

# ADMINISTRATIVE MEMORANDUMS INDEX

As of January 21, 2016

*Please note that these Administrative Memorandums will include many memos that have become outdated due to changes in rules, statutes or current Department policy. Some memos have been amended or superseded by others, and some may no longer be applicable.*

## DAM SAFETY

No.	Title	Signed	Amended or Superseded
1.	<a href="#"><u>Dam Safety Program Procedures</u></a>	7-25-75	1-7-05 7-1-81 4-14-10
2.	<a href="#"><u>Review of Apps. for Permit on a State Protected River Reach or within a Minimum Stream Flow Reach</u></a>	8-16-99	

**ADMINISTRATIVE MEMORANDUM**  
**Dam Safety No. 1**

DATE: April 14, 2010  
TO: Water Management Division Staff  
FROM: Jeff Peppersack   
SUBJECT: Dam Safety Program Procedures for Water Storage Dams and Reservoirs

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The purpose of this memorandum is to provide policy guidance for managing IDWR's dam safety program while maintaining both the spirit and letter of the Idaho Code and other applicable law. Further it attempts to address some of the inconsistencies, conflicts, and ambiguities created by various internal procedures implemented over the years. This memorandum supersedes the following dam safety program and administrative procedures, listed in chronologic order:

Date	Issued by	Subject
3/31/2004	Mike Stubblefield	Reevaluation of Downstream Hazards
1/7/2005	Glen Saxton	Dam Safety Program Procedures
9/1/2005	Guy Paul	Policy for Accepting Applications for Small Dams
1/9/2007	Mike Stubblefield	Removal of Certain 5-Year Dams from Inventory
1/10/2007	Mike Stubblefield	2006 Dam Inspections
2/16/2007	Sonny Hornbaker	Emergency Procedures

**I. Supervision, Technical Assistance, and Training**

- a. The Dam Safety Section, under the direction of the Manager (Section Manager) will provide general supervision for the program, including technical assistance and training to designated dam safety staff in the Region Offices. The Section Manager will advise dam safety staff regarding the status of the state's inventory of dams and about changes in the Idaho Code, rules, or departmental policies that may affect the dam safety program.
- b. With input from designated dam safety staff, region managers, and senior management the Section Manager will define the methods necessary to monitor those artificial barriers that have been determined to be regulated dams and will prepare annual dam inspection schedules for each Region Office. Scheduling priorities will be coordinated with the Regions to ensure that dams with potential safety concerns are inspected in a timely fashion. In addition, the Section Manager will establish the guidelines and format to document inspections and to maintain uniformity in the dam safety files, database and inventory records.
- c. Designated dam safety staff within the Region Offices will prioritize their daily work assignments and schedules to reflect the importance of completing dam inspections in a

timely manner with consideration for other work assigned to them by the Region Manager. Dam safety staff will perform and document their inspections and reporting efforts as prescribed herein.

- d. All dam safety staff must be alert to conditions that could cause physical harm to themselves or to others, and shall exercise prudent and reasonable precautions commensurate with conditions encountered on-site. Staff should never undertake an inspection without using the proper tools and equipment necessary for safely completing the task at hand.

## II. State of Idaho Regulated Dam Criteria

- a. As required by Idaho Code Sections 42-1711, all artificial barriers constructed for the purpose of storing water that are ten (10) feet or more in height or which have a storage capacity of fifty (50) acre-feet or more shall be regulated by IDWR unless specifically exempted. For program consistency, any whole number presented in the Idaho Code shall be interpreted to be a decimal equivalent; for example: six (6) = 6.0.
- b. In addition to size, another important determination is whether or not a dam, by its sheer physical presence, constitutes a hazard to downstream life and property. The hazard classification is used by dam safety professionals to rank the estimated potential consequences to downstream inhabitants in the event of a dam failure and sudden release of water. The combination(s) of height, storage capacity, and hazard classification shall be used to distinguish state regulated dams and reservoirs from other water related artificial barriers.
- c. Hazard does not equal risk. The hazard classification system attempts only to identify the potential adverse consequences to downstream life and property that could result from a dam failure and sudden release of water. A hazard classification does not reflect in any way the probability for failure, nor is it dependant on the physical condition of the structure. Conversely, risk is the combination of the probability for failure plus the consequences that failure would impart to downstream life and property. A risk determination must include a numerical probability of all known events and conditions that could negatively affect the performance of the dam. IDWR dam safety does not presently perform a risk analysis as a part of its hazard identification procedures.
- d. IDAPA Dam Safety Rules describe categories of risk and size. The language in the rules that is used to define "Risk Category" more closely describes the definition of "Hazard Classification". In order to clarify existing Rule, this memorandum establishes that department staff will use terminology consistent with contemporary dam safety standards and practices. The assessment of potential consequences resulting from the failure of a dam and sudden release of water shall be properly identified as Hazard, and not as Risk. Accordingly, the correct terms for use are Low Hazard, Significant Hazard, or High Hazard.
- e. Language in the Idaho Code regarding low risk areas implies that artificial barriers of any height impounding any amount of water *may be* regulated by IDWR should it be determined that the physical condition of the structure is so poor that failure is likely, and the consequences of a failure so great as to impose an unacceptably high risk of death or destruction on the downstream public.

- f. There are some other types of hydraulic structures that are specifically identified by Idaho Code to be non-regulated by IDWR. The list includes the following:
  - Barriers in a canal to raise or lower water therein or divert water there from.
  - Fills, retaining dikes, or structures less than 20 feet in height which are under the jurisdiction of the department of environmental quality or the department of agriculture, designed primarily for retention or treatment of municipal, livestock, or domestic wastes, or sediment and wastes from produce washing or food processing plants.
  - Fills or structures determined by the director to be designed primarily for highway or railroad traffic.
  - Levees that store water regardless of storage capacity.

### III. Application for Construction or Enlargement of a New or Existing Dam

- a. A water right is required before legal storage of water can occur behind any dam or artificial impoundment, regardless its height, storage capacity, hazard classification, age, or method of construction. Dam Safety staff cannot unilaterally authorize storage of water behind a dam absent the owner/applicant having secured the requisite water right.
- b. Applications and the requisite fee for construction or enlargement may be received either by the Region Office or by the State Office. Copies of all such transactions received by either office shall be immediately forwarded to the other office via USPS or digital transmission, together with any supporting documents such as plans, specifications, reports, surveys, photographs, correspondence, or related project information.
- c. A construction application fee will not be charged to owners/applicants who desire to construct artificial barriers less than ten (10) feet high and less than fifty (50) acre-foot storage capacity, or other structures that are exempted specifically by statute from IDWR dam safety regulation.
- d. Once a project not already in the state inventory is determined to be a regulated dam, the receiving office (Region or State) will assign to it a state identification number; a file number that is coincident with the water right. Dams that do not correspond directly with a water right number shall be assigned a state identification number according to the basin where the project is located.
- e. The State Office exclusively shall be responsible for assigning the National Inventory of Dams (NID) identification number.
- f. Application for construction or enlargement of any dam which is ten (10) feet or more in height or impounds a reservoir with storage capacity of fifty (50) acre-feet or more, but twenty (20) feet or less in height and less than one hundred (100) acre-feet storage capacity will proceed as follows:
  - Region Office dam safety staff are responsible for inspecting dam construction projects that do not require the services of a professional engineer. Upon receipt of an application and the required construction fee, dam safety staff will visit the proposed site and evaluate the location relative to the stream channel, the surrounding geology, and the downstream hazard potential and prepare a detailed trip report to document the visit. The trip report, with photographs and other supporting information, together with their recommendations for necessary safety

- revisions to the proposed project, shall be sent to the State Office within 30 days following the inspection.
- The Dam Safety Section Manager will evaluate and approve the application for construction or enlargement following the review of project details, trip report, and recommendations from the Region Office and may request additional information deemed necessary before granting approval. A copy of the approval letter and any other correspondence with the applicant shall be provided to the Region Office.
  - Additional inspections conducted during construction, including a final construction inspection, will be coordinated by the State Office prior to a Certificate of Approval being issued.
- g. Application for construction or modification of dams more than twenty (20) feet in height or having a reservoir storage capacity of one hundred (100) acre-feet or more will proceed as follows:
- Owners who shall desire to construct, enlarge, alter, or repair any dam more than 20 feet in height or to have a reservoir storage capacity of 100 acre-feet or more are required to engage the services of an Idaho licensed professional engineer for preparation of design plans and specifications for IDWR dam safety review and approval prior to beginning construction.
  - The application and requisite construction fee must be received before any design review of plans and specifications may proceed. The State Office shall coordinate the design review of the geology, hydrology, engineering, and other related documents, as appropriate. Review and subsequent approval of final design plans and specifications will follow the guidelines and requirements enumerated in the Idaho Code Section 42-1712.
  - The Water Management Division Administrator or delegated representative will approve for construction all design plans and specifications. As directed by Idaho Code, no construction of the dam shall proceed until the final design has been approved in writing. The State Office is responsible for providing copies of all correspondence and project information to the Region Office, and arranging construction inspections with the owner, engineer and dam safety staff, as appropriate and necessary.

#### IV. Hazard Evaluation and Classification

- a. To provide additional clarification of the Department's Dam Safety rules, a High Hazard classification presumes that direct loss of human life will occur in the event of a dam failure and sudden release of water. Significant Hazard implies that significant economic damage will occur to developed property, and includes the potential for indirect loss of human life. A Low Hazard classification indicates resulting minor damage to developed property, with a low potential for loss of life.
- b. Developed property is further divided according to habitable versus non-habitable infrastructure. Examples of habitable structures include permanently or seasonally occupied homes, businesses, schools, hospitals, RV parks or campgrounds, and heavily travelled transportation links. Non-habitable infrastructure typically includes lightly

travelled roads, culverts, utilities, unoccupied or infrequently occupied buildings or other uninhabited constructed features.

- c. A properly prepared inundation map will illustrate flood boundaries, peak water surface elevations or depths, and estimated flood-wave arrival times. If an inundation map is available, the flood boundaries will be used as a primary tool for rating the appropriate hazard with regard to public safety.
- d. Dams for which inundation maps have not been prepared must necessarily be assigned a hazard classification based on other available information; a procedure which often relies heavily on the judgment and experience of the individual making such determination, and his/her familiarity with the project and its surroundings.
- e. In the past, the *Dam Safety Hazard Classification Worksheet* used a numbering system and numerical modifier to determine the hazard potential directed at downstream life and property. Although convenient, this process depends on an arbitrary point system that often is unreliable and non-repeatable if used by separate individuals.
- f. Whenever the validity of a current hazard classification for an existing dam is questioned, a detailed assessment of downstream development and riparian conditions below the dam will be performed with a focus on the perceived hazard to human life and developed property. A report shall be prepared to document the field observations, including all information necessary to support the revised hazard classification using guidelines and examples provided by the Section Manager. The report shall be placed in the dam safety file to enable future comparison during inspection to assess the need for changing an existing hazard classification.

#### V. Inspection of Existing Dams

- a. Idaho Code Section 42-1717 mandates that regulated dams be inspected at least once every five (5) years. Each dam safety staff member is responsible for performing on-site inspections in the same year that the inspection has been scheduled, according to the inspection schedule prepared and issued annually by the State Office. The dam owner or their representative should be contacted and encouraged to participate in the inspection whenever possible; especially for High Hazard dams.
- b. Priority for inspection, regulation, and enforcement actions on dams shall be given to those structures whose failure would directly or indirectly threaten downstream life and property; i.e. High Hazard and Significant Hazard dams and reservoirs. The target inspection frequency for non-federal, IDWR regulated dams shall be two (2) years for High Hazard dams, four (4) years for Significant Hazard dams, and five (5) years for Low Hazard dams. These targets can be modified by the State Office, with input from the Region Offices, to promote efficiency in scheduling and completion of inspections. Any regulated dam may be inspected more frequently if operation, maintenance, or repair deficiencies prove to be an unresolved public safety issue.
- c. Non regulated barriers will not be included on the Department's annual inspection schedule, nor will they be inspected unless a formal complaint is received specific to the safety of the structure.
- d. Before conducting any safety inspection, dam safety staff must review the project file to ensure they are aware of concerns and recommendations noted during prior inspections. Design plans, asbuilt drawings, monitoring data, and surveys also should be reviewed if

- available; especially when the inspector is not familiar with the project or its design and construction history.
- e. During the inspection of the dam, the inspector shall record their observation of the actual site conditions of the dam and appurtenant works. A copy of the previous inspection report should be taken into the field for comparative purposes to help evaluate changed conditions; such as the location of seeps, depressions, animal burrows, vegetative growth or other potential problems. All uncorrected or unresolved deficiencies that were identified in earlier inspections must again be clearly documented, and observed changes in the site conditions, the dam, or operating procedures shall be clearly documented in the current report. Photographs should be taken to record changed conditions, deficiencies, and any other unique or unusual observation, as necessary and appropriate.
  - f. In addition to inspection of the dam and appurtenant works, the area downstream of the dam should be observed to determine whether or not development has occurred that would affect the hazard classification of the dam. If there is no observed change in downstream conditions that would affect the hazard classification, then it shall be noted on the inspection report. Any proposed revision to the downstream hazard classification will be confirmed by the State Office before the hazard classification in the dam safety database is changed.
  - g. Before leaving the site, the inspector must be certain that the dam and all appurtenant features have been thoroughly examined and reported. If a mechanism or component cannot be inspected, it must be noted in the report stating the reason that the inspection of the component was not accomplished and describing the tools or methods necessary to complete this effort in the future. If serious deficiencies are observed that threaten the ability of the dam to safely impound water, the dam safety inspector should promptly notify the owner and both the Dam Safety Section Manager and Region Manager.
  - h. Dams that have both state and federal jurisdictional authority, for example federal dams such as USBR, USACE, or federal-licensed projects such as FERC, will be inspected in the company of the cooperating agency whenever possible to leverage inspection and technical knowledge, and to help avoid inefficient duplication of effort.

#### VI. Certificates of Approval and Storage Authorization

- a. The Dam Safety Section Manager, acting on behalf of the Director, is responsible for issuing all Certificates of Approval (Certificate) for Significant Hazard and High Hazard dams. The Region Manager, acting on behalf of the Director, is responsible for issuing all Certificates of Approval for Low Hazard dams. Under Idaho Code Section 42-1719 a Certificate shall be issued for all dams upon a finding that the dam is suitable to impound water, within the limitations prescribed in the Certificate. All Certificates shall remain valid for a specific interval of time until expired, or until revoked or modified by the Department. The time interval should be consistent with the inspection schedule.
- b. The owner of a dam for which a Certificate of Approval has been issued shall not, through action or inaction, cause the dam to impound water beyond the expiration date of the Certificate. The Department must ensure that a Certificate is forthcoming in a timely manner, or action is initiated to prevent storage, as appropriate.
- c. Following each inspection of a regulated dam, a new or renewed Certificate shall be issued to: 1) suitable new projects, 2) suitable existing dams not already regulated by

- IDWR, 3) suitable existing dams whose existing Certificate was issued absent an expiration date, and 4) suitable existing dams whose existing Certificate has or will expire within the year.
- d. An inspection report, a draft transmittal letter, and a draft Certificate of Approval advising the owner of the inspection results and requirements thereof, will be prepared by the inspector in a manner consistent with established guidelines and formats within 45 days following the inspection:
    - Draft transmittal letters and draft Certificates of Approval written to owners/operators of all Low Hazard dams, regardless their size, will be reviewed, edited, and signed by the respective Region Manager.
    - Draft transmittal letters and draft Certificates of Approval prepared for High Hazard and Significant Hazard dams will be reviewed, edited and signed by the Dam Safety Section Manager.
  - e. A copy of each transmittal letter and Certificate prepared by one office shall be provided to the other office as expeditiously as possible. IDWR's goal is to provide the dam owner with a transmittal letter, inspection report, and Certificate of Approval within 90 days after the inspection has been performed.
  - f. The duration of a Certificate will authorize storage for a specific period of time, and then expire. If a scheduled inspection is delayed and cannot be performed prior to expiration of the Certificate, then the Department must issue an interim extension to the Certificate or conduct an "out of schedule" inspection of the project to ensure uninterrupted storage authorization, if appropriate.
  - g. The Certificate may be allowed to expire without renewal if operation, maintenance, or repair deficiencies prove to be an unresolved public safety issue. Under Idaho Code Section 42-1701B the continued storage of water without a Certificate may result with the alleged violator being issued a notice of violation. The notice of violation shall be served in person or by certified mail stating the alleged violation; the designated chapter, rule, permit, condition of approval or order which has been violated; the remedy, including any demand to cease and desist, restoration and mitigation measures; and the amount of any civil penalty the director seeks for redress of the violation.
  - h. Pursuant to Idaho Code Section 42-1719 the director may revoke an existing Certificate whenever it is determined that the dam or reservoir constitutes a danger to life and property. Before any Certificate is revoked, the director shall hold a hearing in accordance with Idaho Code Section 42-1701A.
  - i. December 31 is the preferred date for the storage expiration on the Certificate, but any expiration date may be used depending on specific project requirements, inspection frequency, or by special request.

# ADMINISTRATOR'S MEMORANDUM

Application Processing No. 64  
Transfer Processing No. 19  
Dam Safety Processing No. 2  
SCA No. 13

**To:** Water Management Division

**From:** Norman C. Young *NCY*

**RE:** **REVIEW OF APPLICATIONS FOR PERMIT ON A STATE PROTECTED RIVER REACH OR WITHIN A MINIMUM STREAM FLOW REACH**

**Date:** August 16, 1999

The Water Resource Board has adopted Comprehensive State Water plans for certain drainages in Idaho to protect designated reaches of waterways and associated riparian buffers from activities that would degrade the aesthetics and recreational values of the reaches. In addition, minimum streamflows have been approved for approximately 70 stream reaches in Idaho.

In order to assure that various approvals for programs administered by Water Management Division do not conflict with protected rivers in an adopted Comprehensive State Water Plan (plan) or Minimum Stream Flow reach ("minimum flow reach"), staff is directed to seek and consider comment from Planning and Policy Division as described below.

Upon receipt of an application which proposes an activity in a protected river or minimum flow reach, as shown by maps or digital layers provided to Water Management Division by Policy and Planning Division, Water Management staff should provide a copy of the application to Water Planning Bureau for review and comment. This notification should be in addition to Planning and Policy Division's review of the weekly water right print out available on the department's home page. Comments provided by Water Planning Bureau need to be considered before recommending action on such applications.

Examples of permitting activities which require this review include stream channel alteration activities, dam construction, diversion works authorized by a water right permit or transfer.