Guidance on Implementing Dam Safety Legislation
September 1, 2013

Background/Introduction

The TCEQ Sunset Legislation, House Bill 2694 from the 82nd Texas Legislative Session, amended Texas Water Code (TWC) § 12.052, Subsection (a), and added Subsections (b-1), (e-1), (e-2), and (e-3). These statutory changes, along with a Sunset Advisory Commission's management directive, require changes to the agency's dam safety program.

House Bill 677 from the 83rd Texas Legislative session further amended Texas Water Code (TWC) § 12.52 Subsection (e-1) and repealed Subsection (e-3).

This guidance document is provided to offer information on these changes which are **effective September 1, 2013**. Included below is information addressing:

- Inspections
- Dam Evaluation Agreements
- Exemption Requirements
- Expiration of Exemption
- Operation & Maintenance Requirements
- Modification to Exempt Dams
- Exemptions for New Proposed Dams
- Sunset Management Directive
- Dam Classifications
- Statutory Language for HB 2694 and HB 677

Inspections

The Texas Commission on Environmental Quality (TCEQ) currently focuses its inspection program of existing dams primarily on high and significant hazard dams as required by rule in 30 Texas Administrative Code (TAC) §299.42(a)(2). According to the rule, high and significant hazard dams and large low hazard dams are scheduled to be inspected every five years, while small and intermediate size, low hazard dams are only to be inspected at the request of an owner; as a result of a complaint; at the request of someone other than the owner; following an emergency such as a flooding event; or for determining the hazard classification.

Beginning **September 1, 2013, the Dam Safety Program will no longer conduct routine inspections of significant hazard dams that meet the criteria specified in TWC § 12.052 (e-1).** For details on the criteria see "Exemption Requirements" below.

If a dam is identified through review of aerial photographs, topographic maps, or by field observation as being a high hazard due to downstream development, and is

currently a low or significant hazard dam or not in the inventory of dams, an inspection will be scheduled with the dam owner.

The Dam Safety Program will focus the review of emergency action plans and hydrologic and hydraulic adequacy only on the high and significant hazard dams not exempted under HB 677.

If a dam is found to have a low hazard classification due to lack of downstream hazard or the dam is found to meet the exemption criteria, the dam will be removed from the inspection schedule, and no additional analyses on the hydrologic and hydraulic adequacy of the dam will be performed.

In addition, an emergency action plan will not be required for significant hazard dams that are exempted under HB 677; however, the owners of those significant hazard dams are strongly encouraged to develop an emergency action plan for use in an emergency.

Dam Evaluation Agreements

When the Dam Safety Program inspects a high or significant hazard dam, a report is prepared which may include deficiencies that need to be addressed as noted during the inspection and during a file review. If the hydrologic and hydraulic adequacy has not been previously addressed or if the inspection revealed the need for a structural analysis, a recommendation is made for an analysis. The owner will receive a letter and a copy of the report from the TCEQ. If necessary, the owner may be requested to provide a plan of action and timelines for addressing all noted deficiencies.

An agreement may be developed between the TCEQ and the owner to set a timeline to meet the requirements of the rules, but be within the budget of the owner. This written agreement will state the projects to be addressed and the timelines for performance. The agreement may include deferral of an analysis or analyses, if appropriate. The agreement will be signed by the Manager of the Dam Safety Section and the dam owner.

Agreement Request Process:

1) A dam owner interested in establishing an agreement with TCEQ should submit a written request to the Dam Safety Program which includes a detailed plan with proposed time lines for addressing all outstanding issues.

2) Within 45 days of receipt, the Dam Safety Program will evaluate the request. If additional information is needed, program staff may either contact the owner to obtain information, or set up a meeting to discuss the issues with the owner in person.

3) Once all information has been received and evaluated by the Dam Safety Program, either:
    a) the agreement will be drafted and sent to the owner for signature; or
    b) a letter explaining that an agreement is not going to be offered will be sent to the owner. If TCEQ determines that an agreement is not

warranted, the owner will be responsible for completing the corrective actions listed in the original inspection report.

4) After the owner has read and signed the agreement, it should be returned to the TCEQ for the Dam Safety Program Manager's signature (the effective date of the agreement is the Dam Safety Program Manager's signature date).

Exemption Requirements
A dam **must meet all conditions** in TWC § 12.052(e-1) to qualify for the exemption:

- **Privately Owned**
  This does not include dams owned by municipalities, water districts, utility companies, soil and water conservation districts, counties, or state agencies.

- **Maximum capacity less than 500 acre-feet**
  This is the capacity at the top of the dam as defined in 30 TAC §299.2(36). If an owner does not agree with the maximum capacity as recorded in the Dam Safety Program's Inventory of Dams, the owner may submit an evaluation of the capacity conducted by a professional engineer, licensed in the State of Texas, or a registered public surveyor, also licensed in the State of Texas. The Dam Safety Program will review the evaluation and provide a written response within 45 days of receipt.

- **Hazard classification of low or significant**
  30 TAC §299.14 states that the executive director shall classify dams for hazard based on either potential loss of human life or property damage, in the event of failure or malfunction of the dam or appurtenant structures, within affected developments, that are existing at the time of the classification. For additional details on classifications see "Dam Classifications" below.

- **The dam must be located in a county with a population of less than 350,000**
  Click here for a map for the counties. The population is based on the 2010 U. S. Census numbers.

- **The dam must be located outside a city limits**
  The city limits are based on the most current municipal information (2011). As city limits frequently change, an owner may submit additional information to the TCEQ for consideration.

Expiration of Exemption
The exemption provided in TWC § 12.052(e-1) will not expire as indicated in the previous legislation. The owner of any significant hazard dam found to be exempt under that statute will be informed in writing by the TCEQ regarding the exemption and expiration date.

Operation & Maintenance Requirements
30 TAC §299.41(a) and §299.43(a) require the owners of all dams to operate and maintain the dams in a safe manner and have an operation and maintenance plan. Therefore, TCEQ staff will continue to emphasize this requirement in the Dam Owner Workshops, and all reports will continue to have recommendations for operation and maintenance even if the report is on a low hazard, or exempt dam that was investigated due to a request or a complaint.

If an owner of an exempt dam requests an inspection, the Dam Safety Program will perform the inspection; however, recommendations will be made only on maintenance items.

If an owner of an exempt dam has previously received a request from the TCEQ to provide a plan of action and time line, the owner should proceed with the maintenance work, but the owner will not be required to submit a plan and time line.

Modifications to Exempt Dams
For a significant hazard dam that is exempt under subsection (e-1), if the owner chooses to modify the dam due to previous recommendations by the Dam Safety Program or the owner's engineer, the owner or the owner's engineer should submit the plans and specifications to the Dam Safety Program for review before starting construction, to determine if the modifications will change the hazard classification to high. Within 30 days of receipt, the Dam Safety Program will review and provide comments to the owner or the owner's engineer.

Exemptions for New Proposed Dams
For new proposed dams, there is currently an exemption for any small, low hazard dam which does not require a water rights permit or an Edwards Aquifer Protection Plan, from plan and specification review and construction inspections (30 TAC §299.21). For any new, proposed dam that an owner deems exempt under subsection (e-1), the owner or the owner's professional engineer will need to provide the Dam Safety Program with the necessary information to verify the dam's proposed size and hazard classification before any construction starts.

Sunset Advisory Commission Recommendation
The Sunset Advisory Commission included the following management directive in its decision document: "Direct TCEQ to exempt dams that are classified as low-hazard by TCEQ from adhering to TCEQ's hydrologic and hydraulic criteria."

As a result of this directive, the Dam Safety Program will not make any recommendations regarding hydrologic and hydraulic adequacy for any low hazard dam that may be inspected as a result of a request or a complaint.

Dam Classifications

- **Low-hazard:**

  (A) no loss of human life expected (no permanent habitable structures in the breach inundation area downstream of the dam); and

(B) minimal economic loss (located primarily in rural areas where failure may damage occasional farm buildings, limited agricultural improvements, and minor highways (classified by the Texas Department of Transportation as rural major collector road, including Farm-to-Market roads used to provide service to schools).

- **Significant-hazard**:

  (A) loss of human life possible (one to six lives or one or two habitable structures in the breach inundation area downstream of the dam); or

  (B) appreciable economic loss, located primarily in rural areas where failure may cause damage to isolated homes; damage to secondary highways (classified by the Texas Department of Transportation as rural major collector road by the, including Farm-to-Market roads used to provide service to schools), damage to minor railroads; or interruption of service or use of public utilities, including the design purpose of the utility.

The dam's hazard designation does NOT include consideration of the physical condition of the dam. The hazard is based on what would be impacted downstream if the dam fails (regardless of its condition).

30 TAC §299.12(b) states that the executive director may reclassify the hazard classification of a dam at any time based on:

1) an inspection and downstream hazard evaluation by the executive director;
2) a report of an inspection and downstream hazard evaluation by the owner's professional engineer;
3) a breach analysis by either the executive director or the owner's professional engineer; or
4) a review of current aerial photography or topographic maps, along with information obtained in the field.

If the owner does not agree with the hazard classification, the owner may request the executive director to reevaluate the hazard classification.

Owners wishing to have their dam's hazard classification reevaluated must submit a request in writing to the manager of the Dam Safety Section. The letter must include supporting information for consideration.

The hazard classification may be reduced if the owner's engineer provides a Dam Breach Analysis which models three breach scenarios (normal storage capacity non-flood event or "sunny day" breach; barely overtopping flood breach, if the dam does not pass the design flood; and design flood breach), showing no adverse impact from any of these breach scenarios on existing downstream improvements.

The TCEQ may also reevaluate the hazard classification as a result of a complaint.

Statutory Language in HB 2694
(82nd Legislature, effective September 1, 2011)

HB 2694 amended Texas Water Code § 12.052 as follows:
(a) The commission shall make and enforce rules and orders and shall perform all other acts necessary to provide for the safe construction, maintenance, repair, and removal of dams located in this state. In performing the commission's duties under this subsection, the commission shall identify and focus on the most hazardous dams in the state.

(b-1) The commission may enter into an agreement with an owner of a dam who is required to reevaluate the adequacy of an existing dam or spillway. The agreement may include timelines to achieve compliance with the commission's design criteria and may authorize deferral of compliance with the criteria, as appropriate.

(e-1) The commission shall exempt an owner of a dam located on private property from meeting requirements related to dam safety if the dam:
(1) at maximum capacity impounds less than 500 acre feet;
(2) has a hazard classification of low or significant;
(3) is located in a county with a population of less than 215,000; and
(4) is not located inside the corporate limits of a municipality.

(e-2) Notwithstanding Subsection (e-1), an owner of a dam shall comply with operation and maintenance requirements established by commission rule.

(e-3) This subsection and Subsections (e-1) and (e-2) expire August 31, 2015.

Statutory Language in HB 677
(83rd Legislature, effective September 1, 2013)

HB 677 amended Texas Water Code § 12.052 as follows:

(e-1) The commission shall exempt an owner of a dam located on private property from meeting requirements related to dam safety if the dam:
(1) at maximum capacity impounds less than 500 acre feet;
(2) has a hazard classification of low or significant;
(3) is located in a county with a population of less than 350,000; and
(4) is not located inside the corporate limits of a municipality.

Section 12.052 (e-3), Water Code, is repealed.