

	SAN ANTONIO RIVER AUTHORITY	PROCEDURE	
SUBJECT: LAND USE PROCEDURE AT FLOOD RETARDING DAMS		REAL ESTATE	
RESPONSIBLE DEPARTMENT: REAL ESTATE		EFFECTIVE DATE: May 15, 2018 REVISED DATE:	
		PAGE: 1 of 11	

PURPOSE

To preserve the functionality of each flood retarding dam (hereinafter referred to as a ‘dam’), maintain the integrity of the flood storage as designed, and thereby protect residents upstream and downstream of the dams, the San Antonio River Authority (SARA) has adopted this procedure relating to all development within the dam areas under SARA’s jurisdiction and/or to modify an access easement. Most of the dams owned and operated by SARA were constructed in areas rural in nature at the time of construction, but many of those dams are now located in areas of urban development or impending development.

This procedure applies to all SARA-managed dams and all of SARA’s land interests. Any improvement activity on the dam or within the dam easements, must be approved by SARA staff. This includes the dam embankment, auxiliary spillway, principal spillway/pipe outlet, and related appurtenances. Definitions of terminology, exhibits of the vertical zones of a flood structure, and the buffer zones around the dam are located on pages 8-10.

BACKGROUND

SARA manages 41 flood control structures in SARA’s four-county District (District). Twenty-eight of these structures are located in Bexar County and 13 structures are located in Karnes County (see attached map on page 11). The USDA Natural Resources Conservation Service (NRCS) <https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>, in coordination with SARA and other local participants, oversaw the design and construction of these dams and is considered The Engineer of Record for these structures except for one formerly private dam in Bexar County acquired by SARA. Thirty-seven of the dams were built on private lands through the acquisition of land rights in the form of easements. These easements consist of three basic components: **Structure, Inundation, and Access**. (Easement may refer to one or all of the components listed.) The easement components may or may not be individually delineated in the easement document but they serve to describe the functions of the flood control structures for which the easement was granted.

The dams mitigate storm damage, provide flood control and in some cases provide aquifer recharge benefits. SARA dams are designed to impound flood water during rain events and drain

slowly to detain flood flows and reduce flooding downstream. Dams may detain flood water beyond the inundation easement in extreme rain events.

All of SARA's dams are regulated by the Texas Commission on Environmental Quality (TCEQ) <https://www.tceq.texas.gov/>. Texas Administrative Code (TAC) Title 30, Part 1, Chapter 299: DAMS AND RESERVOIRS contains regulations pertaining to dams that meet specific size or hazard criteria. Thirty-eight of the SARA dams are designated by the TCEQ as high hazard dams.

As the holder of land rights and local sponsor of the dams, SARA is responsible for the operation, maintenance, inspection and modernization of these dams and is funded by ad valorem taxes collected within the District, federal and state grants and/or other funds that may be available.

PROCEDURE TO OBTAIN LAND USE APPROVAL OR MODIFY AN ACCESS EASEMENT

1. To apply for a Land Use Permit for construction activity:
 - a. Review Section 1.0, of this document, for permitted uses within the dam footprint.
 - b. Submit to SARA a completed Land Use Application, a non-refundable application fee, and the required documentation listed in Section 2.1.
 - c. If conditional approval is not granted, the applicant will be notified in writing.
 - d. If conditional approval is granted by SARA, obtain approval for City or County Floodplain Development Permit Applications for all proposed construction work within SARA's easement(s) which are also in or adjacent to a designated floodplain, and copies of all additional drainage studies or requirements that are made a part of the City or County permitting process.
 - e. At this time SARA will notify the applicant of the amount of the consideration fee for the land use.
 - f. Submit to SARA approval from the City or County for the Floodplain Development Permit.
 - g. Upon receipt of formal written approval from SARA, which will serve as the Land Use Permit, the applicant will need to complete the Construction Activity Requirements outlined in Section 2.3.
2. To request a modification to an access easement, follow the requirements outlined in Section 3.0.

The Land Use Application, Submittal Checklist, and the SARA Schedule of Fees are located on our website at <https://www.sara-tx.org/public-services/real-estate/>. Note that the fee associated with projects with federal agencies is applicable to projects that require consultation with one or more federal agencies.

1.0 CONSTRUCTION ACTIVITY AND DEVELOPMENT

When construction activity or development near a SARA dam is contemplated on land on which SARA holds a structure easement and/or an inundation easement, the contractor or developer must submit to SARA a Land Use Application. Along with the application, submit the development

plans for review of their impact on the easement(s), the structural integrity, and the hydraulic function of the floodwater retarding structure. Allow 90 days for SARA review.

Development within any SARA easements shall not commence prior to formal written approval of such activity by the General Manager. Any work that is commenced prior to General Manager approval will be subject to legal action by SARA. SARA must also be notified of all work within any SARA easements, including access easements, which will in any way restrict access, temporarily or permanently, to SARA dams, auxiliary spillways, and pipe outlet works. Both ends of all dams must be accessible at all times.

All development should comply with the applicable NRCS operations and maintenance agreement for the specific dam, as well as with the National Flood Insurance Program, and must be approved by the appropriate floodplain administrator.

1.1 The following activities relating to development within and adjacent to structure and/or inundation easements may be permitted with a SARA Land Use Permit upon a determination that they will not adversely impact the dam structure:

- a. Construction of above ground, buried, or bored utilities on and/or beneath the dam or auxiliary spillway that will not reduce or disturb flow; or
- b. Temporary or permanent placement of objects in the auxiliary spillway that will not reduce or disturb flow (i.e. fences, equipment, etc.); or
- c. Recreational activities in the inundation easement component.

1.2 The following activities relating to land use within structure easements and/or inundation easements are prohibited:

- a. All vehicles, including ATVs, motorcycles, and bicycles, are prohibited on the top or the embankment of the slopes of the dams, with the exception of SARA maintenance equipment.
- b. All pedestrian trails, formal or informal, are prohibited on the slopes of the dams. Access agreements contrary to these terms that are in place at the time of the adoption of this procedure will be allowed to complete their term but will not be renewed.
- c. Construction within structure easements including commercial, industrial, and residential buildings, parking lots, roads, homes, and other structures (garages, barns, utility buildings, etc.); or
- d. Construction of habitable structures within inundation easements; or
- e. Placement of fill materials for any reason; or
- f. Excavation to satisfy stormwater detention requirements for new development upstream of the easement within the inundation easement with the intent of increasing impoundment volume or detention for any purpose, including a volume that may be required by another jurisdictional entity; or
- g. Installation of dikes, levees, ponds, or other structures within the inundation easement which may reduce the storage capacity of the flood detention pool; or
- h. Changes of topographic contours within the inundation easement.

2.0 APPROVAL FOR CONSTRUCTION ACTIVITY AND LAND USE

To request approval for land use, an applicant must submit a copy (hard copy or electronic) of the Land Use Application, a non-refundable application fee, along with an electronic PDF copy (on a flash drive) of the documents listed in Section 2.1.

2.1 Submittal Information

- a. A description of the proposed land use activity to occur within the easement area;
- b. A map in the same format as required by the City or County construction permitting authority showing SARA's easements and identifying the general area of the proposed land use activity;
- c. A plat of the property as it exists at the time of completing the application, and a copy of any proposed or pending plats for development that show plans, elevations, and other details regarding the construction of any roads, buildings or other structures proposed to be built within and adjacent to SARA's easements;
- d. Cross-sections, copies of cut/fill calculations, and a summary of volumes of any proposed earthwork within SARA's easements;
- e. A proposed schedule indicating a start date and a completion date of the proposed work, including milestones of the development. The schedule will provide for at least ninety (90) days from submittal of application for SARA (General Manager, engineer, and legal counsel) and NRCS and/or TCEQ (as applicable) to review the application and for SARA to act upon the General Manager's recommendation. Additional scheduling details are provided on the Submittal Checklist.

2.2 Review Process of Proposed Construction Activity

Before construction activity at or near dams is initiated, SARA staff shall consult with legal counsel to assess the nature of the property rights held by SARA and to identify concerns. Construction that proposes to take trees, soil, fish, or other property of a private landowner must be carefully considered and requires coordination with the landowner in advance of construction.

Texas Administrative Code (TAC) Section 299.16(d) identifies certain activities near dams that may warrant evaluation by a professional engineer at the request of the dam owner or the executive director of the TCEQ. Any evaluations that are made of such proposed activities shall be submitted by the applicant to the SARA General Manager and the executive director of TCEQ for review and approval before any work is performed. SARA reserves the right to request an evaluation for all work that falls within the criteria listed below:

- a. Install a utility line or pipeline in the spillways that requires significant excavation in the dam or spillways;
- b. Construct a road across spillways or within 200 feet of the dam;

- c. Drill oil or gas wells, perform horizontal drilling or fracturing, or perform oil or gas exploration within 500 feet of the dam and spillways; or
- d. Blast within 1/2 mile of the dam.
- e. The professional engineer that will perform the evaluation shall be registered in Texas. SARA's approval of the professional's qualifications is required and shall not be unreasonably withheld.

2.3 Approval and Construction Activity Requirements

Upon receipt of a complete submittal package, SARA will perform an internal review, and coordinate with the appropriate agencies. Should the submittal package receive final approval by SARA, then the Land Use Application, and written concurrence from the appropriate agencies, will serve as the **SARA Land Use Permit**. The applicant will then be required to do the following:

- a. Obtain all applicable permits and approvals as required;
- b. Pay required consideration fee for land use as determined by the San Antonio River Authority – refer to definitions;
- c. Notify SARA prior to initiating construction work within or adjacent to the SARA easement(s);
- d. Submit an access plan for approval by the General Manager or designee prior to initiating construction;
- e. Provide all-weather access to the floodwater retarding structure at all times during construction;
- f. Provide monthly verification certified by a Texas registered professional engineer that construction is being performed consistent with the Land Use and in accordance with the approved project design. If such verification is not provided,
 - i. SARA reserves the right to perform a monthly construction site visit at the expense of the applicant. The General Manager, or designee, with the assistance of SARA's engineer, will inspect the site and review all submitted documentation.
 - ii. Additional construction site visits may be performed at the applicant's expense if the applicant fails to provide monthly verification that construction is being performed consistent with the Land Use and in accordance with the latest project design, as required.
 - iii. A final inspection of the project site will be required for construction phase closeout;
- g. Completely restore and re-vegetate the land affected by the construction in accordance with specifications provided by SARA;
- h. Notify SARA of the date of the final inspection of the project;
- i. Provide record drawings of the work performed;
- j. Provide an as-built survey of all of the cut/fill areas;

- k. The applicant must initiate construction within six (6) months of the SARA approval of the application. The applicant may request an extension prior to the six (6) month expiration date.

3.0 ACCESS EASEMENT MODIFICATION

When land use is contemplated on land on which SARA holds an access easement and the owner wishes to request that a portion of the easement be modified or released, the owner shall contact the SARA real estate department to review the plans and their impact on the easement. Allow 90 days for SARA review. If the modification requires relocation or realignment of SARA's access easement, the design must meet the requirements below:

3.1 Access Easement Design Requirements

- a. Twenty feet (20') minimum width of access easement.
- b. Twenty (20) year usable design life for roadway and drainage improvements.
- c. Twelve feet (12') minimum width access roadway designed for all weather access.
- d. All weather roadway surface shall be not less than ten inches (10") compacted aggregate base (TxDOT Item 247, Type A, Grade 1, Density Control) over six inch (6") compacted subgrade (TxDOT Item 216, Proof Rolling), or equivalent. Roadway cross section shall be graded to drain to eliminate ponded water.
- e. Adequate provisions for positive roadside drainage; designed to eliminate erosion caused by concentrated flows and excessive velocity.
- f. Fifty foot (50') minimum horizontal turning radii, suitable for use by truck and trailer combinations
- g. Five percent (5%) maximum vertical profile grade on access roadways.
- h. SARA may require six inch (6") Hydraulic Cement Concrete (TxDOT Item 412, Class A), or equivalent, for access roadways in areas with poor soils or subject to inundation.

3.2 Access Easement Submittal Requirements

Each access easement modification request will require the submittal of a copy (hard copy or electronic) of the Land Use Application, a non-refundable application fee, appropriate consideration fees, along with an electronic PDF copy (on a flash drive) of the following documents:

- a. A map, in the same format as the County or City that has planning and/or subdivision regulatory authority over the property, will be provided showing SARA's dam structure and identifying the general area of the proposed easement modification or the area proposed to be released.
- b. If the property being requested for release or modification of SARA's easement is being subdivided and/or developed, then a copy of the proposed plat and development plans will also need to be provided.
- c. A survey, with metes and bounds, showing the proposed easement modification or the area proposed to be released relative to SARA's inundation elevation and

the top of the dam elevation. Such survey shall bear the seal of a Registered Professional Land Surveyor of the State of Texas.

3.3 Approval

Upon receipt of all required submittal documents, the General Manager, or designee, will review each Land Use Application and Access Easement Modification Request for completeness. SARA staff will then review each proposal with SARA's engineer, SARA's legal counsel, the local and governing soil and water conservation service district, and NRCS and/or TCEQ (as applicable). SARA staff will then prepare a written recommendation to the General Manager for each Application and Request submitted to SARA.

PROCEDURE MODIFICATION

Modification to this Procedure must be approved by the SARA General Manager.

EFFECTIVE DATE

This Procedure will become effective upon execution.

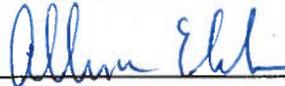
APPROVED ON THIS 21 **DAY OF** May, 2018.



Suzanne B. Scott
General Manager
San Antonio River Authority

5/21/18

Date



Approved as to form:
Allison Elder
Director of Legal Services

5-21-2018

Date

DEFINITIONS

Access Easement – This access easement component allows access to the flood retarding dam structures and site so as to carry out operation and maintenance responsibilities.

Administration Fee – Monetary payment for internal review of a completed application packet.

Application Fee – Monetary payment made at the time a completed application packet is delivered to SARA.

Auxiliary Spillway – A spillway designed to convey excess floodwater exceeding the capacity of the principal spillway.

Consideration – Monetary payment for the use of SARA land holdings shall be based on the full fair market value of the property and the amount of land to be used.

Dam – A barrier that stops or restricts the flow of water.

Development – Any manmade change to improved or unimproved real estate, including but not limited to, adding buildings or other structures, utilities, dredging, tilling, grading, paving, excavation, or drilling operations.

Fencing - The fence and gates around the dam and auxiliary spillway are customarily the property of SARA. Any changes or modifications to the existing fences owned by SARA require prior written approval of SARA. Property line fences located within the easement are not customarily the responsibility of SARA. It should be noted that the fenced-in area around the dam and auxiliary spillway is not necessarily an indicator of the easement area.

Flood Pool – The volume of floodwater storage between the primary spillway crest and the top of the dam.

High Hazard Dam – A dam located where failure may cause loss of life, serious damage to homes, industrial and commercial buildings, important public utilities, main highways, or railroads.

Inundation Easement – The inundation easement component corresponds to the flood pool. (Note: This is not the 100-year floodplain, which is determined by the Federal Emergency Management Agency (FEMA).)

Inundation Pool – The volume of floodwater storage between the primary spillway crest and the top of dam.

Land Use – The permitted use of SARA real estate by a party outside of SARA.

Principal Spillway – The primary outlet device for a stormwater impoundment. It typically consists of a riser structure with a conduit or pipe outlet that extends through the embankment.

Sediment Pool – The volume of storage below the principal spillway crest elevation.

Spillway Crest – The control elevation of the principal or auxiliary spillway.

Structure Easement – The structure easement includes the dam, auxiliary spillway (to the outlet channel), and principal spillway/pipe outlet works. Although most structure easements are not defined by metes and bounds, this easement component is considered to follow the toe of the dam and spillway embankments with an offset to allow for access for maintenance and repair. The offset is 50' from the toe of the dam and 50' from the outermost top or toe of slope of the spillway embankments (see Figure 2).

Toe of Dam – The junction of the downstream face of a dam embankment with the natural ground surface.

Water Use – The right to use water impounded in the normal pool is governed by easement terms and applicable Texas law.

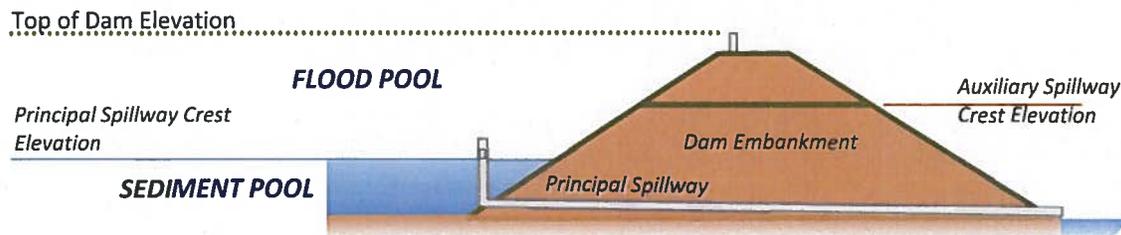


Figure 1: Vertical Zones of a Flood Control Structure

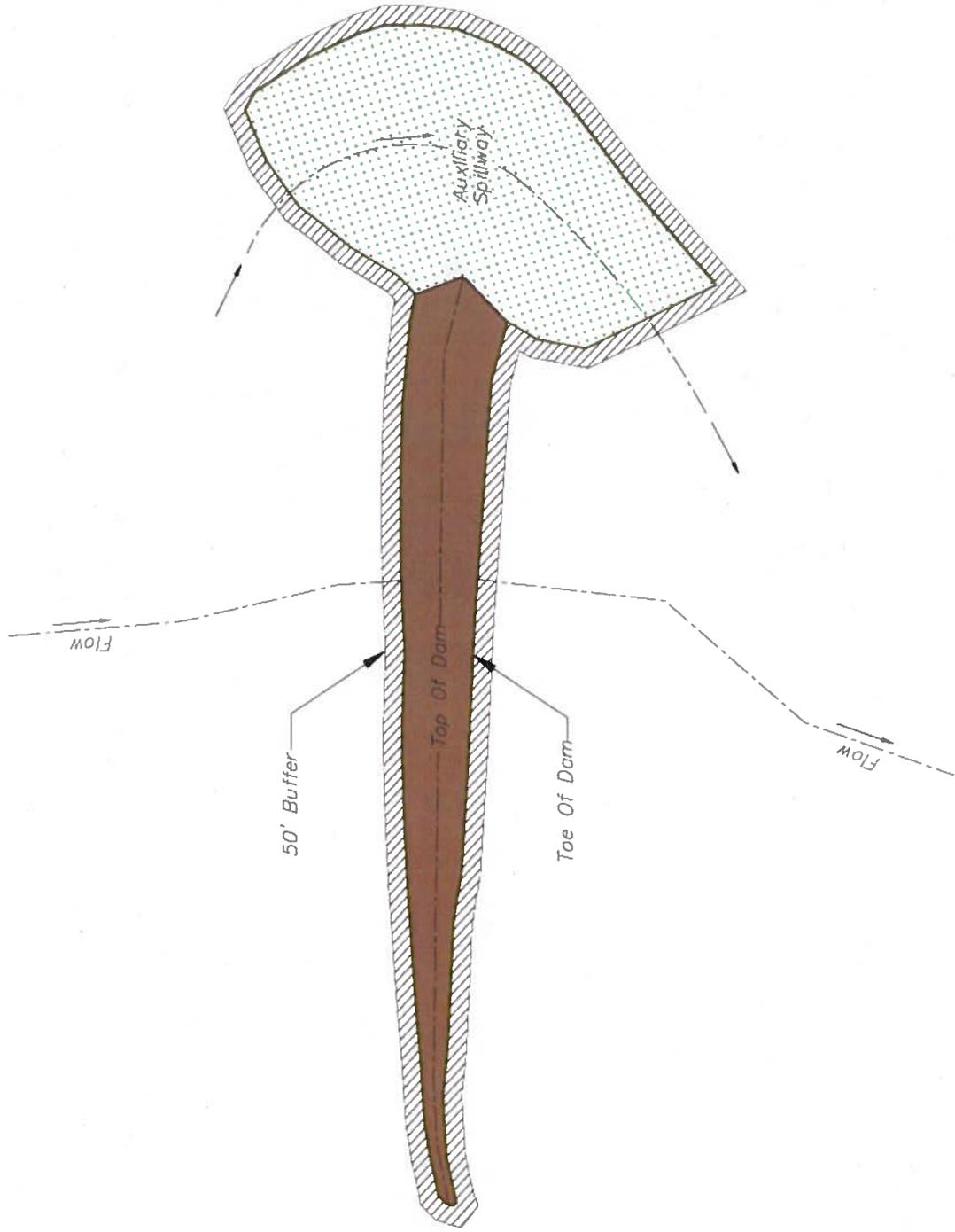


Figure 2: Operational Buffer Zone

San Antonio River Authority

Flood Water Retention Dams

Leon Creek Watershed

LC1 - Wildlake Dam

Salado Creek Watershed

- SC1 - Camp Bullis Dam
- SC2 - Lewis Creek Dam
- SC4 - Blanco Rd Dam
- SC5 - Panther Springs Creek Dam
- SC6 - Hill Country Village Dam
- SC7 - Walker Ranch Dam
- SC8 - Stone Oak Park Dam
- SC9 - Classen Ranch Dam
- SC10 - Mud Creek Dam
- SC11 - Elm Creek Dam
- SC12 - Elm Waterhole Creek Dam
- SC13A - Judson Rd Dam
- SC13B - Bulverde Rd Dam
- SC15 - McAllister Park Dam

Martinez Creek Watershed

- MC1 - Binz Engelman Dam
- MC2 - Martinez Creek Dam
- MC3 - Escondido Creek Dam
- MC4 - Converse Dam
- MC5 - Live Oak Dam
- MC6A - Salatrillo Creek Dam

Calaveras Creek Watershed

- CC3 - Calaveras Creek Dam
- CC5 - East Central Dam
- CC6 - Chupaderas Creek Dam
- CC7 - Stuart Rd Dam
- CC8 - Cooksey Rd Dam
- CC9 - Sulphur Springs Rd Dam
- CC10 - Parita Creek Dam

Escondido Creek Watershed

- EC1 - Esse-Boehm Lake
- EC2 - Roy Young Lake
- EC3 - John Beck Lake
- EC4 - Hailey Lake
- EC5 - Robert May Lake
- EC6 - Crews Lake
- EC7 - Dunn Lake
- EC8 - Jauer Lake
- EC9 - Foegelle Lake
- EC10 - Wespahl Lake
- EC11 - Ingram Lake
- EC12 - Sam Kotara Lake
- EC13 - Willie D Pace Lake

