



Texas Dam Safety Program, MC 174
Field Operations Support Division, Office of Compliance and Enforcement
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711

Attachment D

Page 1

INFORMATION SHEET: PROPOSED NEW CONSTRUCTION, MODIFICATION, REPAIR, ALTERATION, OR REMOVAL OF A DAM

(PLEASE PRINT OR TYPE)

Reference 30 Texas Administrative Code, Chapter 299, Dams and Reservoirs

PLEASE CHECK ONE: ☐ New ☐ Modification ☐ Repair ☒ Removal ☐ Alteration

SECTION 1: OWNER INFORMATION

Owner's Name City of San Marcos Title _____

Organization City of San Marcos

I have authorized the submittal of the final construction plans and specifications to the TCEQ Dam Safety Program according to 30 TAC Chapter 299.

(Signature of Owner)

(Date)

Owner's Address 630 E Hopkins Street

City San Marcos State TX Zip Code 78666

Phone Number (512) 393-8100 Emergency Contact Phone () _____

Fax Number () _____ E-mail jmillier@sanmarcostx.gov

Owner Code (Please check one): ☐ Federal (F) ☒ Local Government (L) ☐ Utility (U) ☐ Private (P) ☐ State (S)
☐ Other (O) please specify: _____

Dam and Reservoir Use (Please check one): ☐ Augmentation ☒ Diversion ☐ Domestic ☐ Erosion Control
☐ Evaporation ☐ Flood Control ☐ Fire Control ☐ Fish ☐ Hydroelectric ☐ Industrial
☐ Irrigation ☐ Mining ☐ Municipal ☐ Pollution Control ☐ Recreation ☐ Stock Water
☐ Settling Ponds ☐ Tailings ☐ Waste Disposal ☐ Other, please specify: _____

Engineering Firm USFWS

Project Engineer Wayne Stancill Texas P.E. License Number WY PE 15287

Engineering Firm Address 420 S. Garfield Ave Ste 400

City Pierre State SD Zip Code 57501

Phone (605) 224-8693 Fax () _____

E-mail wayne_stancill@fws.gov

SECTION 2: GENERAL INFORMATION

Name of Dam Cape's Dam

Other Name(s) of Dam Thompson Island Dam

Reservoir Name N/A

Location San Marcos, TX Latitude 29.8728 Longitude -97.9318

County Hays Stream Name San Marcos River

River Basin Guadalupe Topographic Map No. N/A

Distance and Direction from Nearest City or Town In San Marcos, TX

TX Number N/A Water Rights Number N/A none

If you have questions on how to fill out this form or about the Dam Safety Program, please contact us at 512-239-5195. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-3282.

Summary of Comments on Signed TCEQ Information highlighted-omissions-and-errors.pdf

Page: 1

	Number: 1 Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
	Number: 2 Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:26:13 PM
	Project Engineer: Why is no Texas-based Public Engineer available or willing to sign this statutorily-required information?		
	Number: 3 Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
	Number: 4 Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
	Number: 5 Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
	Number: 6 Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:24:48 PM
	Sec 2: General Info: Why is this readily available information listed as "N/A"? The correct answer is USGS Quad ID: o29097g8, USGS Quad Name: San Marcos South. NOTE: The Topo Map Name is included & correctly described in TPWD's Sand & Gravel Permit.		
	Number: 7 Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
	Number: 8 Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM

SECTION 3: INFORMATION ON DAM

Classification

Size Classification: ☐ Large ☐ Medium ☒ Small
Hazard Classification: ☐ High ☒ Significant ☒ Low
Number of People at Risk N/A Study Year N/A

Type of Dam: ☒ Concrete ☐ Gravity ☐ Earthfill ☒ Rockfill ☐ Masonry ☐ Other (specify) _____

Dam Structure (dimensions to nearest tenth of foot, volume to nearest acre-foot or cubic yard, areas to nearest acre):

Spillway Height 3.7 ft (natural surface of ground to bottom of emergency spillway at longitudinal centerline)
Embankment Height 3.7 5 ft ft (natural surface of ground to crest of dam at centerline)
Structural Height 3.7 8.7 ft ft (bottom of cutoff trench to crest of dam at centerline)
Length of Dam 105 168 ft ft Crest Width N/A 5 ft ft
Normal Pool Elevation 3.7 554' above SL Principal Spillway Elevation N/A 554' above SL
Emergency Spillway Elevation N/A 554' above SL Top of Dam Elevation N/A 554' above SL
Embankment Volume N/A 328 cu yd ac-ft (at top of dam)
Maximum Impoundment Capacity 3 57.4 ac-ft ac-ft (at top of dam)
Normal Reservoir Capacity N/A est 40 ac-ft ac-ft (at normal or conservation pool)
Reservoir Surface Area 0.5 3.2 acres acres (at normal or conservation pool)

Outlet

Outlet Diameter: N/A in ft (check one)
Type: N/A

Principal Spillway

Type: ☐ Natural ☐ Riprap ☒ Concrete ☐ CMP ☐ RCP ☐ Other
Width (Diam.): 105 168 ft ft Capacity: N/A 200-300 cfs cfs

Emergency Spillway The Mill Race acts as the Emergency Spillway for Capes Dam

Type: ☒ Natural ☐ Riprap ☒ Concrete ☐ CMP ☐ RCP ☐ Other
Width (Diam.): N/A 20-30 ft ft Capacity: N/A 50-65 cfs cfs
Total Spillway Capacity: N/A 75-100 cfs cfs (crest of the dam)

SECTION 4: HYDROLOGIC INFORMATION

PMF = Probable Maximum Flood

Required Hydrologic Criteria (% PMF) N/A % PMF Passing N/A
PMF Study Year N/A
Drainage Area: N/A 205,440 acres at Luling acres, or 321 sq mi sq mi
Curve Number (AMC III condition) N/A AMC=Antecedent Moisture Conditions
Time of Concentration N/A 2-4 hours hr
Peak Discharge N/A est 300,000cfs in May 2015 floods- gauge flooded & inoperable
Peak Stage N/A 27'-28' above usual elevation of 554 ft-MSL, or 581-583 ft-MSL
Storm Duration Causing Peak Stage N/A 24 hours hr

Section 4: Hydrologic Information: Why is not a single value provided on this Dam Removal permit?

How can a permit to remove a dam on an important Central Texas **River** be allowed to omit **ALL VALUES** for critical rates of Water Flow?

Page: 2

Number: 1	Author: kelley	Subject: Text Box	Date: 9/17/2016 5:40:32 PM
Sec 3: Info on Dam Why are there no studies available for No of people at Risk?			
Number: 2	Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
Number: 3	Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
Number: 4	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
5 ft			
Number: 5	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:03:24 PM
Structural Height: is the addition of Spillway height + Embankment Height			
Number: 6	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
8.7 ft			
Number: 7	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:03:01 PM
Length of dam: measured 8/18/2016 with surveyors tape show Capes Dam at 168' across (72' + 54' + 42'), 25' width at base, 5' at crest			
Number: 8	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
168 ft			
Number: 9	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
5 ft			
Number: 10	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:03:43 PM
Normal Pool Elevation: The entered value of "3.7" does not make sense. The form asks for the <u>elevation</u> as measured above "SL" (Sea Level). A value, measured at the <u>lowest possible point</u> on Capes Dam is 554' above SL .			
NOTE: Possible values for the elevation of Capes Dam range from a low of 554' above SL, to 580' above SL, a range of 26 ft in elevational difference, representing the varying levels to which Capes Dam has been heavily eroded, due to 3 historic 100-500 year floods, occurring Halloween 2013, Memorial Day 2015, and Halloween 2015.			
Number: 11	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:02:35 PM
Principal Spillway Elevation: The elevation of 554 ft above SL can be used for all of the values asking for the elevation of Capes Dam, since 554' SL is the LOWEST possible elevation.			
Number: 12	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
554' above SL			
Number: 13	Author: kelley	Subject: Line	Date: 9/17/2016 5:37:26 PM
Number: 14	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
554' above SL			
Number: 15	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
554' above SL			
Number: 16	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
554' above SL			
Number: 17	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:02:15 PM
Embankment Volume: Calculated using the values above with online calculator: http://www.onlineconversion.com/object_volume_trapezoid.htm			
Base1 = 5'			
Base2 = 25'			
Total Height = 9'			
Partial Height = 5'			
Length = 168'			
Volume = 8867 sq ft = 328 cu yd			
Number: 18	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
328 cu yd			
Number: 19	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
Why are these values Not Available? when anyone can measure them?			
Number: 20	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:04:39 PM
Maximum Impoundment Capacity: This figure is derived from capacity statements made by Ken Saunders and Karim Aziz, TPWD River Studies Program in TPWD 2015 Newsletter, History of Dams on the Upper San Marcos River: https://tpwd.texas.gov/publications/pwdpubs/media/pwd_br_t3200_003_3_15.pdf			
While historical figures, Capes Dams' maximum holding capacity of 2,500,000 cubic ft quoted by TPWD River Studies employees in 2015 is thought to still be a valid approximation.			

Comments from page 2 continued on next page

2,500,000 cu ft = 57.4 ac-ft

☰	Number: 21	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	57.4 ac-ft			
↗	Number: 22	Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
💬	Number: 23	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:05:40 PM
	Normal Reservoir Capacity: Estimated 50 ac-ft at 200-300cfs with no breach in Capes Dam as currently (Aug 2016) exists.			
	With breach it is estimated Capes Dam is only holding 40+ ac-ft at 200-300 cfs.			
☰	Number: 24	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	est 40 ac-ft 200-300 cfs			
💬	Number: 25	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:05:31 PM
	Reservoir Surface Area: This figure is arrived at using 3521ft (est length of river from Capes Dam to Rio Vista Dam) multiplied by the average width of the river est. 40', equals 140,840 sq.ft or 3.2 acres			
↗	Number: 26	Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM
☰	Number: 27	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	3.2 acres			
☰	Number: 28	Author: kelley	Subject: Text Box	Date: 9/17/2016 6:00:43 PM
	Incorrect figures			
💬	Number: 29	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:07:06 PM
	Principal Spillway Capacity: estimated as 200-300 cfs as daily average from Halloween 2013 - Sept 2016.			
☰	Number: 30	Author: kelley	Subject: Text Box	Date: 9/17/2016 5:05:49 PM
	168 ft			
☰	Number: 31	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	200-300 cfs			
💬	Number: 32	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:08:33 PM
	Emergency Spillway: Marked 'Natural' since the walls and floor of the Mill Race are nature soil and rock - not man made.			
☰	Number: 33	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	The Mill Race acts as the Emergency Spillway for Capes Dam			
☰	Number: 34	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	X			
💬	Number: 35	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:11:17 PM
	Emergency Spillway Capacity: estimated at 50-65 cfs, when the Principal Spillway is at 200-300 cfs			
💬	Number: 36	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:09:54 PM
	Emergency Spillway Width (Diam) The Mill Race measures at between 20-30 feet width.			
☰	Number: 37	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	20-30 ft			
☰	Number: 38	Author: kelley	Subject: Text Box	Date: 9/17/2016 5:11:40 PM
	50-65 cfs			
💬	Number: 39	Author: kelley	Subject: Sticky Note	Date: 9/17/2016 5:13:04 PM
	Emergency Spillway - Total Spillway Capacity: Estimated at 75-100 cfs at peak discharge (flood) stage.			
☰	Number: 40	Author: kelley	Subject: Text Box	Date: 9/17/2016 5:11:56 PM
	75-100 cfs			
☰	Number: 41	Author: kelley	Subject: Text Box	Date: 9/17/2016 5:44:12 PM
	Section 4: Hydrologic Information: Why is not a single value provided on this Dam Removal permit?			
	How can a permit to remove a dam on an important Central Texas <u>River</u> be allowed to omit <u>ALL VALUES</u> for critical rates of Water Flow?			
☰	Number: 42	Author: kelley	Subject: Text Box	Date: 9/17/2016 4:56:39 PM
	PMF = Probable Maximum Flood			
○	Number: 43	Author: kelley	Subject: Oval	Date: 9/17/2016 5:38:37 PM
○	Number: 44	Author: kelley	Subject: Oval	Date: 9/17/2016 4:56:39 PM
↗	Number: 45	Author: kelley	Subject: Line	Date: 9/17/2016 4:56:39 PM

Comments from page 2 continued on next page

Section 4 - Drainage Area:

Information of 205,440 acres at Luling from Page 37: <https://repositories.tdl.org/twdl-ir/bitstream/handle/10850/1357/Water%20Availability%20in%20the%20Guadalupe-San%20Antonio%20River%20Basin.pdf?sequence=1>

Drainage area of SMR at Luling 331 sq miles = 205,440 acres

From https://en.wikipedia.org/wiki/San_Marcos_River

Entire SMR:

Length 75 mi (121 km)

Basin 522 sq mi (1,352 km²)

Discharge-ave.236 cfs (7 m³/s)

205,440 acres at Luling

321 sq mi

AMC=Antecedent Moisture Conditions

2-4 hours

est 300,000cfs in May 2015 floods- gauge flooded & inoperable

27'-28' above usual elevation of 554 ft-MSL, or 581-583 ft-MSL

24 hours