. For the purposes of these rules, all wells or groups of wells associated with a "Remediation Project" may be administered as one (1) "well" at the discretion of the Director. (5-3-03)
- b. Application Information Required.** An applicant shall submit the following information to the Director for all injection wells to be authorized by permit, unless the Director determines that it is not needed in whole or in part, and issues a written waiver to the applicant: (5-3-03)
- i. Facility name and location; (7-1-93)
- ii. Name, address and phone number of the well operator; (7-1-93)
- iii. Class, subclass and function of the injection well (see Section 035); (4-4-13)
- iv. Latitude/longitude or legal description of the well location to the nearest ten (10) acre tract; (5-3-03)
- v. Ownership of the well; (7-1-93)
- vi. County in which the injection well is located; (7-1-93)
- vii. Construction information for the well; (7-1-93)
- viii. Quantity and general character of the injected fluids; (7-1-93)
- ix. Status of the well; (4-4-13)
- x. A topographic map or aerial photograph extending one (1) mile beyond property boundaries, depicting: (7-1-93)
- (1) Location of the injection well and associated facilities described in the application; (7-1-93)
- (2) Locations of other injection wells; (7-1-93)
- (3) Approximate drainage area, if applicable; (7-1-93)
- (4) Hazardous waste facilities, if applicable; (7-1-93)
- (5) All wells used to withdraw drinking water; (7-1-93)
- (6) All other wells, springs and surface waters. (7-1-93)
- xi. Distance and direction to nearest domestic well; (7-1-93)

- xii. Depth to ground water; and (5-3-03)
- xiii. Alternative methods of waste disposal. (7-1-93)
- c. Additional Information. The Director may require the following additional information for Class V injection wells to assess potential effects of injection: (5-3-03)
 - i. A topographic map showing locations of the following within a two (2) mile radius of the injection well: (5-3-03)
 - (1) All wells producing water; (7-1-93)
 - (2) All exploratory and test wells; (7-1-93)
 - (3) All other injection wells; (7-1-93)
 - (4) Surface waters (including man-made impoundments, canals and ditches); (7-1-93)
 - (5) Mines and quarries; (7-1-93)
 - (6) Residences; (7-1-93)
 - (7) Roads; (7-1-93)
 - (8) Bedrock outcrops; and (5-3-03)
 - (9) Faults and fractures. (7-1-93)
 - ii. Additional maps or aerial photographs of suitable scale to accurately depict the following: (7-1-93)
 - (1) Location and surface elevation of the injection well described in this permit; (7-1-93)
 - (2) Location and identification of all facilities within the property boundaries; (7-1-93)
 - (3) Locations of all wells penetrating the proposed injection zone or within a one-quarter (1/4) mile radius of the injection well; (7-1-93)
 - (4) Maps and cross sections depicting all underground sources of drinking water to include vertical and lateral limits within a one-quarter (1/4) mile radius of the injection well, their position relative to the injection zone and the direction of water movement: local geologic structures; regional geologic setting. (7-1-93)
 - iii. A comprehensive report of the following information: (7-1-93)
 - (1) A tabulation of all wells penetrating the proposed injection zone, listing owner, lease holder and operator; well identification (permit) number; size, weight, depth and cementing data for all strings of casing; (7-1-93)
 - (2) Description of the quality and quantity of fluids to be injected; (7-1-93)
 - (3) Geologic, hydrogeologic, and physical characteristics of the injection zone and confining beds; (5-3-03)
 - (4) Engineering data for the proposed injection well; (7-1-93)
 - (5) Proposed operating pressure; (7-1-93)

- (6) A detailed evaluation of alternative disposal practices; (7-1-93)
- (7) A plan of corrective action for wells penetrating the zone of injection, but not properly sealed or decommissioned; and (4-4-13)
- (8) Contingency plans to cope with all shut-ins or well failures to prevent the migration of unacceptable fluids into underground sources of drinking waters. (7-1-93)
- iv. Name, address and phone number of person(s) or firm(s) supplying the technical information and/or designing the injection well; (7-1-93)
- v. Proof that the applicant is financially responsible, through a performance bond or other appropriate means, to decommission the injection well in a manner approved by the Director. (4-4-13)
- d. Other Information.** The Director may require of any applicant such additional information as may be necessary to demonstrate that the proposed or existing injection well will not endanger a USDW. The Director will not complete the processing of an application for which additional information has been requested until such time as the additional information is supplied. The Director may return any incomplete application and will not process such application until such time as the application is received in complete form. (4-4-13)
- 03. Application Processing.** (4-4-13)
- a. Draft Permit.** After all application information is received and evaluated, the Director will prepare a draft permit or denial, which will include the application for permit, permit conditions or reasons for denial, and any compliance schedules or monitoring requirements. In preparing the draft permit or denial, the Director shall consider the following factors: (4-4-13)
 - i. The availability of economic and practical alternative means of disposal; (7-1-93)
 - ii. The application of best management practices to the facilities and/or area draining into the well; (7-1-93)
 - iii. The availability of economical, practical means of treating or otherwise reducing the amount of contaminants in the injected fluids; (7-1-93)
 - iv. The quality of the receiving ground water, its category, its present and future beneficial uses or interconnected surface water; (7-1-93)
 - v. The location of the injection well with respect to drinking water supply wells; and (5-3-03)
 - vi. Compliance with the IDAPA 58.01.11, "Ground Water Quality Rule." (5-3-03)
- b. Public Notice.** The Director will provide public notice of any draft permit to construct, maintain or modify a Class V injection well by means of a legal notice in a newspaper of general circulation in the county in which the well is located. The Director may give additional notice as necessary to adequately inform the interested public and governmental agencies. There shall be a period of at least thirty (30) days following publication for any interested person to submit written comments and to request a fact-finding hearing. The hearing will be held by the Director if deemed necessary. (7-1-93)
- c. Review by the Directors of Other State Agencies.** The Directors of other state agencies, as determined by the Director, shall be provided the opportunity to review and comment on draft permits. Comments shall be submitted to the Director within thirty (30) days of the public or legal notice. (7-1-93)
- d. Open-Loop Heat Pump Return Wells (Subclass 5A7).** (4-4-13)

i. An open-loop heat pump return well greater than eighteen (18) feet in depth to be used solely for disposal of heat pump water at a rate not exceeding fifty (50) gpm does not require a draft permit and is not subject to a recurring permit cycle, however, registration of the well with the Department and submittal of a filing fee as specified in Section 42-3905, Idaho Code is required. The Director reserves the right to override the exemptions from the draft permit and permit cycle requirements. (4-4-13)

ii. An open-loop heat pump return well greater than eighteen (18) feet in depth to be used solely for disposal of heat pump return water at a rate exceeding fifty (50) gpm is subject to the requirements of Subsections 070.02 and 070.03 of these rules. (4-4-13)

e. Fact-Finding Hearings. At the Director's discretion, or upon motion of any interested individual, the Director may elect to hold a fact-finding hearing. Said hearing will be held at a location in the geographical area of the injection well. Notice of said hearing will be provided at least thirty (30) days in advance of the hearing by regular mail to the applicant and to the person or persons requesting the hearing. Public notice of the fact-finding hearing will be made by means of press release to a newspaper of general circulation in the county of the application. (4-4-13)

04. The Director's Action On Draft Permits and Duration Of Approved Permits. The role of the Director is to determine whether or not the injection wells and their respective owners or operators are in compliance with the intent of these rules, thus protecting the ground waters of the state against unreasonable contamination or deterioration of quality and preserving them for diversion to beneficial uses. (7-1-93)

a. Consideration. The Director will consider the following factors in taking final action on draft permits: (7-1-93)

i. The likelihood and consequences of the injection well system failing; (7-1-93)

ii. The long term effects of such disposal or storage; (7-1-93)

iii. The recommendations and related justifications of the Directors of other state agencies and the public; (5-3-03)

iv. The potential for violation of ground water quality standards at the point of injection or the point of beneficial use; and (5-3-03)

v. Compliance with the Idaho Ground Water Quality Plan. (5-3-03)

b. Issuance of Permit. After considering the draft permit for construction, modification, or maintenance, and all matters relating thereto, the Director shall issue a permit if the standards and criteria of Subsection 070.05 will be met and USDW's will not otherwise be unreasonably affected. If the Director finds that the standards and criteria cannot be met or that ground water sources cannot otherwise be protected from unreasonable contamination at all times, the draft permit may be denied or a permit may be issued with conditions designed to protect ground water sources. The Director's decision shall be in writing and a copy shall be mailed by regular mail to the applicant and to all persons who commented in writing on the draft permit or appeared at a hearing held to consider the draft permit. (4-4-13)

c. Permit Conditions and Requirements. Any permit issued by the Director shall contain conditions to insure that ground water sources will be protected from waste, unreasonable contamination, or deterioration of ground water quality that could result in violations of the ground water quality standards. In addition to specific construction, operation, maintenance and monitoring requirements that the Director finds necessary, each permit shall be subject to the standard conditions and requirements of this rule. (5-3-03)

d. Construction Requirements. (7-1-93)

i. Well drillers or other persons involved with the construction of any injection well requiring a permit

shall not commence construction on the facility until a certified copy of the approved permit is obtained from the Director.(7-1-93)

ii. Deep injection wells shall be constructed by a licensed water well driller to conform with the current Minimum Well Construction Standards and the conditions of the permit, except that a driller's license is not required for the construction of a driven mine shaft or a dug hole. (7-1-93)

iii. Shallow injection wells authorized by permit shall be constructed in accordance with the conditions of the permit. Rule-authorized shallow injection wells shall be constructed as shown or described in the inventory submittal. (5-3-03)

iv. Injection wells shall be constructed to prevent the entrance of any fluids other than specified in the permit. (7-1-93)

v. Injection wells shall be constructed to prevent waste of artesian fluids or movement of fluids from one aquifer into another. (7-1-93)

vi. When construction or modification of an injection well has been completed, the owner or operator shall inform the Director of completion on a form provided by the Department. (7-1-93)

vii. A sampling port shall be provided if the injection well system is enclosed. (5-3-03)

viii. All new injection wells constructed into alluvial formations shall have a minimum ten (10) foot separation from the bottom of the well and seasonal high ground water. (5-3-03)

(1) Injection wells installed into fractured basalt are exempt from separation distances. (5-3-03)

(2) The Director may reduce separation distance requirements if the quality of injected fluids are improved through additional treatment or BMPs. (5-3-03)

(3) Heat pump return wells (sub-class 5A7) are exempt from the separation distance requirement of this section. (4-4-13)

e. Operational Conditions. (7-1-93)

i. The injection well shall not be used until the construction, operation and maintenance requirements of the permit are met and provisions are made for any required inspection, monitoring and record keeping. (7-1-93)

ii. Injection of any contaminant at concentrations exceeding the standards set in Paragraph 070.05.c. into a present or future drinking or other ground water source that may cause a health hazard or adversely affect a designated and protected use is prohibited. (4-4-13)

iii. The injection well owner or operator shall develop approved procedures to detect constructional or operational failure in a timely fashion, and shall have contingency plans to cope with the well failure. (7-1-93)

iv. Authorized representatives of the Department shall be allowed to enter, inspect and/or sample: (7-1-93)

(1) The injection well and related facilities; (7-1-93)

(2) The owner or operator's records of the injection operation; (7-1-93)

(3) Monitoring instrumentation associated with the injection operation; and (7-1-93)

- (4) The injected fluids. (7-1-93)
- v. The injection facilities shall be operated and maintained to achieve compliance with all terms and conditions of this permit. (7-1-93)
- (1) Proper operation and maintenance includes effective performance, adequate funding, operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures; (7-1-93)
- (2) If compliance cannot be met, the owner shall take corrective action as determined by the Director or terminate injection. (4-4-13)
- vi. The owner shall mitigate any adverse effects resulting from non-compliance with the terms and conditions of the permit. (7-1-93)
- vii. If the injection well was constructed prior to issuance of the permit, the well shall be brought into compliance with the terms and conditions of the permit in accordance with the schedule of compliance issued by the Director. (7-1-93)
- viii. The permit shall not convey any property rights. (7-1-93)
- f.** Conditions of Permanent Decommissioning. (4-4-13)
- i. Notice of intent to permanently decommission a well shall be submitted to the Director not less than thirty (30) days prior to commencement of the decommissioning activity. (4-4-13)
- ii. The method of permanent decommissioning for all injection wells shall be approved by the Director prior to commencement of the decommissioning activity. (4-4-13)
- iii. Notice of completion of permanent decommission shall be submitted to the Director within thirty (30) days of completion. (4-4-13)
- iv. All deep injection wells that are to be permanently decommissioned shall be plugged in accordance with current Well Construction Standards. (4-4-13)
- v. Following permanent cessation of use, or where an injection well is not completed, the Director shall be notified. Decommissioning procedures or other action, as prescribed by the Director, shall be conducted. (4-4-13)
- vi. The injection well owner or operator has the responsibility to insure that the injection operation is decommissioned as prescribed. (4-4-13)
- g.** Duration of Approved Permits. The length of time that a permit may be in effect for Class V wells requiring permits shall not exceed ten (10) years. (7-1-93)

05. Standards For The Quality of Injected Fluids and Criteria For Location and Use. (4-4-13)

a. General. These standards, which are minimum standards that are to be adhered to for all deep injection wells and shallow injection wells requiring permits and rule-authorized wells not requiring permits, are based on the premise that if the injected fluids meet ground water quality standards for physical, chemical and radiological contaminants, and if ground water produced from adjacent points of diversion for beneficial use meets the water quality standards as defined in Section 010 of these rules, then that aquifer will be protected from unreasonable contamination and will be preserved for diversion to beneficial uses. The Director may, however, when it is deemed necessary, require specific injection wells to be constructed and operated in compliance with additional requirements, such as best management practices (BMPs), so as to protect the ground water resource from deterioration and preserve it for diversion to beneficial use. (4-4-13)

b. Waivers. A waiver of one (1) or more standards may be granted by the Director if it can be demonstrated by the applicant that the contaminants in injected fluid will not endanger a ground water source for any present or future beneficial use. (5-3-03)

c. Standards for Quality of Fluids Injected into Class V Wells. (4-4-13)

i. Ground water quality standards for chemical and radiological contaminants in injected fluids. After the effective date of these standards, the following limits shall not be exceeded in injected fluids from a well when such fluids will or are likely to reach a USDW: (4-4-13)

(1) Chemical contaminants. The concentration of each chemical contaminant in the injected fluids shall not exceed the ground water quality standard for that chemical contaminant, or the concentration of each contaminant in the receiving water, whichever requirement is less stringent; and (5-3-03)

(2) Radiological contaminants. Radiological levels of the injected fluids shall not exceed those levels specified by the ground water quality standards. (5-3-03)

ii. Restrictions on injection of fluids containing biological contaminants. The following restrictions apply to biological contaminants included in the ground water quality standard in injected fluids. Coliform bacteria: injected fluids containing coliform bacteria are subject to the following restrictions: (5-3-03)

(1) Contamination of ground water produced at any existing point of diversion for beneficial use, or any point of diversion for beneficial use developed in the future, by injected fluids is prohibited; (4-4-13)

(2) The Director may require the use of best management practices (BMPs) to reduce the concentration of coliform bacteria in the injected fluids; (5-3-03)

(3) The Director may require the use of water treatment technology, including ozonation and chlorination devices, sand filters, and settling pond specifications to reduce the concentration of coliform bacteria in injected fluids; (5-3-03)

(4) Ground water produced from points of diversion for beneficial use adjacent to injection wells that dispose of fluids containing coliform bacteria in concentrations greater than the current ground water quality standard shall be subject to monitoring for bacteria by the owner/operator of the injection well. A waiver of the monitoring requirement may be granted by the Director when it can be demonstrated that injection will not result in unreasonable contamination of ground water produced from these adjacent points; (5-3-03)

(5) Construction of new Subclass 5F1 injection wells, and other shallow and deep injection wells, as specified by the Director, that are likely to exceed the current ground water quality standard for coliform bacteria at the point of beneficial use is prohibited; and (5-3-03)

(6) At no time shall any fluid containing or suspected of containing fecal contaminants of human origin be injected into any Class V injection well authorized under these rules. (7-1-93)

iii. Physical, visual and olfactory characteristics. The following restrictions apply to physical, visual and olfactory characteristics of injected fluids. Temperature, color, odor, turbidity, conductivity and pH: the temperature, color, odor, conductivity, turbidity, pH or other characteristics of the injected fluid may not result in the receiving ground water becoming less suitable for diversion to beneficial uses, as determined by the Director. (7-1-93)

iv. Contamination by an injection well of ground water produced at an existing point of diversion for beneficial use, or a point of diversion for beneficial use developed in the future, shall not exceed water quality standards defined in Section 010 of these rules. (4-4-13)

d. Criteria for Location and Use of Class V Wells Requiring Permits. (7-1-93)

i. A Class V well requiring a permit may be required to be located a minimum distance, as determined from Table 1, from any point of diversion for beneficial use that could be harmed by bacterial contaminants. This requirement is not applicable to injection wells injecting wastes of quality equal to or better than adopted ground water quality standards in all respects. In addition, Class V wells may be required to be located at such a distance from a point of diversion for beneficial use as to minimize or prevent ground water contamination resulting from unauthorized or accidental injection, as determined by the Director. (5-3-03)

ii. These location requirements in Table 1 may be waived, as per Paragraph 070.05.b., when the applicant can demonstrate that any springs or wells within the calculated perimeter of the generated perched water zone will not be contaminated by the applicant's waste disposal or injection well. Monitoring by the applicant of the production wells or springs in question may be required to demonstrate that they are not being contaminated.

Determined Radii of Perched Water Zones Based on Maximum Average Weekly Injection Rates (cfs) of Class V Injection Wells *	
Injection (cfs)	Radius of Generated Perched Water Zone (ft)
0 - 0.20	800
0.20 - 0.60	1,400
0.61 - 1.00	1,800
1.01 - 2.00	2,500
2.01 - 3.00	3,000
3.01 - 4.00	3,500
4.01 - 5.00	4,000
Greater than 5.00	As determined by the Director

* Injection rates shall be based on the average volume of wastes injected by the well during the week of greatest injection in an average water year. (4-4-13)

e. Standards for the Quality of Fluids Injected by Subclass 5A7 Wells (Open-Loop Heat Pump Return). (4-4-13)

i. The quality of fluids injected by a Subclass 5A7 injection well shall comply with ground water quality standards or shall be equal to the quality of the ground water source to the heat pump, whichever is less stringent. (4-4-13)

ii. If the quality of the ground water source does not meet ground water quality standards, the injected fluids must be returned to the formation containing the ground water source. (5-3-03)

iii. The temperature of the injected fluids shall not impair the designated beneficial uses of the receiving ground water. (7-1-93)

iv. All Rule-authorized Injection Wells shall conform to the ground water quality standards at the point of injection and not cause any water quality standards to be violated at any point of beneficial use. (5-3-03)

06. Monitoring, Record Keeping and Reporting Requirements. The Director may require monitoring, record keeping and reporting by any owner or operator if the Director finds that the well may adversely affect a ground water source or is injecting a contaminant that could have an unacceptable effect upon the quality of the ground waters of the state. (5-3-03)

a. Monitoring. (7-1-93)

i. Any injection authorized by the Director shall be subject to monitoring and record keeping requirements as conditions of the permit. Such conditions may require the installation, use and maintenance of monitoring equipment or methods. The Director may require where appropriate, but is not limited to, the following: (7-1-93)

(1) Monitoring of injection pressures and pressures in the annular space between casings; (7-1-93)

(2) Flow rate and volumes; (7-1-93)

(3) Analysis of quality of the injected fluids for contaminants that are subject to limitation or reduction under the conditions of the permit; or contaminants which the Director determines could have an unacceptable effect on the quality of the ground waters of the state, and which the Director has reason to believe are in the injected fluids; (7-1-93)

(4) Monitoring of ground water through special monitoring wells or existing points of diversion for beneficial use in the zone of influence as determined by the Director; (7-1-93)

(5) A demonstration of the integrity of the casing, tubing or seal of the injection well. (7-1-93)

ii. The frequency of required monitoring shall be specified in the permit when issued, except that the Director at any time may, in writing, require additional monitoring and reporting. (7-1-93)

iii. All monitoring tests and analysis required by permit conditions shall be performed in a state certified laboratory or other laboratory approved by the Director. (4-4-13)

iv. Any field instrumentation used to gather data, when specified as a condition of the permit, shall be required by the Director to be tested and maintained in such a manner as to ensure the accuracy of the data. (7-1-93)

v. All samples and measurements taken for the purpose of monitoring shall be representative of the monitoring activity and fluids injected. (7-1-93)

b. Record Keeping. The permittee shall maintain records of all monitoring activities to include: (7-1-93)

i. Date, time and exact place of sampling; (7-1-93)

ii. Person or firm performing analysis; (7-1-93)

iii. Date of analysis, analytical methods used and results of analysis; (7-1-93)

iv. Calibration and maintenance of all monitoring instruments; and (7-1-93)

v. All original tapes, strip charts or other data from continuous or automated monitoring instruments. (7-1-93)

c. Reporting. (7-1-93)

i. Monitoring results obtained by the permittee pursuant to the monitoring requirements prescribed by

the Director shall be reported to the Director as required by permit conditions. (7-1-93)

ii. The Director shall be notified in writing by the permittee within five (5) days after the discovery of violation of the terms and conditions of the permit. If the injection activity endangers human health or a public or domestic water supply, use of the injection well shall be immediately discontinued and the owner or operator shall immediately notify the Director. Notification shall contain the following information: (7-1-93)

(1) A description of the violation and its cause; (7-1-93)

(2) The duration of the violation, including dates and times; if not corrected or use of the well discontinued, the anticipated time of correction; and (5-3-03)

(3) Steps being taken to reduce, eliminate and prevent recurrence of the injection. (7-1-93)

iii. Where the owner or operator becomes aware of failure to submit any relevant facts in any permit application or report to the Director, that person shall promptly submit such facts or information. (7-1-93)

iv. The permittee shall furnish the Director, within a time specified by the Director, any information which the Director may request to determine compliance with the permit. (7-1-93)

v. All applications for permits, notices and reports submitted to the Director shall be signed and certified. (7-1-93)

vi. The Director shall be notified in writing of planned physical alterations or additions to any facility related to the permitted injection well operation. (7-1-93)

vii. Additional information to be reported to the Director in writing: (7-1-93)

(1) Transfer of ownership; (7-1-93)

(2) Any change in operational status not previously reported; (7-1-93)

(3) Any anticipated noncompliance; and (5-3-03)

(4) Reports of progress toward meeting the requirements of any compliance schedule attached or assigned to this permit. (7-1-93)

07. Permit Assignable. Permits may be assignable to a new owner or operator of an injection well if the new owner or operator, within thirty (30) days of the change, notifies the Director of such change. The new owner or operator shall be responsible for complying with the terms and conditions of the permit from the time that such change takes place. (4-4-13)

071. -- 999. (RESERVED)

Table of Contents

37.3.4 – Drilling for Geothermal Resources Rules

1. Legal Authority (Rule 0).....	2
2. Title And Scope (Rule 1).....	2
3. Written Interpretation (Rule 2).....	2
4. Administrative Appeals (Rule 3).....	2
004. -- 009. (Reserved).....	2
010. Definitions (Rule 10)	2
011. -- 024. (Reserved).....	4
025. Drilling (Rule 25).....	4
026. -- 029. (Reserved).....	7
030. Records (Rule 30).	7
031. -- 034. (Reserved).....	8
035. Blow Out Prevention (Rule 35)	8
036. -- 039. (Reserved).....	9
040. Injection Wells (Rule 40)	9
041. -- 044. (Reserved).....	9
045. Abandonment (Rule 45).....	9
046. -- 049. (Reserved).....	10
050. Maintenance (Rule 50).	11
051. -- 054. (Reserved).....	11
055. Hearings, Notice, Procedure (Rule 55).	11
056. -- 059. (Reserved).....	11
060. Hearings On Refused, Limited, Or Conditioned Permit (Rule 60)	11
061. -- 064. (Reserved).....	11
065. Penalties (Rule 65)	11
066. -- 069. (Reserved).....	12
070. Forms (Rule 70).....	12
071. -- 999. (Reserved).....	12

**IDAPA 37
TITLE 03
CHAPTER 04**

37.03.04 – DRILLING FOR GEOTHERMAL RESOURCES RULES

1. LEGAL AUTHORITY (RULE 0).

The Idaho Department of Water Resources, through authority granted by Section 42-4001 through Section 42-4015, Idaho Code, is the regulatory agency for the drilling, operation, maintenance, and abandonment of all geothermal wells in the state. The Department's authority also includes regulatory jurisdiction over other related operations and environmental hazards pertaining to the exploration and development of geothermal resources. (7-1-93)

2. TITLE AND SCOPE (RULE 1).

The geothermal policy of the state of Idaho as stated in Section 42-4001, Idaho Code, is as follows: "It is the policy and purpose of this state to maximize the benefits to the entire state which may be derived from the utilization of our geothermal resources, while minimizing the detriments and costs of all kinds which could result from their utilization. This policy and purpose is embodied in this act which provides for the immediate regulation of geothermal resource exploration and development in the public interest." (7-1-93)

3. WRITTEN INTERPRETATION (RULE 2).

4. ADMINISTRATIVE APPEALS (RULE 3).

Any person who is aggrieved by the order of the Board relative to the Director's decision on an application for a permit may appeal the Board's order to the District Court within thirty (30) days from the issuance of such order, as provided in Section 42-4005(d) of the Idaho Code. (7-1-93)

5. -- 009. (RESERVED)

10. DEFINITIONS (RULE 10).

For the purpose of these rules, the following definitions shall apply. (7-1-93)

1. Applicant. Any person submitting an application to the Department of Water Resources for a permit for the construction and operation of any well or injection well. (7-1-93)

2. Board. The Idaho Water Resource Board. (7-1-93)

3. BOPE. An abbreviation for Blow Out Prevention Equipment which is designed to be attached to the casing in a geothermal well in order to prevent a blow out of the drilling mud. (7-1-93)

4. Completion. A well is considered to be completed thirty (30) days after drilling operations have ceased unless a suspension of operation is approved by the Director, or thirty (30) days after it has commenced producing a geothermal resource, whichever occurs first, unless drilling operations are resumed before the end of the thirty (30) day period or at the end of the suspension. (7-1-93)

5. Conductor Pipe. The first and largest diameter string of casing to be installed in the well. This casing extends from land surface to a depth great enough to keep surface waters from entering and loose earth from falling in the hole and to provide anchorage for blow out prevention equipment prior to setting surface casing. (7-1-93)

6. Department. The Idaho Department of Water Resources. (7-1-93)

7. Director. The Director of the Idaho Department of Water Resources. (7-1-93)

8. Drilling Logs. The recorded description of the lithologic sequence encountered in drilling a well. (7-1-93)

9. Drilling Operations. The actual drilling, redrilling, or recompletion of the well for production or injection including the running and cementing of casing and the installation of well head equipment. Drilling

operations do not include perforating, logging, and related operations after the casing has been cemented. (7-1-93)

10. Exploratory Well. A well drilled for the discovery and/or evaluation of geothermal resources either in an established geothermal field or in unexplored areas. Exploratory well does not include holes six (6) inches in diameter or less if they are used for gathering geotechnical data such as, but not limited to, heat flow, earth temperature, temperature gradient and/or seismic measurements, provided said holes are not greater than one thousand (1000) feet in depth below land surface and provided the material medium is not intended to be encountered. (7-1-93)

11. Geothermal Area. The same general land area which in its subsurface is underlain or reasonably appears to be underlain by geothermal resources from or in a single reservoir, pool, or other source or interrelated sources, as such area or areas may be designated from time to time by the Director. (7-1-93)

12. Geothermal Field. An area designated by the Director which contains a well or wells capable of commercial production of geothermal resources. (7-1-93)

13. Geothermal Resource. The natural heat energy of the earth, the energy in whatever form which may be found in any position and at any depth below the surface of the earth, present in, resulting from, or created by, or which may be extracted from such natural heat and all minerals in solution or other products obtained from the material medium of any geothermal resource. Geothermal resources are found and hereby declared to be sui generis, being neither a mineral resource nor a water resource but they are also found and hereby declared closely related to and possibly affecting and affected by water and mineral resources in many instances. (7-1-93)

14. Injection Well. Any special well, converted producing well, or reactivated or converted abandoned well employed for injecting material into a geothermal area or adjacent area to maintain pressures in a geothermal reservoir, pool, or other source, or to provide new material or to serve as a material medium therein, or for reinjecting any material medium or the residue thereof, or any by-product of geothermal resource exploration or development into the earth. (7-1-93)

15. Intermediate String or Casing. The casing installed within the well to seal out brackish water, caving zones, etc., below the bottom of the surface casing. Such strings may either be lapped into the surface casing or extend to land surface. (7-1-93)

16. Material Medium. Any substance including, but not limited to, naturally heated fluids, brines, associated gasses and steam in whatever form, found at any depth and in any position below the surface of the earth, which contains or transmits the natural heat energy of the earth, but excluding petroleum, oil, hydrocarbon gas, or other hydrocarbon substances. (7-1-93)

17. Notice of Intent or Notice. A written statement to the Director that the applicant intends to do work. (7-1-93)

18. Observation Well. A small diameter well drilled strictly for monitoring purposes. In no case shall an observation well be completed for production of geothermal resources or for use as an injection well. (7-1-93)

19. Operator. Any person drilling, maintaining, operating, pumping, or in control of any well. The term operator also includes owner when any well is or has been or is about to be operated by or under the direction of the owner. (7-1-93)

20. Owner. The owner of the geothermal lease or well and includes operator when any well is operated or has been operated or is about to be operated by any person other than the owner. (7-1-93)

21. Permit. A permit issued pursuant to these rules for the construction and operation of any well or injection well. (7-1-93)

22. Person. Any individual natural person, general or limited partnership, joint venture, association, cooperative organization, corporation, whether domestic or foreign, agency or subdivision of this or any other state or municipal or quasi-municipal entity whether or not it is incorporated. (7-1-93)

23. Production String. The casing or tubing through which a geothermal resource is produced. This string extends from the producing zone to land surface. (7-1-93)

24. Production Well. Any well which is commercially producing or is intended for commercial production of a geothermal resource. (7-1-93)

25. Surface Casing. The first string of casing which is run after the conductor pipe to anchor blow out prevention equipment and to seal out all existing groundwater zones. (7-1-93)

26. Suspension of Operations. The cessation of drilling, redrilling, or alteration of casing before the well is officially abandoned or completed. All suspensions must be authorized by the Director. (7-1-93)

27. Waste. Any physical waste including, but not limited to: (7-1-93)

a. Underground waste resulting from inefficient, excessive, or improper use, or dissipation of geothermal energy, or of any geothermal resource pool, reservoir, or other source; or the locating, spacing, constructing, equipping, operating, or producing of any well in a manner which results, or tends to result in reducing the quantity of geothermal energy to be recovered from any geothermal area in the state; (7-1-93)

b. The inefficient above-ground transporting and storage of geothermal energy; and the locating, spacing, equipping, operating, or producing of any well or injection well in a manner causing or tending to cause unnecessary or excessive surface loss or destruction of geothermal energy; the escape into the open air from a well of steam or hot water in excess of what is reasonably necessary in the efficient development or production of a well. (7-1-93)

28. Well. Any excavation or other alteration in the earth's surface or crust by means of which the energy of any geothermal resource and/or its material medium is sought or obtained. (7-1-93)

11. -- 024. (RESERVED)

25. DRILLING (RULE 25).

1. General. All wells shall be drilled in such a manner as to protect or minimize damage to the environment, waters usable for all beneficial purposes, geothermal resources, life, health, or property. (7-1-93)

2. Permits and Notices. (7-1-93)

a. Permit to Drill for Geothermal Resources. Any person, owner or operator who proposes to construct a well for the production of or exploration for geothermal resources or to construct an injection well shall first apply to the Director for permit. Application for permit shall be on department form 4003-1. Any person, owner, or operator who proposes to construct a hole for the gathering of geotechnical data shall file a notice of intent with the Director twenty (20) days prior to construction. Written approval of the Director is required before construction may begin. The notice of intent shall show the hole location, proposed depth, hole size, construction methods, intended use and abandonment plan together with other information as required by the Director. (7-1-93)

b. Permit to Deepen or Modify an Existing Well. If the owner or operator plans to deepen, redrill, plug, or perform any operation that will in any manner modify the well, an application shall be filed with the Director and written approval must be received prior to beginning work. Application for permit to alter a geothermal well shall be on department form 4003-2. (7-1-93)

c. Application for Permit to Convert to Injection. If the owner or operator plans to convert an existing geothermal well into an injection well with no change of mechanical condition, an application for permit shall be filed with the Director and written approval must be received prior to beginning injection. Application for permit shall be made on department form 4003-3. (7-1-93)

d. Amendment of Permit. No well may be owned or operated by any person whose name does not appear on the permit or permit application and no changes in departure from the procedures, location, data, or persons

specified on the face of a permit shall be allowed until an amendment to such permit is approved by the Director. Application for amendment shall be made on department form 4003-1. (7-1-93)

e. Notice to Other Agencies. Notice of applications, permits, orders, or other actions received or issued by the Director may be given to any other agency or entity which may have information, comments, or jurisdiction over the activity involved. The Director may enter into a memorandum of understanding with other agencies to eliminate duplication of applications or other efforts. (7-1-93)

~~3. Fees. Any application for permit made pursuant to Sections 42-4003 and/or 42-4011, Idaho Code, shall be accompanied by a filing fee of: (7-1-93)~~

~~a. One hundred dollars (\$100) if for any production well or exploratory well; (7-1-93)~~

~~b. Fifty dollars (\$50) for an injection well; (7-1-93)~~

~~c. Fifty dollars (\$50) for an amendment to a permit; (7-1-93)~~

~~d. No filing fee shall be charged for filing a notice of intent to construct a hole for gathering geotechnical data, for abandonment, or for the drilling of an observation well. (7-1-93)~~

~~e.f. No application shall be accepted and filed by the Director until such filing fee has been deposited with the Director. (7-1-93)~~

04. Bonds. (7-1-93)

a. The Director shall require as a condition of every permit every operator or owner who engages in the construction, alteration, testing, or operation of the well to file with the Director on a form prescribed by the Director a bond indemnifying the state of Idaho providing good and sufficient security conditioned upon the performance of the duties required by these regulations and the Geothermal Resource Act and the proper abandonment of any well covered by such permit. Such bond shall be in an amount which is not less than ten thousand dollars (\$10,000) for each individual well. (7-1-93)

b. Bonds remain in force for the life of the well or wells and may not be released until the well or wells are properly abandoned or another valid bond is substituted therefor. Any person who acquires the ownership or operation of any well or wells shall within five (5) days after acquisition file with the Director an indemnity bond in the sum of ten thousand dollars (\$10,000) for each well acquired. The Director reserves the right to request additional bonding prior to abandonment if deemed necessary. (7-1-93)

5. Well Spacing. (7-1-93)

a. Any well drilled for the discovery and production of geothermal resources or as an injection well shall be located more than one hundred (100) feet from and within the outer boundary of the parcel of land on which the well is situated, or more than one hundred (100) feet from a public road, street, or highway dedicated prior to the commencement of drilling. This requirement may be modified or waived by the Director upon written request. (7-1-93)

b. For several contiguous parcels of land in one or different ownerships that are operated as a single geothermal field, the term outer boundary line means the outer boundary line of the land included in the field. In determining the contiguity of any such parcels of land, no street, road, or alley lying within the lease or field shall be determined to interrupt such contiguity. (7-1-93)

c. The Director shall approve the proposed well spacing programs or prescribe such modifications to the programs as he deems necessary for proper development giving consideration to such factors as, but not limited to, topographic characteristics of the area, hydrologic, geologic, and reservoir characteristics of the area, the number of wells that can be economically drilled to provide the necessary volume of geothermal resources for the intended use, minimizing well interference, unreasonable interference with multiple use of lands, and protection of the environment. (7-1-93)

d. Directional Drilling. Where the surface of the parcel of land containing one acre or more is unavailable for drilling, the surface well location may be located upon property which may or may not be contiguous. Such surface well locations shall not be less than twenty five (25) feet from the outer boundary of the parcel on which it is located, nor less than twenty-five (25) feet from an existing street or road. The production or injection interval of the well shall not be less than one hundred (100) feet from the outer boundary of the parcel into which it is drilled. Directional surveys must be filed with the Director for all wells directionally drilled. (7-1-93)

06. Casing. (7-1-93)

a. General. All wells shall be cased in such a manner as to protect or minimize damage to the environment, usable ground waters, geothermal resources, life, health, and property. The permanent well head completion equipment shall be attached to the production casing or to the intermediate casing if production casing does not reach the surface. No permanent well head equipment may be attached to any conductor or surface casing alone. The specification for casing strength shall be determined by the Director on a well-to-well basis. All casing reaching the surface shall provide adequate anchorage for blow out prevention equipment, hole pressure control, and protection for natural resources. Sufficient casing shall be run to reach a depth below all known or reasonably estimated groundwater levels to prevent blow outs or uncontrolled flows. The following casing requirements are general but should be used as guidelines in submitting applications for permit to drill. (7-1-93)

b. Conductor Pipe. A minimum of forty (40) feet of conductor pipe shall be installed. The annular space is to be cemented solid to the surface. A twenty-four (24) hour cure period for the grout must be allowed prior to drilling out the shoe unless additives sufficient, as determined by the Director, are used to obtain early strength. An annular blow out preventer shall be installed on all exploratory wells and on development wells when deemed necessary by the Department. (7-1-93)

c. Surface Casing. The surface casing hole shall be logged with an induction electrical log or equivalent or gamma-neutron log before running casing. This requirement may be waived by the Director. Permission to waive this requirement must be granted by the Director in writing prior to running surface casing. This casing shall provide for control of formation fluids, protection of shallow usable groundwater, and for adequate anchorage for blow out prevention equipment. All surface casing shall be cemented solid to the surface. A twenty-four (24) hour cure period shall be allowed prior to drilling out the shoe of the surface casing unless additives sufficient, as determined by the Director, are used to obtain early strength. (7-1-93)

i. A minimum of two hundred (200) feet of surface casing shall be set in areas where pressures and formations are unknown. In no case may surface casing be set at a depth less than ten percent (10%) of the proposed total depth of the well. (7-1-93)

ii. In areas of known high formation pressure, surface casing shall be set at the depth determined by the Director after a study of geologic conditions in the area. (7-1-93)

iii. In areas where subsurface geological conditions are variable or unknown, surface casing shall be in accordance with specifications as outlined in a. above. The casing must be seated through a sufficient series of low permeability, competent lithologic units such as claystone, siltstone, basalt, etc., to insure a solid anchor for blow out prevention equipment and to protect usable groundwater from contamination. Additional casing may be required if the first string has not been cemented through a sufficient series of such beds, or a rapidly increasing thermal gradient or formation pressures are encountered. (7-1-93)

iv. The temperature of the return drilling mud shall be monitored continuously during the drilling of the surface casing hole. Either a continuous temperature-monitoring device shall be installed and maintained in a working condition or the temperature shall be read manually. In either case, the return temperature shall be entered into the log book for each thirty (30) feet of depth drilled. (7-1-93)

v. Blow out prevention equipment capable of shutting in the well during any operation shall be installed on the surface casing and maintained ready for use at all times. BOPE pressure tests shall be performed by the operator for department personnel on all exploratory wells prior to drilling out the shoe of the surface casing. The decision to perform BOPE pressure tests on other types of wells shall be made on a well-to-well basis by the Director.

The Director must be notified five (5) days in advance of a scheduled pressure test. Permission to proceed with the test sooner may be given orally by the Director upon request by the operator. (7-1-93)

d. Intermediate Casing. Intermediate casing shall be required for protection against anomalous pressure zones, cave-ins, washouts, abnormal temperature zones, uncontrollable lost circulation zones or other drilling hazards. Intermediate casing strings when installed shall be cemented solidly to the surface or to the top of the casing. (7-1-93)

e. Production Casing. Production casing may be set above or through the producing or injection zone and cemented either below or just above the objective zones. Sufficient cement shall be used to exclude overlying formation fluids from the geothermal zone, to segregate zones, and to prevent movement of fluids behind the casing into possible fresh groundwater zones. Production casing shall either be cemented solid to the surface or lapped into the intermediate casing if run. If the production casing is lapped into an intermediate string, the casing overlap shall be at least fifty (50) feet, the lap shall be cemented solid, and the lap shall be pressure tested to insure its integrity. (7-1-93)

07. Electric Logging. All wells except observation wells shall be logged with an induction electrical log or equivalent or gamma-neutron log from the bottom of the hole to the bottom of the conductor pipe. This requirement may be modified or waived by the Director upon written request. (7-1-93)

26. -- 029. (RESERVED)

30. RECORDS (RULE 30).

1. General. The owner or operator of any well shall keep or cause to be kept a careful and accurate log, core record, temperature logs, and history of the drilling of the well. These records shall be kept in the nearest office of the owner or operator or at the well site and together with all other reports of the owner and operator regarding the well shall be subject to inspection by the Director during business hours. All records unless otherwise specified must be filed with the Director within thirty (30) days of completion of the well. (7-1-93)

2. Records to Be Filed with the Director. (7-1-93)

a. Drilling Logs and Core Record. The drilling log shall include the lithologic characteristics and depths of formations encountered, the depth and temperatures of water-bearing and steam-bearing strata, the temperatures, chemical compositions and other chemical and physical characteristics of fluids encountered from time to time so far as ascertained. The core record shall show the depth, lithologic character, and fluid content of cores obtained so far as determined. (7-1-93)

b. Well History. The history shall describe in detail in chronological order on a daily basis all significant operations carried out and equipment used during all phases of drilling, testing, completion, and abandonment of any well. (7-1-93)

c. Well Summary Report. The well summary report shall accompany the core record and well history reports. It is designed to show data pertinent to the condition of a well at the time of completion of work done. (7-1-93)

d. Production Records. The owner or operator of any well producing geothermal resources shall file with the Director on or before the 20th day of each month for the preceding month a statement of production utilized in such a form as the Director may designate. Copies of monthly geothermal energy report forms are available from the Director; however, production data can be submitted on non-department forms such as computer print-outs if they have been approved by the Director. (7-1-93)

e. Injection Records. The owner or operator of any well injecting geothermal fluids or waste water for any purpose shall file with the Director on or before the twentieth day of each month for the preceding month a report of the injection in such form as the Director may designate. Copies of monthly injection report forms are available from the Director. Injection data may be submitted on non-department forms if they have been approved by the Director. (7-1-93)

f. Electric Logs and Directional Surveys, If Conducted. Electric logs and directional surveys shall be filed with the Director within sixty (60) days of completion, cessation of drilling operations, excluding any approved suspension of operations, or abandonment of any well. Like copies shall be filed upon recompletion of any well. Upon a showing of hardship, the Director may extend the time within which to comply for a period not to exceed six (6) additional months. (7-1-93)

3. Confidential Status. Information on file with the Director is open to public inspection except any reports, logs, records, or histories derived from the drilling of a well and filed with the Director shall not be available for public inspection and shall be kept confidential by the Director for a period of one year from receipt provided, however, that the Director may use any such reports, logs, records, or histories in any action in any court to enforce the provisions of the Geothermal Act or any order or regulation adopted hereunder. (7-1-93)

4. Inspection of Records. The records filed by an operator with the Director which relates to the data gathered from the drilling operation shall be open to inspection only to those authorized in writing by the operator and designated personnel. The records of any operator filed for a completed or producing well that has been transferred by sale, lease, or otherwise shall be available to the new owner or lessee for his inspection or copying and shall be available for inspection or copying by others upon written authorization of such new owner or lessee. (7-1-93)

31. -- 034. (RESERVED)

35. BLOW OUT PREVENTION (RULE 35).

1. Unexplored Areas. (7-1-93)

a. A department employee may be present at the well at any time during the initial phases of drilling until the surface casing has been cemented and the BOPE has been satisfactorily pressure tested. The Department employee may be present during any drilling operations at the well and if in his opinion conditions warrant he may order additional casing to be run. (7-1-93)

b. A logging unit equipped to continuously record the following data shall be installed and operated continuously by a technician approved by the Director after drilling out the shoe of the conductor pipe until the well has been drilled to the total depth. (7-1-93)

i. Drilling mud temperature (in and out). (7-1-93)

ii. Drilling mud pit level. (7-1-93)

iii. Drilling mud pump volume. (7-1-93)

iv. Drilling mud weight. (7-1-93)

v. Drilling rate. (7-1-93)

vi. Hydrocarbon and hydrogen sulfide gas volume (with alarm). (7-1-93)

c. An annular BOPE with a minimum working pressure of one thousand (1,000) PSI shall be installed on the surface casing. If unusual conditions are anticipated, a BOPE may be required on the conductor pipe. (7-1-93)

d. If drilling mud temperature out, reaches one hundred twenty-five (125) Degrees C (Celsius), drilling operations shall cease, drilling mud circulation will continue and the Director must be notified immediately. The operator must obtain the Director's approval of his proposed course of action prior to resuming drilling operations. (7-1-93)

e. The above requirements for BOPE may be modified by the Director and any proposed modification by the applicant must be approved by the Director in writing. (7-1-93)

2. Explored Areas. (7-1-93)

a. A gate valve with a minimum working pressure rating of three hundred (300) PSI must be installed on the well head. (7-1-93)

b. The temperature of the return mud shall be monitored continuously. Either a continuous temperature monitoring device shall be installed and maintained in working condition or the temperature shall be read manually. In either case, return mud temperatures shall be entered into the log book for each thirty (30) feet of depth drilled. (7-1-93)

c. An annular BOPE with a minimum working pressure of one thousand (1,000) PSI shall be installed on the surface casing. (7-1-93)

d. Additional requirements may be set forth by the Director depending upon the knowledge of the area. Such requirements will be set forth on the approved application for permit to drill a geothermal well. Modification of said requirements may be made in the field by Department personnel monitoring construction of the well. (7-1-93)

36. -- 039. (RESERVED)

40. INJECTION WELLS (RULE 40).

1. Construction. The owner or operator of a proposed injection well or series of injection wells shall provide the Director with such information he deems necessary for evaluation of the impact of such injection on the geothermal reservoir and other natural resources. Such information shall include existing reservoir conditions, method of injection, source of injection fluid, estimates of daily amount of material medium to be injected, zones or formations affected, and analysis of fluid to be injected and of the fluid from the intended zone of the injection. Such information shall be on department form 4003-3. (7-1-93)

2. Surveillance. (7-1-93)

a. When an operator or owner proposes to drill or modify an injection well or convert a producing or idle well to an injection well, he shall be required to demonstrate to the Director by means of a test that the casing has complete integrity. This test shall be conducted in a method approved by the Director. (7-1-93)

b. To establish the integrity of the annular cement above the shoe of the casing, the owner or operator shall make sufficient surveys within thirty (30) days after injection is started into a well to prove that all the injected fluid is confined to the intended zone of injection. Thereafter, such surveys shall be made at least every two (2) years or more often if necessary. The Director shall be notified forty-eight (48) hours in advance of such surveys in order that a representative may be present if deemed necessary. If in the Director's opinion such tests are not necessary, he may grant a waiver excepting the operator from such tests. (7-1-93)

c. After the well has been placed on injection, the injection well site will be visited periodically by Department personnel. The operator or owner will be notified of any necessary remedial work. Unless modified by the Director, this work must be performed within ninety (90) days or approval for the injection well issued by the Director will be rescinded. (7-1-93)

41. -- 044. (RESERVED)

45. ABANDONMENT (RULE 45).

1. Objectives. The objectives of abandonment are to block interzonal migration of fluids so as to: (7-1-93)

a. Prevent contamination of fresh water or other natural resources; (7-1-93)

b. Prevent damage to geothermal reservoirs; (7-1-93)

- c. Prevent loss of reservoir energy; (7-1-93)
- d. Protect life, health, environment and property. (7-1-93)

2. General Requirements. The following are general requirements which are subject to review and modification for individual wells or field conditions. (7-1-93)

a. A notice of intent to abandon geothermal resource wells is required to be filed with the Director five (5) days prior to beginning abandonment procedures. A permit to abandon may be given orally by the Director provided the operator submits a written request for said abandonment on a form approved by the Director within twenty-four (24) hours of the oral request. (7-1-93)

b. A history of geothermal resource wells shall be filed within sixty (60) days after completion of abandonment procedures. (7-1-93)

c. All wells abandoned shall be monumented and the description of the monument shall be included in the history of well report. Such monument shall consist of a four (4) inch diameter pipe ten (10) feet in length of which four (4) feet shall be above ground. The remainder shall be imbedded in concrete. The name, number, and location of the well shall be shown on the monument. Alternate methods of monumentation may be approved by the Director where land surface use indicates the above described method is not satisfactory. (7-1-93)

d. Good quality heavy drilling fluid shall be used to replace any water in the hole and to fill all portions of the hole not plugged with cement. (7-1-93)

e. All cement plugs with a possible exception of the surface plug shall be pumped into the hole through drill pipe or tubing. (7-1-93)

f. All open annuli shall be filled solid with cement to the surface. (7-1-93)

g. A minimum of one hundred (100) feet of cement shall be emplaced straddling the interface or transition zone at the base of groundwater aquifers. (7-1-93)

h. One hundred (100) feet of cement shall straddle the placement of the shoe plug on all casings including conductor pipe. (7-1-93)

i. A surface plug of either neat cement or concrete mix shall be in place from the top of the casing to at least fifty (50) feet below the top of the casing. (7-1-93)

j. All casing shall be cut off at least five (5) feet below land surface. (7-1-93)

k. Cement plugs shall extend at least fifty (50) feet over the top of any liner installed in the well. (7-1-93)

l. Abandonment. Injection wells are required to be abandoned in the same manner as other wells. (7-1-93)

m. Other abandonment procedures may be approved by the Director if the owner or operator can demonstrate that the geothermal resource, groundwaters, and other natural resources will be protected. Such approval must be given in writing by the Director prior to the beginning of any abandonment procedures. (7-1-93)

n. Within five (5) days after the completion of the abandonment of any well or injection well, the owner or operator of the abandoned well or injection well shall report in writing to the Director on such form as may be prescribed by the Director on all work done with respect to the abandonment. (7-1-93)

46. -- 049. (RESERVED)

50. MAINTENANCE (RULE 50).

1. General. All well heads, separators, pumps, mufflers, manifolds, valves, pipelines, and other equipment used for the production of geothermal resources shall be maintained in good condition in order to prevent loss of or damage to life, health, property, and natural resources. (7-1-93)

2. Corrosion. All surface well head equipment and pipelines and subsurface casing and tubing will be subject to periodic corrosion surveillance in order to safeguard health, life, property, and natural resources. (7-1-93)

3. Tests. The Director may require such tests or remedial work as in his judgment are necessary to prevent damage to life, health, property, and natural resources, to protect geothermal reservoirs from damage or to prevent the infiltration of detrimental substances into underground or surface water suitable for irrigation or other beneficial uses to the best interest of the neighboring property owners and the public. Such tests may include, but are not limited to, casing tests, cementing tests, and equipment tests. (7-1-93)

51. -- 054. (RESERVED)

55. HEARINGS, NOTICE, PROCEDURE (RULE 55).

Any applicant or the Director shall have the right to a hearing concerning the propriety of issuing a permit for which an application has been filed. Any applicant who desires a hearing pursuant to Section 42-4004, Idaho Code, must file a written request therefor with the Director of the Department of Water Resources. Any person may file a petition with the Director requesting that the Director hold a hearing concerning the propriety of issuing a permit for which an application has been filed. The petitioner must serve a copy of the petition upon the applicant and set forth in the petition all reasons for requesting the hearing. The applicant may respond to the petition within ten (10) days of its service. However, failure of the applicant to respond shall not be prejudicial to his right to appear at the hearing and present such evidence as he deems proper, if the Director grants the petition for such hearing. The hearing shall be set by the Director at any location deemed appropriate. Notice of the time and location shall be served on the applicant and/or the petitioner by the Director at least twenty (20) days before said date by certified mail addressed to applicant's address as stated in the application and to the petitioner at the address given in the petition. The hearing shall be conducted in the manner prescribed in the general rules and procedures of the Department. (7-1-93)

56. -- 059. (RESERVED)

60. HEARINGS ON REFUSED, LIMITED, OR CONDITIONED PERMIT (RULE 60).

Any applicant who is granted a limited or conditioned permit, or who is denied a permit or any person aggrieved by a decision of the Director may seek a hearing on said action of the Director by serving on the Director written notice and request for a hearing before the Board within thirty (30) days of service of the Director's decision. Said hearing will be set, conducted, and notice given as set forth in Rule 055 above. Any applicant may appeal the decision of the Board to the District Court within thirty (30) days of service of the decision. All hearings under this rule shall be conducted in the manner prescribed in the general rules and procedures of the Department. (7-1-93)

61. -- 064. (RESERVED)

65. PENALTIES (RULE 65).

1. Order by Director. If the Director finds that any person is constructing, operating, or maintaining any hole, well or injection well not in accordance with any applicable permit or in a fashion so as to involve an unreasonable risk of, or so as to cause, damage to life or property or subsurface, surface, or atmospheric resources, the Director may issue an order to such person to correct or to stop such practices as are found to be improper and to mitigate any injury of any sort caused by such practices. (7-1-93)

2. Enforcement by Director. The Director may enforce any provision of this act or any order or regulation issued or adopted pursuant thereto by an appropriate action in the District Court. The Director may bring action in the District Court to have enjoined any threatened noncompliance with any provision of this act or any order or regulation adopted pursuant hereto or any threatened harm to life, property, or surface, subsurface or atmospheric resources which would be caused by such noncompliance. (7-1-93)

3. Willful Violations or Failure to Comply. Any willful violations of or failure to comply with any provision of these rules, or if such order or regulation has been served on such person or is otherwise known to him, any valid order or regulation issued or adopted hereto shall be a misdemeanor punishable by fine of up to five thousand dollars (\$5,000) for each offense or a sentence of up to six (6) months in a county jail or both; each day of a continuing violation shall be a separate offense under this subdivision. A responsible or principal executive officer or any corporate person may be liable under this subdivision if such corporate person is not in compliance with any provision of this act or with any valid order or regulation adopted pursuant hereto. (7-1-93)

66. -- 069. (RESERVED)

70. FORMS (RULE 70).

Forms required by these rules. (7-1-93)

1. Samples of Forms. Samples of all forms required by these rules are available from the Department to interested parties upon request. (7-1-93)

02. Forms. The forms include the following: (7-1-93)

a. Form 4003-1, Application for Permit to Drill for Geothermal Resources; (7-1-93)

b. Form 4003-2, Application for Permit to Alter a Geothermal Well; (7-1-93)

c. Form 4003-3, Application for Permit to Convert a Well to a Geothermal Injection Well; (7-1-93)

d. Form 4005, Geothermal Resources Surety Bond; (7-1-93)

e. Form 4007, Notice of Intent to Abandon a Well; (7-1-93)

f. Form 4009, Report of Abandonment of a Well; (7-1-93)

g. Form 4010-1, Monthly Injection Report for Geothermal Wells; and (7-1-93)

h. Form 4010-2, Monthly Energy Report for Geothermal Wells. (7-1-93)

071. -- 999. (RESERVED)

Subject Index

A

Abandonment 9
 General Requirements 10
 Objectives 9

B

Blow Out Prevention 8
 Explored Areas 9
 Unexplored Areas 8

D

Definitions, IDAPA 37.03.04 2
 Applicant 2
 Board 2
 BOPE 2
 Completion 2
 Conductor Pipe 2
 Department 2
 Director 2
 Drilling Logs 2
 Drilling Operations 2
 Exploratory Well 3
 Geothermal Area 3
 Geothermal Field 3
 Geothermal Resource 3
 Injection Well 3
 Intermediate String or Casing 3
 Material Medium 3
 Notice of Intent or Notice 3
 Observation Well 3
 Operator 3
 Owner 3
 Permit 3
 Person 3
 Production String 4
 Production Well 4
 Surface Casing 4
 Suspension of Operations 4
 Waste 4
 Well 4
Drilling 4
 Bonds 5
 Casing 6
 Electric Logging 7
 Fees 5
 General 4
 Permits & Notices 4
 Well Spacing 5

F

Forms 12
 Samples of Forms 12

H

Hearings On Refused, Limited, Or
 Conditioned Permit 11
Hearings, Notice, Procedure 11

I

Injection Wells 9
 Construction 9
 Surveillance 9

M

Maintenance 11
 Corrosion 11
 General 11
 Tests 11

P

Penalties 11
 Enforcement by Director 11
 Order by Director 11
 Willful Violations or Failure to
 Comply 12

R

Records 7
 Confidential Status 8
 General 7
 Inspection of Records 8
 Records to be Filed With the
 Director 7

Table of Contents

37.3.7 – Stream Channel Alteration Rules

1. Legal Authority (Rule 0).....	2
2. Title And Scope (Rule 1).....	2
3. Written Interpretation (Rule 2).....	2
4. Administrative Appeals (Rule 3).....	2
004. -- 009. (Reserved).....	2
010. Definitions (Rule 10)	2
011. -- 024. (Reserved).....	3
025. Exemptions (Rule 25)	3
026. -- 029. (Reserved).....	3
030. Applications (Rule 30).....	3
031. -- 034. (Reserved).....	4
035. Application Review (Rule 35).....	4
036. -- 039. (Reserved).....	5
040. Approval (Rule 40).....	5
041. -- 044. (Reserved).....	5
045. Enforcement Of Act (Rule 45).....	5
046. -- 049. (Reserved).....	5
050. Emergency Waiver (Rule 50).....	5
051. -- 054. (Reserved).....	6
55. Minimum Standards (Rule 55).....	6
56. Construction Procedures (Rule 56).....	6
57. Dumped Rock Riprap (Rule 57).....	7
58. Gabions (Rule 58).....	9
59-58.	D
rop Structures, Sills And Barbs (Rule 59).....	10
60. Dikes And Levees (Rule 60).....	11
61. Jetties (Rule 61).....	13
62-59.	C
ulverts And Bridges (Rule 62).....	15
63-60.	R
emoval Of Sand And Gravel Deposits (Rule 63).....	16
64-61.	S
uction Dredges And Non-powered Sluice Equipment (Rule 64).	17
65-62.	P
iling (Rule 65).	17
66-63.	P
ipe Crossings (Rule 66)	18
67-64.	C
oncrete Plank Boat Launch Ramps (Rule 67).	18
068. -- 069. (Reserved).....	19
070. Hearings On Denied, Limited, Or Conditioned Permit Or Other Decisions Of The Director (Rule 70)	19

071. -- 999. (Reserved).....19

**IDAPA 37
TITLE 03
CHAPTER 07**

37.03.07 – STREAM CHANNEL ALTERATION RULES

1. LEGAL AUTHORITY (RULE 0).

The purpose of these rules and minimum standards is to specify procedures for processing and considering applications for stream channel alterations under the provisions of Title 42, Chapter 38, Idaho Code. (7-1-93)

2. TITLE AND SCOPE (RULE 1).

01. Title. (7-1-93)

3. Scope. The minimum standards are intended to enable the Director to process, in a short period of time, those applications which are of a common type and which do not propose alterations which will be a hazard to the stream channel and its environment. It is intended that these rules and minimum standards be administered in a reasonable manner, giving due consideration, to all factors affecting the stream and adjacent property. (7-1-93)

2. WRITTEN INTERPRETATION (RULE 2).

3. ADMINISTRATIVE APPEALS (RULE 3).

Any owner who is aggrieved by a determination or order of the Director may request a hearing pursuant to the provisions of Section 42-1701A(3), Idaho Code, and the Department's adopted Rules of Procedure. (7-1-93)

4. -- 009. (RESERVED)

10. DEFINITIONS (RULE 10).

1. Alteration. To obstruct, diminish, destroy, alter, modify, relocate or change the natural existing shape of the channel or to change the direction of flow of water of any stream channel within or below the mean high water mark. It includes removal of material from the stream channel and emplacement of material or structures in or across the stream channel where the material or structure has the potential to affect flow in the channel as determined by the director. (7-1-93)

2. Applicant. Any individual, partnership, company, corporation, municipality, county, state or federal agency, their agent, or other entity proposing to alter a stream channel or actually engaged in constructing a channel alteration, whether authorized or not. (7-1-93)

3. Board. The Idaho Water Resource Board. (7-1-93)

4. Continuously Flowing Water. A sufficient flow of water that could provide for migration and movement of fish, and excludes those reaches of streams which, in their natural state, normally go dry at the location of the proposed alteration. IDWR will assume, subject to information to the contrary, that the USGS quadrangle maps accurately depict whether a stream reach is continuously flowing, at the location of the proposed alteration. Such exclusion does not apply to minor flood channels that are a part of a stream which is continuously flowing in the reach where the alteration is located. Also, such exclusion does not apply to streams which may be dry as a result of upstream diversion or storage of water. (7-1-93)

5. Department. The Idaho Department of Water Resources. (7-1-93)

6. Drop Structures, Sills and Barbs. Physical obstructions placed within a stream channel for the purpose of stabilizing the channel by decreasing stream gradient and velocity and by dissipating stream energy. (7-1-93)

7. Director. The Director of the Idaho Department of Water Resources. (7-1-93)

8. Mean High Water Mark. A water level corresponding to the "natural or ordinary high water

mark" as defined in Section 58-104(9), Idaho Code, and is the line which the water impresses on the soil by covering it for sufficient periods of time to deprive the soil of its terrestrial vegetation and destroy its value for commonly accepted agricultural purposes. (7-1-93)

9. Non-Powered Sluice Equipment. Equipment which is powered only by human strength. (7-1-93)

10. Plans. Maps, sketches, engineering drawings, photos, work descriptions and specifications sufficient to describe the extent, nature, and location of the proposed stream channel alteration and the proposed method of accomplishing the alteration. (7-1-93)

11. Repair. Any work needed or accomplished, to protect, maintain, or restore any water diversion structure and the associated stream channel upstream and downstream as necessary for the efficient operation of the water diversion structure. (7-1-93)

12. Stream Channel. A natural water course of perceptible extent with definite beds and banks which confines and conducts continuously flowing water. The channel referred to is that which exists at the present time, regardless of where the channel may have been located at any time in the past. For the purposes of these rules only, the beds of lakes and reservoir pool areas are not considered to be stream channels. (7-1-93)

13. Base Flood Elevation. The Base Flood (BF) is referred to as the one hundred (100) year flood and is a measure of flood magnitude based on probability. The base flood has a one percent chance of occurring or being exceeded in any given year, with the Base Flood Elevation (BFE) being the level of flooding reached during the BF or the one hundred (100) year flood event. (7-1-93)

11. -- 024. (RESERVED)

25. EXEMPTIONS (RULE 25).

1. Work on Existing or Proposed Reservoir Projects. Permits are not required under the provisions of Title 42, Chapter 38 for construction work on any existing or proposed reservoir project, including the dam, and such areas downstream as the Director may determine is reasonably necessary for construction and maintenance of the dam. (7-1-93)

2. Snake and Clearwater Rivers. Permits are not required for work within that portion of the Snake and Clearwater rivers from the state boundary upstream to the upper boundary of the Port of Lewiston Port District as it now exists or may exist in the future. (7-1-93)

3. Cleaning, Maintenance, Construction or Repair Work. No permit is required of a water user or his agent to clean, maintain, construct, or repair any diversion structure, canal, ditch, or lateral or to remove any obstruction from a stream channel which is interfering with the delivery of any water under a valid existing water right or water right permit. (7-1-93)

4. Removal of Debris. No permit is required for removal of debris from a stream channel provided that no equipment will be working in the channel and all material removed will be disposed of at some point outside the channel where it cannot again reenter the channel. (7-1-93)

26. -- 029. (RESERVED)

30. APPLICATIONS (RULE 30).

1. Joint Application Permit Form. The Department of Water Resources, Department of Lands, and the U.S. Army Corps of Engineers have developed a joint application for permit form which will suffice for the required application under the Stream Protection Act. An application should be filed at least sixty (60) days before the applicant proposes to start the construction and shall be upon the joint application form furnished by the Department. The application shall be accompanied by plans which clearly describe the nature and purpose of the proposed work. (7-1-93)

2. **Applicant Following Minimum Standards.** In those cases where the applicant intends to follow the minimum standards (Rule 055), detailed plans may be eliminated by referring to the specific minimum standard; however, drawings necessary to adequately define the extent, purpose, and location of the work will still be required. Plans shall include some reference to water surface elevations and stream boundaries to facilitate review. The application should show the mean high water mark on the plans; however, any water surface or water line reference available will be helpful as long as this reference is described. (Examples: present water surface, low water, high water.) (7-1-93)

3. **Submission of Copies.** The applicant shall submit one (1) copy of all necessary plans along with the application form. When drawings submitted are larger than eight and one half by eleven (8 1/2 x 11), the applicant shall provide the number of copies specified by the department. (7-1-93)

4. **Stream Channel Alteration Permit.** Any applicant proposing to operate a vacuum or suction dredge within or below the mean high water mark of a stream channel shall apply for and obtain a stream channel alteration permit. The vacuum or suction dredge shall only be operated in accordance with the conditions of the permit and with the applicable rules. (7-1-93)

31. -- 034. (RESERVED)

35. APPLICATION REVIEW (RULE 35).

1. **Prior to Issuance of Permit.** The following items shall be among those considered by the Director prior to issuing a permit: (7-1-93)

- a. What is the purpose of doing the work? (7-1-93)
- b. What is the necessity and justification for the proposed alteration? (7-1-93)
- c. Is the proposal a reasonable means of accomplishing the purpose? (7-1-93)
- d. Will the alteration be a permanent solution? (7-1-93)
- e. Will the alteration pass anticipated water flows without creating harmful flooding or erosion problems upstream or downstream? (7-1-93)
- f. What effect will the alteration have on fish habitat? (7-1-93)
- g. Will the materials used or the removal of ground cover create turbidity or other water quality problems? (7-1-93)
- h. Will the alteration interfere with recreational use of the stream? (7-1-93)
- i. Will the alteration detract from the aesthetic beauty of the area? (7-1-93)
- j. What modification or alternative solutions are reasonably possible which would reduce the disturbance to the stream channel and its environment and/or better accomplish the desired goal of the proposed alteration? (7-1-93)
- k. Is the alteration to be accomplished in accordance with the adopted minimum standards? (7-1-93)
- l. Are there public safety factors to consider? (7-1-93)

2. **Proposed Alteration Which Does Not Follow Minimum Standards.** In those cases where a proposed alteration does not follow the minimum standards, a copy of the application will be sent for review to those state agencies requesting notification. The Director shall provide for review by the Department of Lands, copies of applications on navigable rivers. The Director will provide a copy of any other application requested by the Department of Lands and may request review by other state agencies regardless of whether or not the proposed

alteration will comply with the minimum standards.

(7-1-93)

36. -- 039. (RESERVED)

40. APPROVAL (RULE 40).

1. Conformance to Application. All work shall be done in accordance with the approved application, subject to any conditions specified by the department.

(7-1-93)

2. Permits Allowed Without Review. A permit may be approved by the Director of the Department of Water Resources without review by other agencies in situations where the work is of a nature not uncommon to the particular area and where it is clear that the work will not seriously degrade the stream values except on navigable rivers which require review by the Department of Lands. All work approved in this manner shall be accomplished in accordance with the minimum standards.

(7-1-93)

3. Reinstatement of Expired Permit. A permit which has expired may be reinstated by the Director after review by other agencies as determined by the Director.

(7-1-93)

41. -- 044. (RESERVED)

45. ENFORCEMENT OF ACT (RULE 45).

1. Written Orders Issued by Designated Employees of Department. Employees of the Department designated by the Director may issue written orders directing an applicant to cease and desist, to ensure proper notice to applicants who are found to be altering a stream without a permit or not in compliance with the conditions of a permit. Such orders shall be in effect immediately upon issuance and will continue in force until a permit is issued or until the order is rescinded by the Director.

(7-1-93)

2. Failure to Comply with Stream Protection Act. Failure to comply with any of the provisions of the Stream Protection Act (Chapter 38, Title 42, Idaho Code), may result in issuance of an Idaho uniform citation and/or the cancellation of any permit by the Director without further notice and the pursuit in a court of competent jurisdiction, such civil or criminal remedies as may be appropriate and provided by law. The Director may allow reasonable time for an applicant to complete stabilization and restoration work.

(7-1-93)

46. -- 049. (RESERVED)

50. EMERGENCY WAIVER (RULE 50).

1. Waiver of Provisions of Stream Protection Act. Section 42-3808, Idaho Code, provides for waiver of the provisions of the Stream Protection Act in emergency situations where immediate action must be taken to protect life or property including growing crops. The Director will not consider failure to submit an application for a stream channel alteration far enough ahead of the desired starting time of the construction work as an emergency situation.

(7-1-93)

2. Verbal Waivers. A verbal waiver may be granted initially; however, all verbal requests for waivers shall be followed up by the applicant in writing within fifteen (15) days of any initial authorization to do work. If the applicant is unable to contact the Director to obtain an emergency waiver, he may proceed with emergency work; however, he must contact the Director as soon as possible thereafter. Proving that a bonafide emergency did actually exist will be the responsibility of the applicant.

(7-1-93)

3. Emergency Waiver. Work authorized by an emergency waiver shall be limited to only that which is necessary to safeguard life or property, including growing crops, during the period of emergency.

(7-1-93)

4. Conformance to Conditions of Waiver. The applicant shall adhere to all conditions set by the Director as part of a waiver.

(7-1-93)

5. Waivers Granted by Designated Employees. The Director may delegate the authority to grant

waivers to designated employees of the Department. Names and telephone numbers of such employees will be made available to any interested applicant upon request. (7-1-93)

51. -- 054. (RESERVED)

55. MINIMUM STANDARDS (RULE 55).

These standards are intended to cover the ordinary type of stream channel alteration and to prescribe minimum conditions for approval of such construction. Unless otherwise provided in a permit, these standards shall govern all stream channel alterations in this state. An applicant should not assume that because an application utilizes methods set forth in these standards it will automatically be approved. These minimum standards include the following items:

(7-1-93)

1. Construction Procedures. (7-1-93)
2. Dumped Rock Riprap. (7-1-93)
- ~~03. Gabions. (7-1-93)~~
4. Drop Structures, Sills and Barbs. (7-1-93)
- ~~5. Dikes and Levees. (7-1-93)~~
- ~~06. Jetties. (7-1-93)~~
7. Culverts and Bridges. (7-1-93)
8. Removal of Sand and Gravel Deposits. (7-1-93)
9. Suction Dredges and Non-Powered Sluice Equipment. (7-1-93)
10. Piling. (7-1-93)
11. Pipe Crossings. (7-1-93)
12. Concrete Plank Boat Launch Ramps. (7-1-93)

56. CONSTRUCTION PROCEDURES (RULE 56).

1. **Conformance to Procedures.** Construction shall be done in accordance with the following procedures unless specific approval of other procedures has been given by the Director. When an applicant desires to proceed in a manner different from the following, such procedures should be described on the application. (7-1-93)

2. **Operation of Construction Equipment.** No construction equipment shall be operated below the existing water surface without specific approval from the Director except as follows: Fording the stream at one (1) location only will be permitted unless otherwise specified; however, vehicles and equipment will not be permitted to push or pull material along the streambed below the existing water level. Work below the water which is essential for preparation of culvert bedding or approved footing installations shall be permitted to the extent that it does not create unnecessary turbidity or stream channel disturbance. Frequent fording will not be permitted in areas where extensive turbidity will be created. (7-1-93)

3. **Temporary Structures.** Any temporary crossings, bridge supports, cofferdams, or other structures that will be needed during the period of construction shall be designed to handle high flows that could be anticipated during the construction period. All structures shall be completely removed from the stream channel at the conclusion of construction and the area shall be restored to a natural appearance. (7-1-93)

4. **Minimizing Disturbance of Area.** Care shall be taken to cause only the minimum necessary disturbance to the natural appearance of the area. Streambank vegetation shall be protected except where its removal

is absolutely necessary for completion of the work adjacent to the stream channel. (7-1-93)

5. **Disposal of Removed Materials.** Any vegetation, debris, or other material removed during construction shall be disposed of at some location out of the stream channel where it cannot reenter the channel during high stream flows. (7-1-93)

6. **New Cut of Fill Slopes.** All new cut or fill slopes that will not be protected with some form of riprap shall be seeded with grass and planted with native vegetation to prevent erosion. (7-1-93)

7. **Fill Material.** All fill material shall be placed and compacted in horizontal lifts ~~except as provided for in Rule Subsection 060.05 for uncompacted dike and levee construction.~~ Areas to be filled shall be cleared of all vegetation, debris and other materials that would be objectionable in the fill. (7-1-93)

8. **Limitations on Construction Period.** The Director may limit the period of construction as needed to minimize conflicts with fish migration and spawning, recreation use, and other uses. (7-1-93)

57. DUMPED ROCK RIPRAP (RULE 57).

1. **Placement of Riprap.** Riprap shall be placed on a granular bedding material or a compact and stable embankment. (7-1-93)

2. **Sideslopes of Riprap.** Sideslopes of riprap shall not be steeper than 2:1 (2' horizontal to 1' vertical) except at ends of culverts and at bridge approaches where a 1 1/2:1 sideslope is standard. (7-1-93)

3. **Minimum Thickness of Riprap.** The minimum thickness of the riprap layer shall equal the dimension of the largest size riprap rock used or be eighteen (18) inches, whichever is greater. When riprap will be placed below high water level, the thickness of the layer shall be fifty percent (50%) greater than specified below. (7-1-93)

4. **Riprap Protection.** Riprap protection must extend at least one (1) foot above the anticipated high water surface elevation in the stream. (7-1-93)

5. **Rock Used for Riprap.** Rock for riprap shall consist of sound, dense, durable, angular rock fragments, resistant to weathering and free from large quantities of soil, shale, and organic matter. The length of a rock shall not be more than three (3) times its width or thickness. Rounded cobbles, boulders, and streambed gravels are not acceptable as dumped riprap. (7-1-93)

6. **Size and Gradation of Riprap.** Riprap size and gradation are commonly determined in terms of the weight of riprap rock. The average size of riprap rock shall be at least as large as the maximum size rock that the stream is capable of moving. The maximum size of riprap rock used shall be two (2) to five (5) times larger than the average size. (7-1-93)

7. **Methods Used for Determining Gradation of Riprap.** There are many methods used for determining the gradation of riprap rock. One of these many acceptable methods is shown in Table 1 below the Far West States (FWS) method shown in APPENDIX A - Table 1A at the end of this chapter.

GRADATION OF RIPRAP IN POUNDS		
Max. Weight of Stone required (lbs)	Min. and Max. Range in weight of Stones (lbs)	Weight Range 75 percent of Stones (lbs)
150	25 - 150	50 - 150
200	25 - 200	50 - 200
250	25 - 250	50 - 250
400	25 - 400	100 - 400

GRADATION OF RIPRAP IN POUNDS		
Max. Weight of Stone required (lbs)	Min. and Max. Range in weight of Stones (lbs)	Weight Range 75 percent of Stones (lbs)
600	25 - 600	150 - 600
800	25 - 800	200 - 800
1000	50 - 1000	250 - 1000
1300	50 - 1300	325 - 1300
1600	50 - 1600	400 - 1600
2000	75 - 2000	600 - 2000
2700	100 - 2700	800 - 2700

(7-1-93)

8. Use of Filter Material. A blanket of granular filter material or filter fabric shall be placed between the riprap layer and the bank in all cases where the bank is composed of erodible material that may be washed out from between the riprap rock. Filter material shall consist of a layer of well-graded gravel and coarse sand at least six (6) inches thick.

(7-1-93)

9. Toe Protection. Some suitable form of toe protection shall be provided for riprap located on erodible streambed material.

(7-1-93)

a. Various acceptable methods of providing toe protection are shown in APPENDIX B at the end of this chapter.

(7-1-93)

b. In addition to the approved methods of providing toe protection as shown in APPENDIX B at the end of this chapter, any other reasonable method will be considered by the Director during review of a proposed project.

(7-1-93)

10. Extension of Riprap Area. Riprap shall extend far enough upstream and downstream to reach stable areas, unless protected against undermining at ends by the method shown in APPENDIX C, Figure 3 at the end of this chapter. On extremely long riprap sections, it is recommended that similar cutoff sections be used at several intermediate points to reduce the hazard that would be created if failure of the riprap occurred at any one (1) location.

(7-1-93)

11. Finished Surface. Placement shall result in a smooth, even finished surface. Compaction is not necessary.

(7-1-93)

12. Placement of Riprap. The full course thickness of the riprap shall be placed in one (1) operation. Dumping riprap long distances down the bank or pushing it over the top of the bank with a dozer shall be avoided if possible. Material should be placed with a backhoe, loader, or dragline. Dumping material near its final position on the slope or dumping rock at the toe and bulldozing it up the slope is a very satisfactory method of placement, if approval is obtained for the use of equipment in the channel.

(7-1-93)

13. Design Procedure. Design procedure using the Far West States (FWS) method.

(7-1-93)

a. The FWS method uses a single equation to deal with variables for riprap.

(7-1-93)

$D_{75} = 3.5/CK$ WDS for Channel Banks

where: D_{75} = Size of the rock at seventy five percent (75%) is finer in gradation, in inches.

W	= Specific weight of water, usually 62.4 lbs./cu.ft.
D	= Depth of flow in stream, in feet in flood stage
S	= Channel slope or gradient, in ft/ft.
C	= A coefficient relating to curvature in the stream
K	= A coefficient relating to steepness of bank slopes

(7-1-93)

b. The coefficient, C, is based on the ratio of the radius of curvature of the stream, (CR), to the water surface width, (WSW), so it is necessary for the user to make field determination of these values. The coefficient varies from 0.6 for a curve ratio of 4 to 6, up to 1.0 for a straight channel. If the computed ratio for a particular project is less than 4, the designer should consider some modification less than 4.

CR/WSW	C
4 - 6	0.60
6 - 9	0.75
9 - 12	0.90
Straight Channel	1.00

(7-1-93)

c. The coefficient, K, ranges from 0.5 for a 1.5:1 sideslope to 0.87 for 3:1 sideslope. No values are given for steeper or flatter slopes. Slopes steeper than 1.5:1 are not recommended. If slopes flatter than 3:1 are desired, it would be conservative to use the K-value for 3:1 slopes.

Bankslope	K
1.5:1	0.50
1.75:1	0.63
2.0:1	0.72
2.5:1	0.80
3.0:1	0.87

(7-1-93)

Table 1A in APPENDIX A, located at the end of this chapter.

58. ~~GABIONS (RULE 58).~~

~~1. **Wire Enclosed Gabion Riprap.** This protection consists of filling wire "cages" with available rock and securing individual cages together to form a stable slope protection. Aesthetics can be improved by arranging the individual gabions in a manner that will allow planting of vegetation.~~ (7-1-93)

~~2. **Placement of Gabions.** Gabions shall be placed on a well-compacted and stable embankment.~~ (7-1-93)

~~3. **Toe Protection.** In general, toe protection shall consist of protection equivalent to at least one (1) of the following:~~ (7-1-93)

- a. ——— Extend gabions, on slope, at least three (3) feet below streambed or to non-erodible material. (7-1-93)
- b. ——— Extend gabions out from toe along streambed of an erodible channel a horizontal distance of at least five (5) times the thickness of the gabion mattress. (7-1-93)
4. ——— **Mattress or Retaining Wall Gabion Placements.** Gabions may be placed to form either a mattress or a retaining wall as shown in Figures 4 and 5 in APPENDIXES D and E, located at the end of this chapter. Minimum thickness of mattress shall be twelve (12) inches unless otherwise approved by the Director. (7-1-93)
- a. ——— Gabion retaining walls shall be constructed in accordance with the illustrated criteria as shown in Figure 5 in APPENDIX E, (located at the end of this chapter); and shall have a minimum horizontal thickness of three (3) feet. Fill above gabion retaining walls shall not exceed a slope of one and one-half to one (1 1/2:1). Retaining walls shall not exceed a height of ten (10) feet above streambed unless the Director has approved detailed design plans for the project. (7-1-93)
- b. ——— The wall shall be founded on a stable non-erodible base unless a mattress is provided to prevent undermining as shown in Figure 6 in APPENDIX F, located at the end of this chapter. (7-1-93)
5. ——— **Single Unit Construction.** Gabions are to be of single unit construction — the base, ends, and sides to be woven into a single unit. (7-1-93)
- a. ——— **Wire.** Wire mesh shall be heavily galvanized steel woven wire no smaller than twelve (12) gage. Mesh size shall be coordinated with rock gradation as specified in Rule Subsection 058.06. All ties, hog rings, lacing and other wire used shall be nine (9) gage galvanized wire unless otherwise approved. (7-1-93)
- b. ——— **Size of Gabion.** No individual compartment within a gabion shall have a length, width, or height exceeding four (4) feet except that gabion mattress sections one (1) foot or less in thickness may have a horizontal length up to six (6) feet. (7-1-93)
- c. ——— **Seams.** Gabion baskets shall have corners tied or laced together at least every four (4) inches along edges. (7-1-93)
- d. ——— **Ties Between Gabion Baskets.** At least two (2) ties shall be made between gabions for every square foot of contact area. (7-1-93)
6. ——— **Rock Used for Gabion Fill.** Rock used for gabion fill shall be sound, dense, durable rock which is free from earth and organic matter. The maximum size of the rock shall not exceed the gabion thickness and seventy percent (70%) of the rock by weight must exceed, in least dimension, the mesh opening in the wire. (7-1-93)
7. ——— **Filter Blanket.** A filter blanket of well-graded gravel and coarse sand at least six (6) inches thick, or suitable filter fabric, shall be placed between the bank and the gabions in cases where the bank is composed of fine erodible material. For filter design using the FWS method, see USDA, Soil Conservation Service, Idaho Technical Note No. 6 or equivalent design criteria. (7-1-93)
8. ——— **Riprap Protection.** Riprap protection shall extend at least one (1) foot above the anticipated high water surface elevation in the stream; however, it is not required that protection be extended above the elevation of the top of the bank. (7-1-93)
9. ——— **Locating Ends of Gabion.** Whenever it is necessary to locate the ends of gabion protection in areas that may be subject to erosive damage, minimum cutoffs shall be provided to prevent undermining as shown in Figure 7 in APPENDIX G. Views shown are cross sections at end of gabion section looking down along the sideslope of the channel. (7-1-93)

59.58. DROP STRUCTURES, SILLS AND BARBS (RULE 59).

1. **Drop Structures.** A drop structure shall be constructed of rocks, boulders and/or logs placed within a stream channel to act as a low level dam. Placement of a drop structure perpendicular to stream flow will decrease the stream gradient, dissipate stream energy and decrease stream velocity through an increase in water surface elevation immediately above the structure. Drop structures shall comply with the following criteria: (7-1-93)

a. Maximum water surface differential across (upstream water surface elevation minus downstream water surface elevation) a drop structure shall not exceed two (2) feet. The department shall approve the final elevation of any structure. (7-1-93)

b. Rock drop structures shall be constructed of clean, sound, dense, durable, angular rock fragments, and/or boulders of size and gradation, such that the stream is incapable of moving the material during peak flows. Rocks shall be keyed into the stream banks to minimize the likelihood of bank erosion. (See Figure 8 in APPENDIX H located at the end of this chapter). (7-1-93)

c. Log drop structures are acceptable in four (4) designs including the single log dam, the stacked log dam, the three (3) log dam, and the pyramid log dam. Log ends shall be keyed into both banks at least one-third (1/3) of the channel width or a distance sufficient to prevent end erosion. To prevent undercutting, the bottom log shall be imbedded in the stream bed or hardware cloth, cobbles or boulders shall be placed along the upper edge. Minimum log size for a single log structure shall be determined by on-site conditions and shall be placed to maintain flow over the entire log to prevent decay. Each log drop structure must be accompanied by downstream scour protection, such as a rock apron (See Figure 9 in APPENDIX I located at the end of this chapter). (7-1-93)

d. All drop structures shall be constructed to facilitate fish passage and centralized scour pool development. (7-1-93)

2. **Sills.** A sill shall be constructed of the same material and in the same manner as a drop structure. The top of the sill may not exceed the elevation of the bottom of the channel. The purpose of a sill is to halt the upstream movement of a headcut, thus precluding the widening or deepening of the existing channel. (See Figure 10 in APPENDIX J located at the end of this chapter). (7-1-93)

3. **Barb or Partial Drop Structure.** A barb or partial drop structure shall be constructed in the same manner and of the same material as a drop structure and placed into the stream channel to act as a low level dam and grade control structure. The barb will decrease stream gradient, dissipate stream energy and redirect stream flow. (7-1-93)

a. Barbs shall be constructed of clean, sound, dense, angular rock fragments, of size and gradation such that the stream is incapable of moving the material during peak flows. (7-1-93)

b. Barbs shall be constructed with a downstream angle of no less than one hundred (100) degrees and no greater than one hundred thirty-five (135) degrees unless otherwise specified. (7-1-93)

c. Barbs shall "extend" into the channel a distance of not more than twenty percent (20%) of the width of the channel unless otherwise specified by the Director. (7-1-93)

d. Barbs shall be keyed into the bank a distance equal to or greater than the width of the structure and down to bed level. Whenever moisture is encountered in the construction of the keyways, willow cuttings or clumps shall be placed before and during rock placement in such a manner that the base of the cutting is in permanent moisture and the top extends a minimum of six (6) inches above grade (see Figure 11 in APPENDIX K located at the end of this chapter). (7-1-93)

60. — DIKES AND LEVEES (RULE 60),

~~1. — Standards for Dikes. The following standards apply to dikes with heights from ground level to water surface elevation no greater than twelve (12) feet. Approval of higher dikes will be based on evaluation of a detailed design for the particular proposal. Permits for such structures are needed only when all or part of the structure is located below the mean high water mark (see Figure 12 in APPENDIX L located at the end of this chapter). (7-1-93)~~

2. ~~Location of Dikes.~~ Dikes shall be located in the best possible foundation material available and shall not obstruct the natural flow of or raise the water surface in the channel. (7-1-93)

3. ~~Figure 13.~~ Figure 13 in APPENDIX L, located at the end of this chapter, shows the most desirable location for a dike, because such an alignment results in minimum erosion and maintenance for the dike and the least possible disturbance to the stream; however, each applicant must decide what alignment is most suited to solve a particular problem. (7-1-93)

4. ~~Dike or Levee Foundation Areas.~~ Dike or levee foundation areas shall be clear of all trees, brush, stumps, logs, roots, boulders and other undesirable material which would interfere with scarifying the area. (7-1-93)

a. ~~Organic soils shall be removed except where fill used for the levee will primarily consist of organic material.~~ (7-1-93)

b. ~~Unsuitable material at old channel crossings shall be removed and banks of the old channel shall be no steeper than one to one (1:1) before fill is placed.~~ (7-1-93)

5. ~~Pervious Foundation.~~ When the foundation is pervious enough that piping may occur, a core trench shall be constructed down to an impervious layer or to some reasonable depth if impervious material is not present. Construction of the core trench shall comply with the following criteria: (7-1-93)

a. ~~The core trench shall be located approximately along the centerline of the dike.~~ (7-1-93)

b. ~~When impervious material is not encountered in the core trench, drains shall be provided on the land side of the trench (use a graded sand-gravel filter blanket) with the minimum trench depth as follows to ensure stability:~~

Design Water Surface Above Ground Level	Minimum Core Trench Depth Below Ground Level
0-6'	3'
6-12'	6'

(7-1-93)

c. ~~The width of the bottom of the core trench shall be adequate to allow movement of construction equipment to place and compact material. Sideslopes of the trench shall not be steeper than one to one (1:1).~~ (7-1-93)

d. ~~Core trench backfill shall consist of the most impervious material available and shall be well compacted.~~ (7-1-93)

6. ~~Existing Drains.~~ All existing drains entering the channel shall be maintained by installing conduits through dikes. Conduits shall be installed on firm foundations and backfill material shall be thoroughly compacted in lifts.) (7-1-93)

7. ~~Minimum Design Water Level Surface.~~ The minimum design water surface elevation that shall be provided for is as follows: The dike shall provide at least two (2) feet of freeboard above the design water surface.

Drainage Area	Design Flow Frequency
Less than 50 sq. mi.	25 years
50 sq. mi. or more	50 years or greatest flow of record, whichever is more

(7-1-93)

8. Height of Dike or Levee. The height of a dike or levee shall be increased during construction enough to ensure the required freeboard after settlement. Minimum height increases are as follows:

Fill Material	Minimum Height Increase
Normal compacted fill	5%
Uncompacted Dragline construction	20%
Near-saturated organic matter	40%

(7-1-93)

9. Compacted Mineral Soil. Compacted mineral soil having a high specific gravity and capable of achieving low permeability is the most desirable fill material and may be utilized on all dikes or levees. (7-1-93)

a. Organic fill material shall not be used on levees having a design water surface more than six (6) feet above land surface, unless specific approval from the Director is obtained. (7-1-93)

b. Silty or sand material shall not be used for fill unless provisions are specified on the application and/or plans which will adequately protect this material from erosion. (7-1-93)

10.4. Cross-Section of Dike or Levee. The cross section of a dike or levee shall conform to the minimum criteria shown in Rule 061.01, Table 2 and Figure 14 in APPENDIX L, located at the end of this chapter. In those instances where the location of a dike or the nature of the fill material is such that erosion of the fill is likely, some suitable form of slope protection such as riprap or grass shall be provided. (See the appropriate riprap specification for standards required. Embankments constructed of silty or sandy materials shall receive particular attention with regard to slope protection.) (7-1-93)

61. JETTIES (RULE 61).

1. Use of Jetties. Use of jetties shall not be permitted on curves having less than a two hundred (200) foot radius unless hydraulic analysis can be provided to show that they will achieve the desired results:

MINIMUM CRITERIA FOR DIKE OR LEVEE CROSS-SECTION		
Height to Design Water Surface	Minimum Top Width	Steepest Allowable Sideslope
Compacted mineral fill:		
0-6'	6'	1 1/2:1
over 6'-12'	8'	2:1
Silty, sandy, or organic fill:		
0-6'	8'	2:1
Dumped, uncompacted fill:		
0-6'	6'	2:1
over 6'-12'	8'	2 1/2:1 (or 3:1 on stream side and 2:1 on land side)
When road on top: (turnaround areas also needed)	10'	

MINIMUM CRITERIA FOR DIKE OR LEVEE CROSS-SECTION		
Height to Design Water Surface	Minimum Top Width	Steepest Allowable Sideslope
When fill unstable during rapid drawdown or severe wave action anticipated)	3:1 on stream side	
Permeable soil of low plasticity used	3:1	

(7-1-93)

a. Jetties shall not extend into the stream from the bank more than twenty percent (20%) of the channel width unless it can be demonstrated that undesirable effects will not be created. (7-1-93)

b. Jetties shall be spaced close enough together to provide continuous protection along the streambank unless other provisions for protection between the jetties are provided. Section Subsection 061.01, Table 2, shows one (1) method of locating jetties. (7-1-93)

2. **Height of Jetty.** The height shall be at least equal to the design streamflow depth unless the jetty is specifically designed for fish shelter or streambank toe protection only. (See details in Figure 16 in APPENDIX M, located at the end of this chapter.) (7-1-93)

a. Jetties shall always be protected from erosion at their contact with the bank and streambed by extending the fill and/or riprap down to non-erodible material or beyond the maximum anticipated scour depth. The minimum scour depth considered shall be two (2) feet. (7-1-93)

b. Minimum top width for a jetty shall be three (3) feet unless otherwise specified by the Director. (7-1-93)

e. The steepest allowable sideslopes for a jetty shall be as follows unless otherwise specified by the Director:

Type of Jetty	Maximum Sideslope
Full flow height	1 1/2:1
Low partial flow height	2:1

(7-1-93)

d. Jetties shall be protected from erosive damage either by placing rock riprap or other protective cover at areas subject to erosion or by constructing the jetty using a material resistant to erosion. (7-1-93)

e. Full flow height jetties shall be protected from erosive damage on the upstream side and end. (7-1-93)

f. Low jetties that will be subject to flow over the entire structure shall be protected from erosive damage on all exposed surfaces. (7-1-93)

3. **Pervious or Impervious Fills.** Jetties may be constructed as either pervious or impervious fills. (7-1-93)

a. Construction of a pervious jetty will require the use of fill material such as well graded angular rock which will not be eroded or otherwise weakened by allowing seepage to flow through it. Rock filled wire gabions are also suitable for construction of pervious jetties where angular rock of adequate size is not available. (7-1-93)

~~b. — Impervious fill shall be placed in horizontal lifts and thoroughly compacted. Fill consisting primarily of silty material shall not be used. This type of construction requires the use of rock riprap or other suitable protection in areas subject to erosive action. (7-1-93)~~

62.59. CULVERTS AND BRIDGES (RULE 62).

1. Culverts and Bridges. Culverts and bridges shall be capable of carrying streamflows and shall not significantly alter conditions upstream or downstream by causing flooding, turbidity, or other problems. The appearance of such installations shall not detract from the natural surroundings of the area. (7-1-93)

2. Location of Culverts and Bridges. Culverts and bridges should be located so that a direct line of approach exists at both the entrance and exit. Abrupt bends at the entrance or exit shall not exist unless suitable erosion protection is provided. (7-1-93)

3. Ideal Gradient. The ideal gradient (bottom slope) is one which is steep enough to prevent silting but flat enough to prevent scouring due to high velocity flows. It is often advisable to make the gradient of a culvert coincide with the average streambed gradient. (7-1-93)

a. Where a culvert is installed on a slope steeper than twenty percent (20%), provisions to anchor the culvert in position will be required. Such provisions shall be included in the application and may involve the use of collars, headwall structures, etc. Smooth concrete pipe having no protruding bell joints or other irregularities shall have such anchoring provisions if the gradient exceeds ten percent (10%). (7-1-93)

4. Size of Culvert or Bridge Opening. The size of the culvert or bridge opening shall be such that it is capable of passing design flows without overtopping the streambank or causing flooding or other damage. (7-1-93)

a. Design flows shall be based upon the following minimum criteria:

Drainage Area	Design Flow Frequency
Less than 50 sq. mi.	25 Years
Over 50 sq. mi. or more	50 years or greatest flow of record, whichever is more

(7-1-93)

b. For culverts and bridges located on U.S. Forest Service or other federal lands, the sizing should comply with the Forest Practices Act as adopted by the federal agencies or the Department of Lands. (7-1-93)

c. For culverts or bridges located in a community qualifying for the national flood issuance program, the minimum size culvert shall accommodate the one hundred (100) year design flow frequency. (7-1-93)

d. If the culvert or bridge design is impractical for the site, the crossing may be designed with additional flow capacity outside the actual crossing structure, provided there is no increase in the Base Flood Elevation.

(NOTE: When flow data on a particular stream is unavailable, it is almost always safe to maintain the existing gradient and cross-section area present in the existing stream channel. Comparing the proposed crossing size with others upstream or downstream is also a valuable means of obtaining information regarding the size needed for a proposed crossing.) (7-1-93)

e. Minimum clearance shall be at least one (1) foot at all bridges. This may need to be increased substantially in the areas where ice passage or debris may be a problem. Minimum culvert sizes required for stream crossings: (7-1-93)

i. Eighteen (18) inch diameter for culverts up to seventy (70) feet long; (7-1-93)

ii. Twenty-four (24) inch diameter for all culverts over seventy (70) feet long. (7-1-93)

f. In streams where fish passage is of concern as determined by the director, an applicant shall comply with the following provisions and/or other approved criteria to ensure that passage will not be prevented by a proposed crossing. (7-1-93)

g. Minimum water depth shall be approximately eight (8) inches for salmon and steelhead and at least three (3) inches in all other cases. (7-1-93)

h. Maximum flow velocities for streams shall not exceed those shown in Figure 17 in APPENDIX N, located at the end of this chapter, for more than a forty-eight (48) hour period. The curve used will depend on the type of fish to be passed. (7-1-93)

i. Where it is not feasible to adjust the size or slope to obtain permissible velocities, the following precautions may be utilized to achieve the desired situation. (7-1-93)

j. Baffles downstream or inside the culvert may be utilized to increase depth and reduce velocity. Design criteria may be obtained from the Idaho Fish and Game Department. (7-1-93)

k. Where multiple openings for flow are provided, baffles or other measures used in one (1) opening only shall be adequate provided that the opening is designed to carry the main flow during low-flow periods. (7-1-93)

5. **Construction of Crossings.** When crossings are constructed in erodible material, upstream and downstream ends shall be protected from erosive damage through the use of such methods as dumped rock riprap, headwall structures, etc., and such protection shall extend below the erodible streambed and into the banks at least two (2) feet unless some other provisions are made to prevent undermining. (7-1-93)

a. Where fish passage must be provided, upstream drops at the entrance to a culvert will not be permitted and a maximum drop of one (1) foot will be permitted at the downstream end if an adequate jumping pool is maintained below the drop. (7-1-93)

b. Downstream control structures such as are shown in Figure 18 in APPENDIX O, located at the end of this chapter, can be used to reduce downstream erosion and improve fish passage. They may be constructed with ~~gabions~~, pilings and rock drop structures. (7-1-93)

6. **Multiple Openings.** Where a multiple opening will consist of two (2) or more separate culvert structures, they shall be spaced far enough apart to allow proper compaction of the fill between the individual structures. The minimum spacing in all situations shall be one (1) foot. In areas where fish passage must be provided, only one (1) opening shall be constructed to carry all low flows. Low flow baffles may be required to facilitate fish passage. (7-1-93)

7. **Areas to be Filled.** All areas to be filled shall be cleared of vegetation, topsoil, and other unsuitable material prior to placing fill. Material cleared from the site shall be disposed of above the high water line of the stream. Fill material shall be reasonably well-graded and compacted and shall not contain large quantities of silt, sand, organic matter, or debris. In locations where silty or sandy material must be utilized for fill material, it will be necessary to construct impervious sections both upstream and downstream to prevent the erodible sand or silt from being carried away (see Figure 19, APPENDIX P, located at the end of this chapter). Sideslopes for fills shall not exceed one and one half to one (1.5:1). Minimum cover over all culvert pipes and arches shall be one (1) foot. (7-1-93)

8. **Installation of Pipe and Arch Culvert.** All pipe and arch culverts shall be installed in accordance with manufacturer's recommendations. (7-1-93)

a. The culvert shall be designed so that headwaters will not rise above the top of the culvert entrance unless a headworks is provided. (7-1-93)

63.60. REMOVAL OF SAND AND GRAVEL DEPOSITS (RULE 63).

1. **Removal of Sand and Gravel.** This work consists of removal of sand and gravel deposits from within a stream channel. The following conditions shall be adhered to unless other methods have been specified in detail on the application and approved by the Director. (7-1-93)
2. **Removal Below Water Surface.** Sand and gravel must not be removed below the water surface existing at the time of the work. Where work involves clearing a new channel for flow, removal of material below water level will be permitted to allow this flow to occur; however, this must not be done until all other work in the new channel has been completed. (7-1-93)
3. **Buffer Zone.** A buffer zone of undisturbed streambed material at least five (5) feet in width or as otherwise specified by the Director shall be maintained between the work area and the existing stream. The applicant shall exercise reasonable precautions to ensure that turbidity is kept to a minimum and does not exceed state water quality standards. (7-1-93)
4. **Movement of Equipment.** Equipment may cross the existing stream in one (1) location only, but shall not push or pull material along the streambed while crossing the existing stream. (7-1-93)
5. **Disturbing Natural Appearance of Area.** Work must be done in a manner that will least disturb the natural appearance of the area. Sand and gravel shall be removed in a manner that will not leave unsightly pits or other completely unnatural features at the conclusion of the project. (7-1-93)

64.61. SUCTION DREDGES AND NON-POWERED SLUICE EQUIPMENT (RULE 64).

1. **Standards for Suction Dredges.** The following standards shall apply only to uses of suction dredges with nozzle diameter of five (5) inches or less and rated at fifteen (15) HP or less and non-powered sluice equipment moving more than one-quarter (1/4) cubic yard per hour. (7-1-93)
2. **Operating Permit.** A permit for the operation of a suction dredge may authorize the use of the dredge within a drainage basin or a large portion of a drainage basin except as otherwise determined by the Director. (7-1-93)
3. **Mechanized Equipment Prohibited Below High Water Mark.** There shall be no use of mechanized equipment below the mean high water mark except for the dredge itself, and any life support system necessary to operate the dredge. (7-1-93)
4. **Operation of Dredge.** The operation of the dredge shall be done in a manner so as to prevent the undercutting of streambanks. (7-1-93)
5. **Permit Required for Non-Powered Operation -- More Than Five People.** A permit shall be required for any non-powered operation in which more than five (5) people are working the same area. (7-1-93)
6. **Permit Required for Non-Powered Operation -- More Than Thirty-Three Percent of Stream Width.** A permit shall be required for any non-powered operation if the disturbed area exceeds thirty-three percent (33%) of the stream width at the mining location. (7-1-93)
7. **Limitation of Mining Sites.** Only one (1) mining site per one hundred (100) linear feet of stream channel shall be worked at one (1) time unless waived by the Director. (7-1-93)

65.62. PILING (RULE 65).

1. **Standards for Pilings.** The following standards apply to a piling associated with a boat or swimming dock, a log boom, a breakwater, or bridge construction. (7-1-93)
2. **Replacement of Pilings.** In replacing a piling the old piling shall be completely removed from the channel, secured to the new piling or cut at stream bed level. (7-1-93)

3. **Condition of Pilings.** Chemicals or compounds used for protection of piles and lumber shall be thoroughly dried to prevent bleeding, weeping or dissolution before placing such piles and lumber over, in or near water. (7-1-93)

4. **Prohibited Materials.** The application of creosote, arsenicals or phentachlorophenol (Penta) to timber shall not occur in, or over water. (7-1-93)

66.63. PIPE CROSSINGS (RULE 66).

1. **Standards for Pipe Crossings.** The following standards apply to pipe crossings to be installed below the bed of a stream or river such as utility crossings of a gas line, sewer line, electrical line, communication line, water line or similar line. (7-1-93)

2. **Depth of Line.** The line shall be installed below the streambed to a depth which will prevent erosion and exposure of the line to free flowing water. In areas of high stream velocity where scouring may occur, the pipe shall be encased in concrete or covered with rock riprap to prevent the pipeline from becoming exposed. (7-1-93)

3. **Pipe Joints.** The joints shall be welded, glued, cemented or fastened together in a manner to provide a water tight connection. (7-1-93)

4. **Construction Methods.** Construction methods shall provide for eliminating or minimizing discharges of turbidity, sediment, organic matter or toxic chemicals. A settling basin or cofferdam may be required for this purpose. (7-1-93)

5. **Cofferdam.** If a cofferdam is used, it shall be completely removed from the stream channel upon completion of the project. (7-1-93)

6. **Revegetation of Disturbed Areas.** Areas disturbed as a result of the alteration shall be revegetated with plants and grasses native to these areas. (7-1-93)

67.64. CONCRETE PLANK BOAT LAUNCH RAMPS (RULE 67).

1. **Construction of Concrete Plank Boat Launch Ramps.** Concrete plank boat launch ramps, shall be constructed with individual sections of precast, reinforced concrete planks linked together to provide a stable non-erosive water access. Typical plank size is twelve feet by fourteen inches by four inches (12' x 14" x 4"). (See Figure 20, APPENDIX Q, located at the end of this chapter). (7-1-93)

2. **Construction of Planks.** All planks shall be constructed with Type II low alkali cement. (7-1-93)

3. **Concrete Planks.** All concrete planks shall have a smooth form finish, free of rock pockets and loose materials. Figure 22 shows a typical launch plank detail. (See Figures 21 and 22 in APPENDIXES R and S). (7-1-93)

4. **Assembly of Planks.** The planks shall be assembled out of the water and slid into place on a constructed launch ramp where water velocities do not exceed two (2) feet per second. In waters exceeding (2) feet per second the ramp sections shall be linked together and fastened to pre-positioned stringers anchored into the launch ramp. (See Figure 23, APPENDIX T, located at the end of this chapter). (7-1-93)

5. **Water Depth.** The water depth above the lower end of the ramp section shall not be less than three (3) feet during low level or low flow periods. (See Figure 20, APPENDIX Q, located at the end of this chapter). (7-1-93)

6. **Construction of Boat Ramp.** The boat launch ramp shall have a base constructed of sound, dense, durable, angular rock resistant to weathering and free from soil, shale and organic materials. Rounded cobbles, boulders and streambed material are not acceptable as base material in areas with stream flow velocities greater than two (2) fps. Base materials shall be covered with a layer of (three-fourths inches (3/4") min.) crushed rock with a

minimum depth of two inches (2"). The ramp shall have a minimum and maximum slope of ten percent (10%) and fifteen percent (15%) respectively, and shall be constructed in a manner to avoid long incursions into the stream channel. All ramps and fill material shall be protected with rock riprap in accordance with Rule 057 when stream flow velocities exceed two (2) fps. (See Figure 24, APPENDIX U, located at the end of this chapter). (7-1-93)

68.65. -- 069. (RESERVED)

70. HEARINGS ON DENIED, LIMITED, OR CONDITIONED PERMIT OR OTHER DECISIONS OF THE DIRECTOR (RULE 70).

Any applicant who is granted a limited or conditioned permit, or who is denied a permit, may seek a hearing on said action of the Director by serving on the Director written notice and request for a hearing before the Board within fifteen (15) days of receipt of the Director's decision. Said hearing will be set, conducted, and notice given as set forth in the Rules promulgated by the Board under the provisions of Title 67, Chapter 52, Idaho Code. (7-1-93)

71. -- 999. (RESERVED)

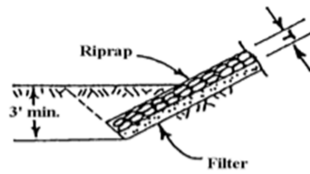
APPENDIX A

Table 1A

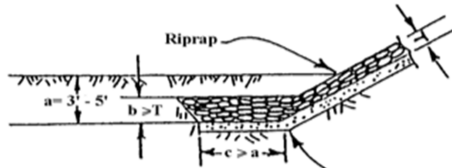
Riprap Gradation Using FWS Method

% Finer by Weight (Lbs.)	Minimum Size (Lbs.)	Maximum Size (Lbs.)
D ₁₀₀	1.33 X D ₇₅	2.0 X D ₇₅
D ₇₅	1.0 X D ₇₅	1.67 X D ₇₅
D ₅₀	0.67 X D ₇₅	1.17 X D ₇₅
D ₂₅	0.33 X D ₇₅	0.77 X D ₇₅
D ₀	None	0.33 X D ₇₅

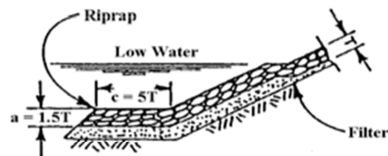
APPENDIX B



METHOD 1: This is most suited to areas where the toe is dry during construction.



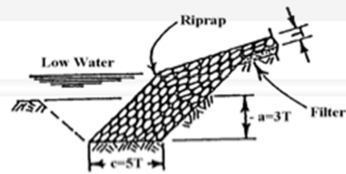
METHOD 2: Used when streambed is very wet or groundwater present makes using Method 1 impractical.



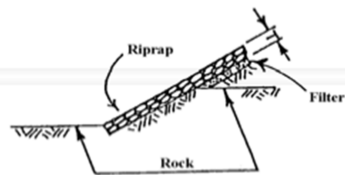
METHOD 3: Often used when toe is underwater during construction. Both Methods 2 and 3 utilize the idea that undermining will cause rock at toe blanket to settle into eroded area providing protection during scouring.

FIGURE 2. Acceptable toe protection

APPENDIX B (CONTINUED)



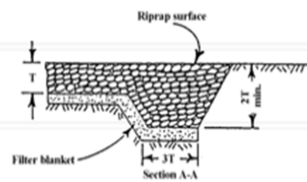
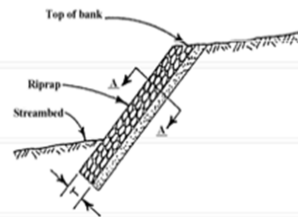
METHOD 4: Used underwater in areas with extremely bad streambed erosion conditions which make Method 3 unfeasible. This method may also be preferred where Method 3 would destroy fish spawning beds.



METHOD 5: When the streambed is non-erodible, no special provisions for toe protection are needed other than insuring that the riprap is well keyed to the rock.

FIGURE 2. Acceptable toe protection *continued*

APPENDIX C

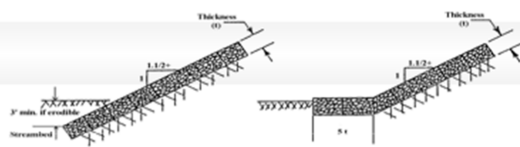


View shown above is cross section at end of riprap looking down along the slope toward streambed.

FIGURE 3. Protection against undermining

APPENDIX D

FIGURE 4. Mattress Construction



APPENDIX E

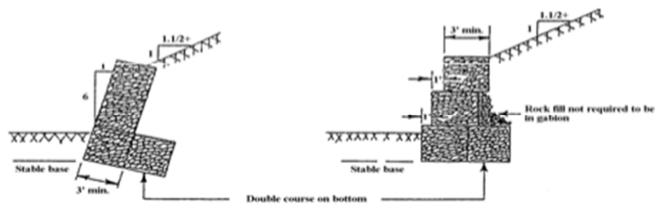


FIGURE 5. Retaining wall construction

APPENDIX F

FIGURE 6. Placement of mattress toe protection

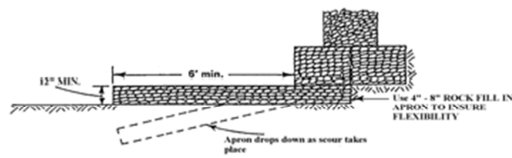
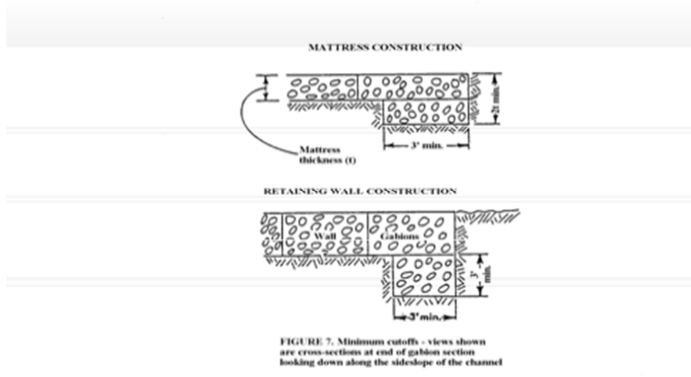
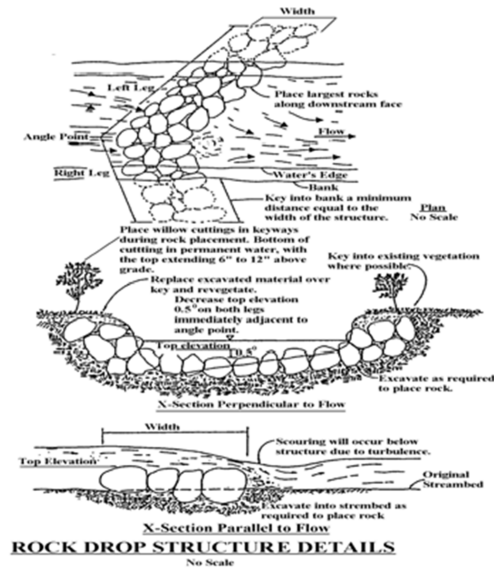


FIGURE 6. Placement of mattress toe protection

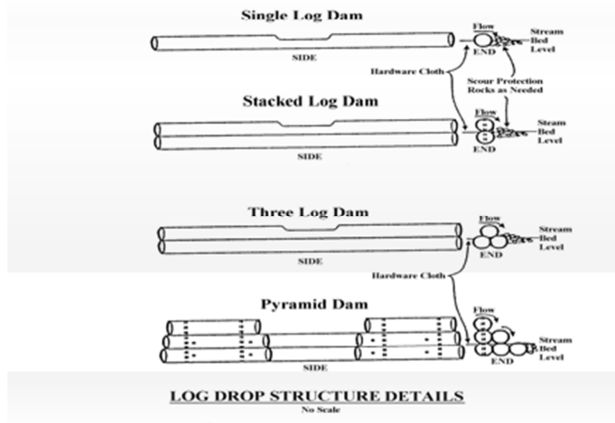
APPENDIX G



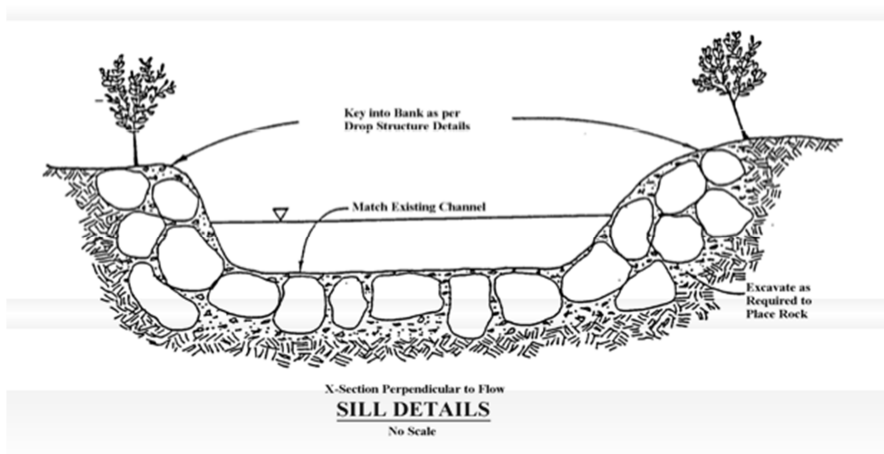
APPENDIX H



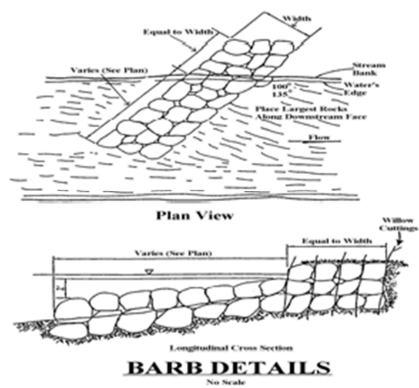
APPENDIX I



APPENDIX J



APPENDIX K



STREAM CHANNEL ALTERATIONS

Minimum Criteria for Dike or Levee Cross-Section		
Height to Design Water Surface	Minimum Top Width	Steepest Allowable Sideslope
Compacted mineral fill: 0–6' over 6'–12'	6' 8'	1 1/2:1 2:1
Silty, sandy, or organic fill: 0–6'	8'	2:1
Dumped, uncompacted fill: 0–6' over 6'–12'	6' 8'	2:1 2 1/2:1 (or 3:1 on stream side and 2:1 on land side)
When road on top: (turnaround areas also needed)	10'	
When fill unstable during rapid drawdown or severe wave action anticipated:		3:1 on stream side
Permeable soil of low plasticity used		3:1

APPENDIX L

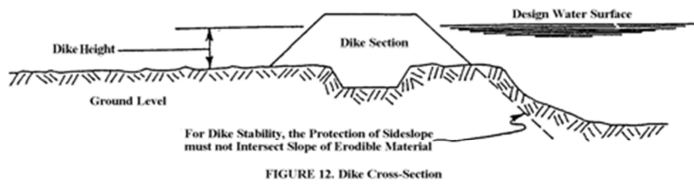


FIGURE 12. Dike Cross-Section

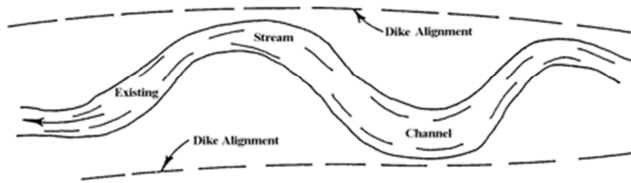


FIGURE 13. Desirable Dike Location

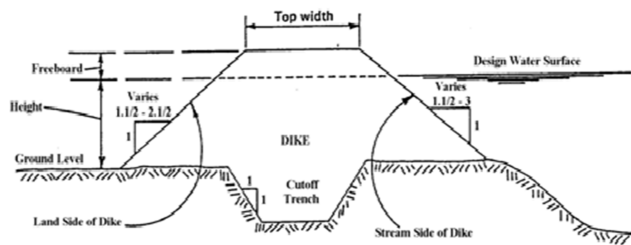


FIGURE 14. Minimum Criteria for Dike or Levee Cross-Section

FIGURE 15. Method of Locating Jetties



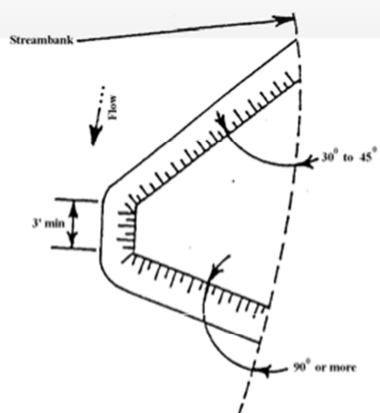


FIGURE 16. Jetty Height in Relation to Streamflow Depth

APPENDIX N

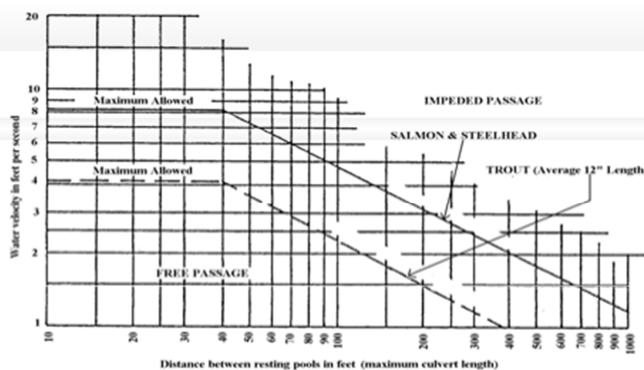


FIGURE 17. Swimming capability of migrating salmon and trout
(Alaskan Curve)

APPENDIX P

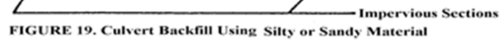
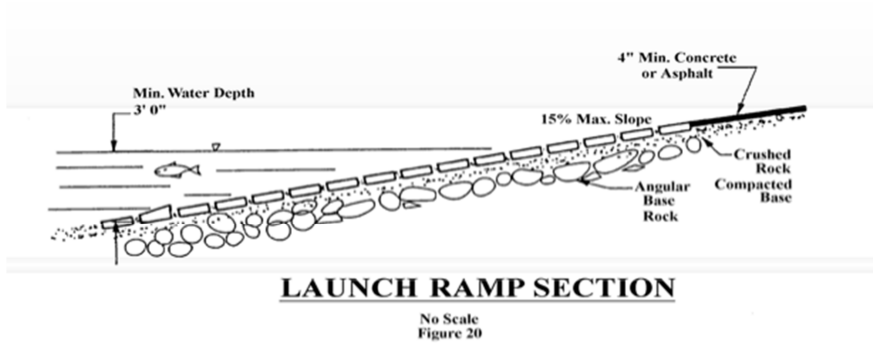
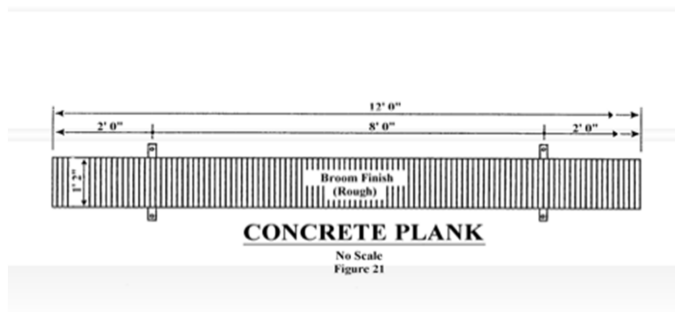


FIGURE 19. Culvert Backfill Using Silty or Sandy Material

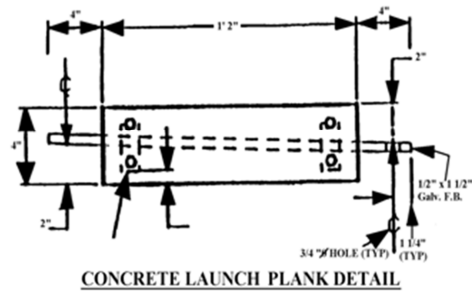
APPENDIX Q



APPENDIX R

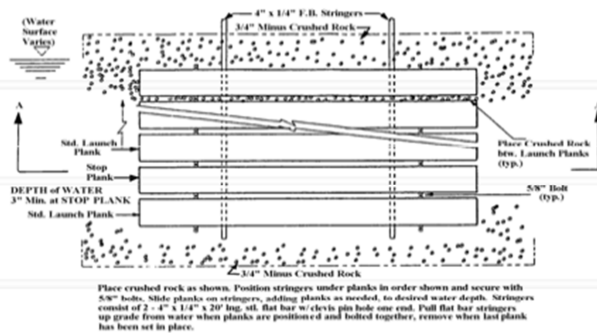


APPENDIX S



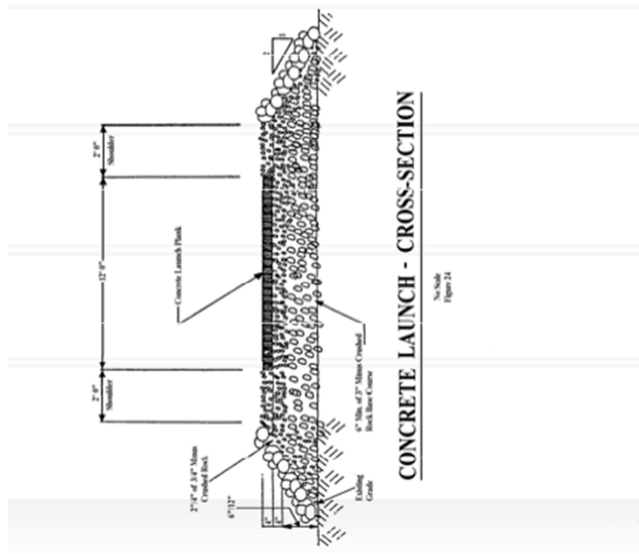
No Scale
Figure 22

APPENDIX T



CONCRETE LAUNCH-PLAN VIEW
Figure 23
No Scale

APPENDIX U



Subject Index

A

Appendix A, Riprap Gradation Using
FWS Method 19
Appendix B, (Continued), Toe
Protection 21
Appendix B, Toe Protection 20
Appendix C, Protection Against
Undermining 22
Appendix D, Mattress
Construction 22
Appendix E, Retaining Wall
Construction 23
Appendix F, Placement of Mattress Toe
Protection 23
Appendix G, Mattress & Retaining Wall
Construction 24
Appendix H, Rock Drop Structure
Details 24
Appendix I, Log Drop Structure
Details 25
Appendix J, Sill Details 26
Appendix K, Barb Details 26
Appendix L, Dike Location 28
~~Appendix M, Locating Jetties—29~~
Appendix N, Swimming Capability of
Migrating Salmon & Trout 30
Appendix O, Downstream Control
Structure 31
Appendix P, Culvert Backfill Using
Sandy or Silty Material 31
Appendix Q, Launch Ramp 32
Appendix R, Concrete Plank, Boat
Ramp 32
Appendix S, Concrete Launch Plank
Detail 33
Appendix T, Concrete Launch-Plan
View, Boat Launch 33
Appendix U, Concrete Launch-Cross-
Section 34
Application Review 4
Prior to Issuance of Permit 4
Proposed Alteration Which Does
Not Follow Minimum
Standards 4
Applications 3
Applicant Following Minimum
Standards 4
Joint Application Permit Form 3
Stream Channel Alteration
Permit 4
Submission of Copies 4
Approval 5
Conformance to Application 5
Permits Allowed Without
Review 5
Reinstatement of Expired
Permit 5

C

Concrete Plank Boat Launch
Ramps 18
Assembly of Planks 18
Concrete Planks 18
Construction of Boat Ramp 18
Construction of Concrete Plank
Boat Launch Ramps 18
Construction of Planks 18
Water Depth 18
Construction Procedures 6
Conformance to Procedures 6
Disposal of Removed Materials 7
Fill Material 7
Limitations on Construction
Period 7
Minimizing Disturbance of
Area 6
New Cut of Fill Slopes 7
Operation of Construction
Equipment 6
Temporary Structures 6
Culverts & Bridges 15
Areas to be Filled 16
Construction of Crossings 16
Culverts & Bridges 15
Ideal Gradient, Culverts &
Bridges 15
Installation of Pipe & Arch
Culvert 16
Location of Culverts &
Bridges 15
Multiple Openings 16
Size of Culvert or Bridge
Opening 15

D

Definitions, IDAPA 37.03.07 2
Alteration 2
Applicant 2
Base Flood Elevation 3
Board 2
Continuously Flowing Water 2
Department 2
Director 2
Drop Structures, Sills & Barbs 2
Mean High Water Mark 2
Non-Powered Sluice
Equipment 3
Plans 3
Repair 3
Stream Channel 3
~~Dikes & Levees—11~~
~~Compacted Mineral Soil—~~
~~13~~ ~~Cross-Section of Dike or~~
~~Levee—13~~
~~Dike or Levee-~~
~~Foundation~~

Areas—12

~~Existing Drains—12~~
~~Figure 13—12~~
~~Height of Dike or Levee—13-~~
~~Location of Dikes—12~~
~~Minimum Design Water Level~~
~~Surface—12~~
~~Pervious Foundation—12~~
~~Standards for Dikes—11~~

Drop Structures, Sills & Barbs 10
Barb or Partial Drop Structure 11
Drop Structures 11
Sills 11
Dumped Rock Riprap 7
Design Procedure 8
Extension of Riprap Area 8
Finished Surface 8
Methods Used for Determining
Gradation of Riprap 7
Minimum Thickness of Riprap 7
Placement of Riprap 7, 8
Riprap Protection 7
Rock Used for Riprap 7
Sideslopes of Riprap 7
Size & Gradation of Riprap 7
Toe Protection 8
Use of Filter Material 8

E

Emergency Waiver 5
Conformance to Conditions of
Waiver 5
Emergency Waiver 5
Verbal Waivers 5
Waiver of Provisions of Stream
Protection Act 5
Waivers Granted by Designated
Employees 5
Enforcement Of Act 5
Failure to Comply with Stream
Protection Act 5
Written Orders Issued by
Designated Employees of
Department 5
Exemptions 3
Cleaning, Maintenance,
Construction or Repair Work 3
Removal of Debris 3
Snake & Clearwater Rivers 3
Work on Existing or Proposed
Reservoir Projects 3

G

~~Gabions—9~~
~~Filter Blanket—10~~
~~Locating Ends of Gabion—10-~~
~~Mattress or Retaining Wall Gabion~~
~~Placements—10~~

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0.5", Space Before: 0.25 pt, Line spacing: Exactly 10 pt

Subject Index (Cont'd)

~~Placement of Gabions—9—~~
~~Riprap Protection—10—~~
~~Rock Used for Gabion Fill—10—~~
~~Single Unit Construction—10—~~
~~Toe Protection—9—~~
~~Wire Enclosed Gabion Riprap—9—~~

H

Hearings On Denied, Limited, Or
Conditioned Permit Or Other
Decisions Of The Director 19

J

~~Jetties—13—~~
~~Height of Jetty—14—~~
~~Pervious or Impervious Fills—14—~~
~~Use of Jetties—13—~~

M

Minimum Standards 6
Concrete Plank Boat Launch
Ramps 6
Construction Procedures 6
Culverts & Bridges 6
~~Dikes & Levees—6—~~
Drop Structures, Sills & Barbs 6
Dumped Rock Riprap 6
~~Gabions—6—~~
~~Jetties—6—~~
Piling 6
Pipe Crossings 6
Removal of Sand & Gravel
Deposits 6
Suction Dredges & Non-Powered
Sluice Equipment 6

P

Piling 17
Condition of Pilings 18
Prohibited Materials, Pilings 18
Replacement of Pilings 17
Standards for Pilings 17
Pipe Crossings 18
Cofferdam 18
Construction Methods 18
Depth of Line 18
Pipe Joints 18
Revegetation of Disturbed
Areas 18
Standards for Pipe Crossings 18

R

Removal Of Sand & Gravel
Deposits 16
Buffer Zone 17
Disturbing Natural Appearance of
Area 17

Surface 17
Removal of Sand & Gravel 17

S

~~Stream Channel Alterations, Minimum—~~
~~Criteria for Dike or Levee Cross—~~
~~Section—27—~~

Suction Dredges & Non-Powered Sluice
Equipment 17
Limitation of Mining Sites 17
Mechanized Equipment Prohibited
Below High Water Mark 17
Operating Permit 17
Operation of Dredge 17
Permit Required for Non-Powered
Operation -- More Than Five
People 17
Permit Required for Non-Powered
Operation -- More Than Thirty-
Three Percent of Stream
Width 17
Standards for Suction
Dredges 17

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Movement of Equipment 17
Removal Below Water