

SUMMARY COMMENT AND RESPONSE MEMO

RE: In the Matter of IDWR Rulemaking for IDAPA 37.03.05 and 37.03.60 - Summary of Rulemaking Stakeholder Comments and Responses to the Draft Mine Tailings Impoundment Structure Rules (Strawman v1.0) and the Draft Dam Safety Rules (Strawman v2.0)

Date: October 27, 2022

Comments from Tammi Thatcher's Written Comment Letter Dated August 19, 2022, and IDWR Responses

- 1) COMMENT: Ms. Thatcher commented on Page 4/36 that “there are no stated hazard classification criteria associated with the mine tailings rule nor does there appear to be an explicit requirement for the IDWR to perform hazard classification of MTISs”.
 - a. RESPONSE: IDWR has elected to postpone significant revision to existing MTIS rules, due to its decision to bifurcate the combined Dam Safety rules and MTIS rules late in the negotiated rulemaking process. Consequently, IDWR has only proposed minimal revisions to MTIS rules to comply with existing statute (Idaho Code) and to correct existing formatting, misspelling, grammar, or other perceived scrivener’s errors. IDWR notes that further response to questions, requests or comments regarding 2022 MTIS rules are necessarily limited to such edits as described.

- 2) COMMENT: Ms. Thatcher commented on page 5/36 & 6/36 that “the lack of financial assurance requirement for catastrophic failure of dams or MTISs continues to be true in Idaho”.
 - a. RESPONSE: IDWR understands that implementation of this type of a financial assurance must first be promulgated by legislative action and signed into law by the Governor as no statute currently exists to provide IDWR authority to unilaterally impose such a requirement during the rulemaking process; for example, Idaho Code 42.1714 that presently authorizes the agency to require surety for mine tailings dams.

- 3) COMMENT: Ms. Thatcher, in reference to Table 1a & 1b on page 7/36, comments that “where the draft rule states a range...the draft rule would apparently be met by the lowest specified value, and it would appear to be difficult for IDWR to enforce the higher value”.
 - a. RESPONSE: The referenced comment offers speculation as to the result of IDWR’s Dam Safety design review and approval process or enforcement actions. Due to the wide variation in regulated dams and order-of-magnitude variables as dam height, drainage area, reservoir capacity, and other important differences such as construction materials, location, and downstream hazard classification, IDWR offers a range of inflow design flood(s) of equally weighted requirement that may be needed to satisfy the intent of the legislature (I.C., § 42-1710); in other words, *all values within a stated range* are subject to consideration during the review process and none become preferential until the final design has been approved by the Director. For further response refer to IDWR’s comment response #17 (pg. 5) from its Summary Comment & Response Memo dated August 9, 2022 (“August 9 Response Memo”).

- 4) COMMENT: Ms. Thatcher comments on page 10/36 that proposed Rule 60.01 for existing dams should not be reducing the analyses requirements.
- a. RESPONSE: IDWR has not eliminated or otherwise reduced analyses requirements. IDWR instead offers that due to huge variation in existing dams, some dams have empirically demonstrated suitable design parameters; however, the Director *may require analyses for any dam* or any circumstance where flood routing, stability, or operational concerns have not been resolved to the satisfaction of Director regarding the intent of the legislature.
- 5) COMMENT: On page 11/36, Ms. Thatcher characterizes Proposed Rule 60 as “misguided arguments to reduce the inflow design flood design requirement for an existing dam”.
- a. RESPONSE: IDWR realizes that due to the huge variability between one dam and another (refer to response #3, above), some projects impound a relatively small volume of water compared against the peak flow rate or volume that is estimated for the contributing watershed. Several instances exist where the potential failure consequence results in an incrementally small addition(s) to the downstream flood inundation zone. The proposed revision allows for professional engineering discretion during design review due to the potentially great diversity of input variable(s). For further response refer to IDWR’s comment response #17 (pg. 5) from its August 9 Response Memo.
- 6) COMMENT: Ms. Thatcher requests on page 15/36 that IDWR offer the name(s) of technical source documents that are the basis for including incremental damage assessment in the design analysis available to the engineer of record.
- a. RESPONSE: IDWR offers that the topic of *Incremental Damage Assessment* is well researched and numerous technical articles can be identified using an internet search by that or similar name. Three example references include (1) Engineering Guidelines for the Evaluation of Hydropower Projects (1993), Federal Energy Regulatory Commission; (2), Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (2013), Federal Emergency Management Agency; and (3) Federal Guidelines for Dam Safety: Selecting and Accommodating Inflow Design Floods for Dams (2004), Federal Emergency Management Agency.
- 7) COMMENT: Also, on page 15/36 (paraphrased), Ms. Thatcher questions whether a rule that explicitly states public safety as an objective includes prolonged environmental damage or economic consequence, or instead is excluded from IDWR consideration during design review?
- a. RESPONSE: When assessing and assigning hazard classifications to new or existing dams, IDWR must consider the potential for environmental loss in its evaluation of economic losses. Refer to IDAPA 37.03.06 proposed Rule 25.01 Hazard Classification.
- 8) COMMENT: Ms. Thatcher questions on page 16/36 “why has rule 55 (proposed rule 60) for existing dams failed the Mackay Dam”?
- a. RESPONSE: IDWR will not respond to Mackay Dam specific comments and discussions in this forum because they are outside the scope of this rulemaking which applies generally to all dams and not to individual dams, proposed or existing.
- 9) COMMENT: Ms. Thatcher offers concerns on pages 17/36 – 20/36 and 27/36 – 36/36 regarding the proper selection of seismic loading for new and existing dams and mine tailings structures.

- a. RESPONSE: Regarding mine tailings impoundment structures, refer to response #1 above.

On page 18/36 – 19/36 Ms. Thatcher notes that the proposed Rule 35.12.d.ii allows that “seismic analysis may be waived” based on determination that the “consequence of failure” is demonstrated to be sufficiently low but that “there is no stated association to Rule 25, Hazard Classification, the identified hazard classification for the structure, or to any specific criteria for evaluating the consequence of failure.” In response, IDWR proposes that Large and High hazard dams shall use seismic analyses that reference a return interval of 2 percent (2%) probability of exceedance in fifty (50) years, or greater interval, as determined by the Director.

Ms. Thatcher comments, “IDWR needs to address whether the maximum value obtained from a probabilistic evaluation based on existing USGS Seismic Hazard maps would result in higher seismic loading than the maximum credible earthquake.” In response IDWR notes that estimated seismic loading at a project site can be greater when calculated from a probabilistic analysis of regional seismic activity than from a deterministic analysis that relies primarily on the distance to a known fault. The intent of the proposed rule that addresses seismic review of large size high hazard dams is not to lower the design threshold, but to advise the design engineer of the potential need to compare seismic loads attributed to both, and to select the greater of the two for input into the stability analysis submitted for final design approval.

On page 19/36 Ms. Thatcher also comments, “[t]he requirement for existing dams in Rule 60 is more stringent than [sic] for new dams/embankments in Rule 50.” IDWR disagrees, its intent is to establish the same seismic analysis requirements for new or existing large high hazards dams. For other dam classes, IDWR believes the standards will generally be more stringent for new dams than existing dams, however, Rule 60.1 gives the director authority to require any analyses from Rule 35, including seismic analysis.

Finally, on page 19/36 Ms. Thatcher comments, “stakeholders concerned by the stringency of design standards need to have assurance as to what design criteria the IDWR is even aiming for, even [sic] for new structures or for modifications to structures.” Regarding seismic analysis of dams, IDWR feels the proposed rules are sufficiently detailed to guide design engineers in their design of dams and IDWR in its review of proposed designs.

For additional response on this topic, refer to IDWR’s comment response #17 (pg. 8) from its August 9 Response Memo.

- 10) COMMENT: Ms. Thatcher comments generally that IDWR should better clarify the definition “Hazard Classification.” She further comments that its proposed use regarding recommended design criteria is inappropriate and/or should be restated for improved comprehension. Her comments on page 20/36 are followed by a question asking, “what return periods have been allowed by IDWR for existing dams?”.

- a. RESPONSE: IDWR recognizes that the term “hazard” may be defined to represent more than a single meaning; for example, a “seismic hazard” is not synonymous with “hazard classification” that is applied to water storage dams. Likewise, the term “risk” should

not be used interchangeably with “hazard”. IDWR believes its proposed use of this term in the proposed rule is adequately defined. IDWR schedules return dam inspection(s) at 2-, 4- and 5-year frequencies, corresponding generally to Low, Significant, and High hazard classification respectively; no revision to the inspection interval is contemplated at this time.

11) COMMENT: Ms. Thatcher raises questions on page 28 /36 that appear to ask why IDWR has lengthened the title of some rules from “Safety of Dams” to the proposed title(s) that would read “Safety of Dams and Reservoirs”.

- a. RESPONSE: IDWR agrees that the inclusion of “reservoir” in the title of one or more proposed rule(s) is not consistent with the name recognized by IDAPA for the referenced suite of rules addressing Dam Safety generally. However, IDWR does not consider this discrepancy consequential. Regardless of these semantics, there are two dimensional aspects that IDWR must consider when determining regulated status: *dam height and reservoir storage*. Therefore, IDWR will proceed with the revision as written.

12) COMMENT: Ms. Thatcher identifies on page 28/36 & 29/36 the following instances of perceived miscellaneous errors or problems, and their suggested remedy(s):

- i. Rule 10.26 – change “greater” to “higher” for consistency
 - ii. Rule 25.2 – correct misspelling of “hazard”
 - iii. Rule 10.2 – correct capitalized text regarding the term “hazard” for consistency
 - iv. Rule 35.14.c – change the sentence to be read gender neutral, and remove the word “placed” with substitute language
 - v. Rule 45 – confirm the capitalization of hazard for consistency throughout
 - vi. Rule 50.04 – disagreement with the use of the term “however”
 - vii. Rule 50.13.a – disagreement with the use of the term “asbuilt”
 - viii. Rule 60.01.c – apparent formatting error that skips list-level “iii”
 - ix. Rule 60.02.c – incorrect reference to rule 50.03a, 50.03b, and 50.03c
 - x. Rule 65 – “Dams Storing Tailings and Water” appear to be regulated by rule differently from Rule 50 (IDAPA 37.03.05) “Dams Storing Tailings and Water”
 - xi. Rule 65.01 – request for explanation why Rule 50 was removed from the other referenced rules (i.e., rule 35, 45, 60).
- a. RESPONSE: IDWR acknowledges the items identified by Ms. Thatcher and offers a brief reply addressing each on the above list:
 - i. Rule 10.26 – noted for editing in subsequent draft(s).
 - ii. Rule 25.2 – noted for editing in subsequent draft(s).
 - iii. Rule 10.2 – noted for editing in subsequent draft(s).
 - iv. Rule 35.14.c – *Rule 35.13* is noted for editing in subsequent draft(s). Refer to response #3 above regarding substitution of the term “placed.”
 - v. Rule 45 – noted for editing in subsequent draft(s).
 - vi. Rule 50.04 – no change; leave as proposed.
 - vii. Rule 50.13.a – no change; leave as proposed.
 - viii. Rule 60.02.c – noted for editing in subsequent draft(s).
 - ix. Rule 60.02.c – noted for editing in subsequent draft(s).
 - x. Rule 65 – noted for editing in subsequent draft(s); however, limited as described in response #3 above.
 - xi. Rule 65.01 – noted for editing in subsequent draft(s).

- 13) COMMENT: Ms. Thatcher offers on page 31/36 suggested changes to formatting and organization of variously listed Dam Safety rules, and on page 32/36 thru 36/36 other revision per identified tables referenced by number in her comments.
- a. RESPONSE: IDWR is reviewing the selection of seismic design parameters for revision in subsequent draft(s). Other revision to text in one or more of the Ms. Thatcher's tables which do not have direct correlation to table(s) or figure(s) in the proposed draft rule(s) also is being contemplated and may be edited in subsequent draft(s).
- 14) COMMENT: Ms. Thatcher comments on page 22/36 (paraphrased) that the wording of proposed Rule 25.2, results in "low hazard" dams not being bound by rules 35, 45, 50, 55, and 60.
- a. RESPONSE: IDWR will reword Rule 25.2 to include all dams and thus avoid the misperception that low hazard dam(s) are being excluded from rule.
- 15) COMMENT: Ms. Thatcher comments on page 22/36 (paraphrased) that the omission of a reference to the term "environment" in Rule 10.22, sets up a possible conflict between proposed rules 10.22 and 25.1 regarding the consideration of environmental impacts from a dam failure when evaluating a dam's hazard class.
- a. RESPONSE: IDWR is considering revising the definition for "hazard" in Rule 10.22 to include reference to environmental impacts in a subsequent draft.
- 16) COMMENT: Ms. Thatcher comments on page 22/36 "the hazard classification table in Rule 25 should have the consideration of environmental damage under its own heading in the hazard classification table... ." Ms. Thatcher makes related comments on pages 26/36 and 27/36.
- a. RESPONSE: IDWR disagrees that an additional column and heading are needed. Such an addition would result in a larger word count but no additional clarity and as such is contrary to the spirit of the zero-based regulation rulemaking initiative.
- 17) COMMENT: Ms. Thatcher comments on pages 22/36 and 23/36 (paraphrased) that the table in Rule 25.1 incorrectly omits reference to the "environment" for the "low hazard" dam category. Ms. Thatcher makes similar related comments on pages 26/36 and 27/36.
- a. RESPONSE: IDWR is considering reference language to the environment for low hazard class dams in the Rule 25 table in a subsequent draft.
- 18) COMMENT: Ms. Thatcher comments numerous times regarding hazard classification as related to mine tailings impoundment structures. Refer to pages 22/36 – 30/36.
- a. RESPONSE: For comment regarding mine tailings impoundment structures refer to response #1 above.
- 19) COMMENT: Ms. Thatcher comments on page 23/36, "the regulations should explicitly address the potential cascade of dam...failures should the failure of one structure case the failure of another."
- a. RESPONSE: IDWR notes that failure consequence (i.e., hazard evaluation) considers all impacts to downstream life and property resulting from a potential dam failure. Because the definition is comprehensive, IDWR does not agree that unique hazard language is needed for existing dams and reservoirs that may be located downstream.
- 20) COMMENT: Ms. Thatcher comments on page 22/36 – 24/36 (paraphrased) that the definition of "hazard" in proposed Rule 10.22 could be improved by referencing the hazard evaluation criteria set forth in proposed Rule 25.1.

- a. RESPONSE: IDWR will modify the definition of the term “hazard” to reference the evaluation criteria set forth in proposed ruled 25.1, i.e., “downstream development,” “estimated loss of life,” and “economic losses.”

21) COMMENT: Ms. Thatcher comments on page 27/36, “[t]here are no clear criteria between significant hazard and high hazard [classifications] in the IDWR’s Rule 25... .”

- a. RESPONSE: IDWR disagrees with this comment. The proposed Rule 25 distinguishes between significant and high hazard classifications across three criteria, “downstream development,” “estimated loss of life,” and “economic losses.”

Comments from the Idaho Conservation League’s and the Save the South Fork Salmon’s Written Comment Letter Dated August 26, 2022, and IDWR Responses

22) COMMENT: On page 2/4, the Idaho Conservation League, and the Save the South Fork Salmon (“ICL”) comment that IDWR has still given no specific analysis, justification, support, or explanation for how these changes (proposed draft rules) to make the rule less restrictive will still accomplish the benefits and ultimate goals of the existing rules.

- a. RESPONSE: IDWR has noted previously that the dam safety program attempts not to prescribe to Idaho Licensed professional engineers (“PE”) how best to design a dam. Although IDWR inspects nearly a hundred dams annually and reviews designs for several others, staff do not operate, repair, or prepare designs for any dam. The design of dams and other hydraulic structures evolves as data is collected worldwide, and forensic-type analysis of dam failures is reported. Additionally, the rapid development of computer software programs that allow the PE to investigate multiple iterations of proposed design configurations often results in a preferred alternative in terms of cost, safety and reliability that can differ from prescription. These are the reasons for IDWR to proceed with some of the rule revisions that serve to reduce or eliminate “one size fits all” mandates for the wide of structures that fit the category of a regulated dam, as described in Idaho Code.

In lieu of overly prescriptive administrative rules dictating specific design criteria that are hard to promulgate and modify when out of date, IDWR’s preference is to offer instruction to the PE regarding the general design limits or range of input values with the stated objective of ensuring the suitability of the design will meet or exceed its intended purpose and satisfy public safety concerns.

IDWR has prepared a document that attempts to better illustrate the existing rule compared against the proposed draft (version 2). The document lists each rule separately, to include both the “draft” formatted in **BLUE ink**, and the “existing IDAPA” version in **Black ink** which has been cut/pasted directly from the published IDAPA original (7-93). Each rule has its own numbered pages; for example, Dam Safety Rule 50 occupies eleven consecutively numbered pages (1-11). Included also, on the last page(s) of each comparison, is a **BLUE** bordered text box that attempts to briefly explain the more notable changes, and the objective/justification for the revision(s). This document represents a snapshot of proposed Dam Safety draft rule(s) version 2. It corresponds to the edits that were made in August 2022 and presented formally at the public hearing on 8/19/2022. As such, this version does not include any of the changes that have occurred since. There will be some additional edits to this document when IDWR next posts/publishes future named draft(s).

IDWR has also prepared and published to its webpage a “track changes” document that uses strikethrough and underscore formatting to illustrate changes between the existing rule and the published proposed rule. On its webpage, IDWR has titled the document “IDAPA 37.03.06 Safety of Dams Existing Rule vs. Proposed Rule Track Changes Document” and it is dated October 24, 2022.

- 23) COMMENT: ICL comments also on page 2/4 & 3/4 (paraphrased) that revision to the mine tailings impoundment structure (MTIS) rules increases the frequency of required site inspection (extends the time between inspections) and issuance of Certificates of Approval, expressing further that the currently proposed five-year inspection interval and corresponding surety review may create an unacceptable risk to public safety, and must not be implemented as written.
- b. RESPONSE: For comment regarding mine tailings impoundment structures refer to response #1 above.
- 24) COMMENT: ICL comments that dam safety rule 25.02 is unclear as the language seems to imply, by not referencing other rules, that Low Hazard dams need not comply with other stated rules listed for Significant and High Hazard dam.
- c. RESPONSE: For reply, refer to response #14 above.
- 25) COMMENT: ICL notes that rule 35.07 eliminates three previously specified construction milestones, and instead is left to the Director’s discretion.
- d. RESPONSE: IDWR acknowledges the comment, and notes that language in the existing rule is too prescriptive and does not provide any opportunity for discretion as to the importance or necessity of IDWR staff making multiple site visits in relationship to such design variables as dam height, reservoir storage volume, downstream failure consequence, material properties, dam location, and others. Importantly, the rule does not limit the timing or frequency that inspections can occur during construction.
- 26) COMMENT: ICL comments that rule 35.12.d.i replaces previously specific requirements for seismic evaluation with one requirement to be determined based on the discretion of the Director.
- e. RESPONSE: IDWR acknowledges this and other similar comments but notes in response that generally the seismic analysis requirements detailed in the existing rule are out of date with contemporary engineering practices. As a result, IDWR has updated the seismic stability analyses requirements in rule to reflect current engineering practice, and to properly emphasize the role of the design engineer as the responsible charge over the design and construction of individual projects. As proposed, the rule allows flexibility by the Director to require greater scrutiny and design analysis when justified by a specific project. IDWR’s notes will consider changes to Proposed Rule 50.1.d in response to this and other comments to clarify the seismic stability analysis requirements.
- 27) COMMENT: ICL comments that rule 45 makes a distinction between Emergency Action Plans (EAP) and Operation Plans (OP), and that the proposed revision does not appear to require an OP for Significant and High Hazard dams.
- f. RESPONSE: IDWR acknowledges the distinction between EAP and OP and notes that the proposed revision is intentional. While an OP may be important to the dam owner, it is

only the EAP that must be shared with first responders, emergency personnel, certain downstream individuals, and other agencies, regulators, or other named plan-holders for benefit of public safety.

28) COMMENT: ICL comments that rule 50.1 increases the required maximum downstream slope of a dam from 2H:1V to 2.5H:1V.

g. RESPONSE: IDWR notes that proposed language in rule 50.1 is more conservative than the existing rule because it flattens the maximum allowable slope angle, resulting in a less steep slope. IDWR does not plan to make further edits to this rule in subsequent draft(s).

29) COMMENT: ICL comments that 50.2 requires a minimum crest width of twelve (12 feet instead of being governed by a specific formula based on dam height.

h. RESPONSE: IDWR notes that the specified minimum width is needed for equipment/vehicle access, and that the designed stability of the dam slope(s) or erosion resistance to overtopping should not be dependent on crest width. IDWR does not plan to make further edits to this rule in subsequent draft(s).

30) COMMENT: ICL comments on page 4/4 that the proposed cutoff wall trench design criteria in rule 50.3c are now less specified as compared to the existing rule.

i. RESPONSE: IDWR acknowledges this observation and notes that change is intentional. IDWR is considering editing the rule in a subsequent draft to include language at the end of the sentence that will read "...when required or otherwise employed" or similar.

31) COMMENT: ICL comments that rule 50.4 offers fewer specific requirements for design and construction of core material(s) as compared to the existing rule.

j. RESPONSE: IDWR acknowledges this observation and notes that this change is intentional. As described in detail in other responses, IDWR has removed overly prescriptive design requirements from the rule. Greater deference is assigned to the professional engineer responsible for design of the project and supervising its construction. IDWR notes however that it did preserve key technical requirements to ensure proper materials are used to design and construct the core. IDWR does not plan to make further edits to this rule in subsequent draft(s).

32) COMMENT: ICL comments that calculation of wave height in rule 50.6 is now less specific.

k. RESPONSE: IDWR acknowledges this observation and notes the change is intentional. As written the existing rule is overly prescriptive; further, the formula may not correctly provide good results for all type of dams or impounded reservoirs. IDWR does not plan to make further edits to this rule in subsequent draft(s).

33) COMMENT: ICL comments that language in rule 50.7 that address proposed outlet design criteria is now less specific than existing requirements.

l. RESPONSE: IDWR acknowledges this observation and notes that revision is needed to eliminate previously described design and construction techniques which have been identified to be a cause for some dam failures, and to instead implement criteria more in keeping with present professional engineering practice. IDWR does not plan to make further edits to this rule in subsequent draft(s).

34) COMMENT: ICL comments that rule 50.11 is less specific about the required release capacity of outlet conduit(s).

m. RESPONSE: IDWR acknowledges the observation and notes that subsequent editing of rule 50.11 may include a provision that considers the net difference between the release capacity of the dam versus the flow rate attributed to the inflow design flood (IDF) conditional to an accounting for such items as diversion channels, reservoir routing, and reservoir detention and or retention calculations. IDWR notes that a prescriptive instruction that would require a single dam component to satisfy the flow capacity equal to the IDF is unreasonable in the presence of other existing component(s).

35) COMMENT: ICL includes on page 4/4 additional comment noting that IDWR has given no specific analysis, justification, support, or explanation for how these less restrictive rule changes are justified and will not threaten public safety, property, and the environment.

n. RESPONSE:

IDWR has prepared numerous documents responsive to this comment, which it has posted to its Mine Tailings Impoundment Structures and Dam Safety Rulemaking website ([link](#)). Responsive documents include:

- The Preliminary Draft Rule (Strawman v1.0);
- A summary document titled Comparison of Existing IDAPA 37.03.05 and Existing IDAPA 37.03.06 Rules dated May 3, 2022, which compares the existing rules section by section;
- A summary comparison spreadsheet titled IDAPA 37.03.05 and 37.03.06 Rule Comparison Matrix dated May 23, 2022;
- Matrix of IDWR Regulated Dams and Reservoirs dated January 2014;
- Matrix of IDWR Regulated Dams and Reservoirs dated March 2018;
- EO 2020-01 Recommendation Memo dated August 1, 2022;
- Summary Comment and Response Memo dated August 1, 2022;
- Draft Mine Tailings Impoundment Structures Rule (strawman v1.0 Marked-Up draft) dated August 9, 2022;
- Draft Dam Safety Rules (strawman v2.0, clean draft and marked up draft) dated August 9, 2022;
- IDAPA 37.03.06 Safety of Dams Existing Rule vs. Proposed Rule Tack Changes Document dated October 24, 2022; and
- IDWR drafting work products prepared in development of the Strawman v1.0 and subsequent drafts.

In addition to the above referenced documents, IDWR will have hosted four meeting where stakeholders were able to ask specific questions pertaining to “specific analysis, justification, support, or explanation for how [the] less restrictive rule changes are justified and will not threaten public safety, property, and the environment.”

IDWR is appreciative of all comments but notes it has met all statutory obligations associated with this rulemaking effort.

Comments from the Idaho Mining Association’s Written Comment Letter Dated August 26, 2022, and IDWR Responses

- 36) COMMENT: The Idaho Mining Association (“IMA”) comments on page 1/3 that IDWR’s decision to bifurcate the Dam Safety and Mine Tailings Impoundment rules is fully supported by the IMA.
- a. RESPONSE: IDWR has elected to postpone significant revision to existing Mine Tailings Impoundment Structures (MTIS) rules due to written request(s) that these two (2) sets of rules (IDAPA 37-03-05 and 37-03-06) remain separate from one another.

Consequently, due to time constraints which now limit staff time this calendar year for a comprehensive review and revision for both referenced rules, the MTIS rules currently are being adjusted only to comply with existing statute (Idaho Code) and to correct existing formatting, misspelling, grammar, or other perceived scrivener’s errors. IDWR will instead address additional revisions to the MTIS rules in future rulemakings. IDWR notes that further response to questions, requests, or comments regarding 2022 MTIS rules are necessarily limited to such edits as described.

- 37) COMMENT: IMA comments that it is appreciative of IDWR’s effort “to sync the rule with Idaho’s Mined Land Reclamation Act”.
- a. RESPONSE: IDWR acknowledges IMA statement that appropriate and adequate financial assurances are essential to protect industry and Idaho taxpayers, noting that revision to existing rule 37.03.05 is postponed until a future rulemaking (see Response 1, above).

- 38) COMMENT: IMA comments on the bottom of page 1/3 that tracking the rule changes from the current Dam Safety rule to the proposed draft(s) is difficult and offers that “we would benefit from a document that tracks current standard to the draft proposal”.
- a. RESPONSE: IDWR has prepared a document that attempts to better illustrate the existing rule compared against the proposed draft (version 2). The document lists each rule separately, to include both the “draft” formatted in **BLUE ink**, and the “existing IDAPA” version in **Black ink** which has been cut/pasted directly from the published IDAPA original (7-93). Each rule has its own numbered pages; for example, Dam Safety Rule 50 occupies eleven consecutively numbered pages (1-11). Included also, on the last page(s) of each comparison, is a **BLUE** bordered text box that attempts to briefly explain the more notable changes, and the objective/justification for the revision(s). This document represents a snapshot of proposed Dam Safety draft rule(s) version 2. It corresponds to the edits that were made in August 2022 and presented formally at the public hearing on 8/19/2022. As such, this version does not include any of the changes that have occurred since. There will be some additional edits to this document when IDWR next posts/publishes future named draft(s).

IDWR has also prepared and published to its webpage a “track changes” document that uses strikethrough and underscore formatting to illustrate changes between the existing rule and the published proposed rule. On its webpage, IDWR has titled the document “IDAPA 37.03.06 Safety of Dams Existing Rule vs. Proposed Rule Track Changes Document” and it is dated October 24, 2022.

- 39) COMMENT: IMA suggests adding the words “the study of” to the definition for hydraulics in Rule 10.23.
- a. RESPONSE: IDWR accepts and has noted for editing in subsequent draft(s).

- 40) COMMENT: IMA offers that Rule 10.28 definition is overly specific to lakes, and requests “expanding the definition and threshold heights to work for both lake and river levees”.
- a. RESPONSE: IDWR is reluctant to change the definition described herein due to it also being defined in statute (Idaho Code). One objective of IDWR’s revision to rule is to help ensure the rules are compatible with existing statute; therefore, IDWR will not include this suggested revision to the definition of “levee” in subsequent draft(s).
- 41) COMMENT: IMA notes that Rule 10.37 definition for small dams should also state that “dams smaller than the lower range in the size classification table are unregulated” or that “a definition could be added for an unregulated dam”.
- a. RESPONSE: IDWR does not agree that additional definition is needed to properly identify a non-regulated dam. This determination is based on language in statute that *any hydraulic structure* exclusive its size or physical condition may be subject to regulation by IDWR Dam Safety for benefit of public safety based on the severity of failure consequence (i.e., hazard), however unlikely the probability of occurrence (I.C. §§ 42-1709 & 42.1711).
- 42) COMMENT: IMA comments that proposed rule 25.2 is unclear whether a tailings impoundment regulated under IDAPA 37.03.06 must likewise meet all requirements of IDAPA 37.03.05 (Dam Safety Rules).
- a. RESPONSE: IDWR agrees that the language, as written, is unclear. The intent of the rule is to assign hazard classification(s) to all structures the failure of which will damage downstream life or property; to include both mine tailings impoundments and water storage dams. IDWR will consider edits in a subsequent draft to remove this potential for misinterpretation or misunderstanding.
- 43) COMMENT: IMA comments that the final sentence of Rule 45 would be better expressed if the term “damage” were replaced with “endanger”.
- a. RESPONSE: IDWR notes that the term “damage” often is applied to material items (things), while “endanger” conveys more of a life-safety situation. Due to the word “damage” being used both as a noun and a verb, it can have multiple definitions some of which include “injury”, “harm”, or “action causing physical pain and suffering”. Given this discussion, IDWR will leave the word “danger” in place and not revised the rule to use “endanger.”
- 44) COMMENT: IMA comments that revision of embankment slope(s) expressed in Rule 50.1 will result in additional and largely unnecessary analysis of certain small, low-risk impoundments.
- a. RESPONSE: IDWR considers the proposed rule recommending a 2.5H:1V downstream embankment slope to be a reasonable starting point in the design of an earthen dam, noting that Rule 50.0 allows “exclusion from these established criteria ...on a case-by-case basis during design review”. IDWR offers that the design engineer, acting as an agent of dam owner, is likewise responsible for the adequacy of said design and construction procedures, and that good cause for departure from prescribed minimum(s) must be demonstrated (I.C. § 42-1712).
- 45) COMMENT: IMA comments on page 2/3 that the seismic section in rule 50.1.d appears to have been completely overhauled. IMA provides the following suggestions (paraphrased) directed at this section:

- i. A dynamic deformation analysis is required under more circumstances than before based on language of 50.01.d.i that states a pseudo-static analysis is acceptable for non-liquifiable soils, and that a dynamic response method is required for embankment dams and foundations composed of potentially liquifiable soils. IMA suggests adding clarifying language allowing for alternative analysis approaches.
 - ii. IMA suggests that landslide evaluation requirements be separated from the required seismic report contents of rule 50.1.d.iii, and the word “geologic” be removed in recognition of the fact that seismic hazard analysis and geohazard evaluations are usually the purview of different specialty consultants.
 - iii. IMA makes note of rule 50.1.d.iv, and comments that “while the USGS maps should always be consulted, it is not necessary to carry the information contained therein forward to the stability analysis if better site-specific estimates of ground acceleration are available”; therefore, the rule should allow “flexibility for more detailed site-specific analyses.”
- a. RESPONSE: IDWR offers the following reply to each of the three topics (above):
- i. IDWR does not agree that additional language be included to allow for alternative analyses. Embankment dams should not be built with or on potentially liquifiable soils unless the design engineer has performed a comprehensive stability analysis that includes an estimate of crest and/or slope deformation resulting from the applied seismic load(s). As previously noted, Rule 50.0 allows sufficient opportunity for the design engineer to offer, and for IDWR to contemplate, alternative analysis approaches during design review as may be appropriate.
 - ii. IDWR does not agree that the topic of landslides be removed from the seismic report requirements, nor do we believe that ignoring a report describing the geology of the damsite is prudent for large and high hazard dams. The design engineer may combine report(s) or include one as a chapter or appendix to another variously named evaluation report; however, information relevant to both topics should be addressed somewhere in the final design submitted for approval prior to commencing construction.
 - iii. IDWR revised the existing rule to allow the design engineer the option of obtaining estimated load(s) from existing USGS seismic maps. Such maps are available for large areas of the state and relatively easy to acquire. For those instances where the proposed seismic loading regime differs from published USGS sources, the design engineer must demonstrate why IDWR should accept the (presumed) lower imparted seismic load(s) in the final design. IDWR does not agree that modification of the rule, as proposed, is needed.

46) COMMENT: IMA comments that cutoff trenches, walls, or other such features are not required on certain dam types and propose that IDWR adjust Rule 50.3 to instead read “when employed, cutoff trenches or walls...”.

- a. RESPONSE: IDWR agrees that the reference rule can be edited; however, with the disclaimer occurring on the end of the sentence instead of being placed at its beginning. IDWR will edit a subsequent draft accordingly.

- 47) COMMENT: IMA comments that rule 50.5.b be modified to remove the prescriptive language that requires ½” to ¾” maximum size rock surrounding drainpipes, and to instead leave the material gradation to the design engineer rather than prescribed in rule.
- a. RESPONSE: IDWR agrees that prescriptive language for most design components should be avoided when possible. The intent of this language is to offer a minimum standard of care, as IDWR experience has been that some engineers do not address drainage design and construction with the same attention to detail that is afforded other dam components. As a result of its historical experiences in this matter, IDWR will not change the rule as proposed.
- 48) COMMENT: IMA comments rule 50.8 regarding concrete encasement of outlet conduits and whether the Department intends this change.
- a. RESPONSE: IDWR is cognizant of the change noting that the language in the proposed revision is intentional.
- 49) COMMENT: IMA offers discussion on the topic of release capacity contained in Rule 50.11.c, noting that language in the proposed rule does not include provision for discharge “credits” to be applied against the IDF, using examples such as diversion channels and reservoir routing or reservoir storage calculation.
- a. RESPONSE: IDWR agrees that rule 50.11.c should be adjusted to include a provision that considers the net difference between the release capacity of the dam vs. the flow rate attributed to the IDF that *could be affected* by diversion channels, reservoir routing, and reservoir detention and/or retention. In response, IDWR will edit a subsequent draft accordingly.
- 50) COMMENT: IMA suggests that rule 60.1.a be modified to include language “at the onset of inflow” to clarify the intended analysis.
- a. RESPONSE: IDWR does not agree that additional modification is necessary to impart reader comprehension; particularly due to editing of subsequent draft(s) of rule 50.11.c (response 14 above).
- 51) COMMENT: IMA comments that in rule 65.1, IDWR apparently has reduced the Department’s authority to waive certain sections/number of rules previously attributed to both water storage dams and mine tailings impoundments that store water more than fifty acre-feet. IMA states further that the Department should include provision in the rule to “waive any section of the greater dam safety rules (IDAPA 37.03.06) that would be inapplicable or inappropriate for a given facility”.
- a. IDWR agrees that including in the dam safety rules (IDAPA 37.03.06) a reference to mine tailings impoundment structures (MTIS) rules (IDAPA 37.03.05) or vice-versa may contribute unnecessarily to reduced reader comprehension or misinterpretation of the rule. IDWR will edit rule 65.1 in a subsequent draft accordingly.