7.9.3.3 All areas inundated by the reservoir and IDF surcharge.

7.9.4 Pipelines, utility lines, or any other construction that penetrates through the dam, abutment areas below the dam crest elevation, or that are within a distance of 50 feet or the height of the dam, whichever is greater, from either toe of the dam shall not be allowed without prior written approval by the State Engineer.

Rule 8. Construction Requirements

8.1 Pre-Construction.

8.1.1 Water Diversion Plan.

8.1.1.1 A plan to control surface water during construction shall be developed by the construction contractor based on information and requirements provided by an Engineer. The plan shall state the return interval or annual exceedance probability for the storm event the system is designed to protect against. The plan shall be prepared under the direction of an Engineer meeting the requirements of Rule 4.10.

8.1.1.2 The plan shall be approved by the Engineer and submitted to the State Engineer in advance of construction of the diversion facilities.

8.1.1.3 A hazard classification evaluation shall be performed by an Engineer based on consequences to the public for any proposed cofferdam. If the water diversion system is found to be High or Significant Hazard, the design shall meet the requirements of Rule 7.

8.1.1.4 The water diversion plan shall address the removal or abandonment of cofferdams, spillways, conduits, or other temporary features after construction is complete.

8.1.2 **Construction Observation Plan**. Not less than thirty (30) days prior to construction, the Engineer shall submit a construction observation plan to the State Engineer. The construction observation plan shall include, at a minimum:

A. The anticipated date of the start of construction;
B. Names and resumes of the Engineer and staff to be used on the project;
C. A construction observation schedule for the Engineer and staff;
D. For dams on rock foundations, a schedule for observations of the foundation by a Geologist;
E. A quality assurance plan including a schedule of the construction material tests; and
F. Identification of the firm and qualifications of the personnel that will conduct the construction material tests in the field and in the laboratory.

8.1.2.1 **Approval.** Within fourteen (14) days of receipt, the State Engineer shall provide written comments and approval, or conditions for approval, of the construction observation plan. Construction shall not commence without approval of the observation plan by the State Engineer.

8.1.3 **Pre-Construction Meeting**. Prior to commencement of construction, a meeting shall be held between the Engineer, Owner, State Engineer, and contractor. The State Engineer shall be notified at least fourteen (14) days prior to the meeting. The contractor shall present and thoroughly explain its construction work plan along with any anticipated construction difficulties. The name of the subcontractors shall be furnished to the State Engineer at the meeting. Project

communication protocol between the Owner, Engineer, and the State Engineer shall be established at the pre-construction meeting.

8.2 Construction.

8.2.1 **Engineer's Observation**. The Engineer shall observe the progress and quality of the construction in accordance with the approved construction observation plan. The Engineer shall endeavor to prevent defects and deficiencies in the construction of the dam and appurtenant structures, and shall disapprove or reject work failing to conform to the approved plans and specifications. In cases where the Engineer has a contractual relationship with the contractor to provide engineering services, the Owner shall provide an independent, third-party engineer to perform the engineering quality assurance observations.

8.2.2 **Construction Records**. The Engineer shall maintain a record of construction that, at a minimum, shall include daily activity and progress reports, design change orders, all materials testing results, gate and valve installation certifications, photographs sufficient to provide a record of foundation conditions and various stages of the construction through completion, all geologic information obtained, and documentation of any construction problems and remedies.

8.2.3 **Progress Reports**. Progress reports summarizing the status of the work shall be submitted to the State Engineer during the project at a minimum frequency and in a format agreed upon during the pre-construction meeting. The progress report shall include the contractor's three-week look-ahead schedule.

8.2.4 **Notice for Inspection**. The Engineer shall give the State Engineer at least five (5) days advance notice of any work items listed by the State Engineer in the pre-construction meeting, to allow for observation by the State Engineer.

8.2.5 **Design Change Order**. When unforeseen site conditions or material availability require that the construction work differ significantly from the approved plans and specifications, a design change order, including details, shall be provided by the Engineer to the State Engineer. No change shall be executed until approved by the State Engineer. Major changes shall be submitted in writing with supporting documentation, and approved in writing by the State Engineer. Minor changes, as determined by the State Engineer, may be approved verbally and documented in the final construction documents.

8.2.6 **Final Inspection**. The Engineer shall give the State Engineer at least fourteen (14) days advance notice prior to the project's final construction inspection. The Engineer shall document the completion of any punch list items.

8.3 **Acceptance of Construction**. Construction shall not be deemed complete nor shall storage of water be permitted until the State Engineer furnishes to the Owner a written statement of acceptance. The acceptance shall state the as-constructed dam dimensions, the capacity of the reservoir, and any limitations upon or requirements for the use of the dam. The State Engineer shall furnish the acceptance or denial within sixty (60) days of receipt of construction completion documents as outlined below.

8.3.1 **Construction Completion Documents**. The Engineer shall provide the following construction documentation within sixty (60) days of the final construction inspection:

8.3.1.1 A written notification that the project is complete and in general conforms with the approved plans, specifications, and design change orders.

8.3.1.2 A schedule for the first filling of the reservoir specifying fill rates, water level elevations to be held for observation, and a schedule for inspecting and monitoring the dam.

8.3.1.3 As-constructed plans showing the original approved plans amended to include any major or minor changes.

8.3.1.4 A final construction report summarizing construction, problems encountered and solutions implemented to resolve the problems, and compiling the construction records as identified in Rule 8.2.2.

8.3.1.5 A record of the location of permanent monuments and instrumentation as well as installation details and initial surveys and readings, if applicable.

8.3.1.6 The approved dam observation and monitoring plan in accordance with Rule 13.4.

8.3.1.7 A new or updated Emergency Action Plan including current inundation map in accordance with Rule 13.7.

8.3.2 For new dams and enlargements, the Engineer shall provide periodic review of the data included in the dam observation and monitoring plan on at least an annual basis for the first five years following construction completion. The Engineer shall submit the data and a written assessment of the dam's performance to the State Engineer annually.

8.3.3 **Temporary Approval**. Upon written request by the Owner and for good cause shown, the State Engineer may temporarily approve storage of water prior to submitting the construction completion documents. Only a partial reservoir filling will be granted under this Rule. Final acceptance of the construction for full use of the reservoir will not be granted until the requirements of Rule 8.3 have been satisfactorily completed. The written request shall include, at a minimum:

A. A schedule for compliance with Rule 8.3;
B. A notification letter signed and sealed by the Engineer in accordance with Rule 8.3.1.1;
C. A schedule for the first filling of reservoir in accordance Rule 8.3.1.2;
D. A monitoring plan for observing the behavior of the dam and appurtenances during the initial filling or refilling of the reservoir; and
E. A new or updated EAP prepared in accordance with Rule 13.7.

Rule 9. Requirements for Removing or Breaching an Existing Dam

9.1 **Breach Plan and Application**. An Owner proposing to permanently remove or breach a dam shall submit an application package to be approved by the State Engineer prior to commencing work. The application shall be completed on a form provided by the State Engineer and shall include the following:

9.1.1 Documentation demonstrating that notice has been given to land owners and agencies potentially impacted by removal or breach of the dam.

9.1.2 Documentation showing that all permitting requirements by local, state and federal agencies have been satisfied.