

From: Dianne Wassenich
To: [Brake, Alison](#)
Subject: [EXTERNAL] 2016 file on Cape's Dam, please forward to the HPC
Date: Friday, August 31, 2018 8:49:53 AM
Attachments: [record op ed from Drs. Schwartz and Longley.PNG](#)
[cape's dam from tpwd.pdf](#)
[cape's dam letter from usfws.pdf](#)
[Cape's dam letter to editor.docx](#)
[Cape dam letter to council July 2016.docx](#)
[Capes Dam Breach 8-5-16 USFWS report.pdf](#)

Alison, please forward to your Historic Preservation Commission since they are discussing Cape's dam. These attachments are from 2016 when the scientists and SMRF pointed out how important it is, to remove the dam built in the riverbed of rock rubble and wood posts, with metal inserted later. These include an engineer's report done by US Fish & Wildlife Service. In case your members do not know, Dr. Glenn Longley has retired from being the head of the research facility at the University called the Edwards Aquifer Research and Data Center. Dr. Ben Schartz is now the head of that facility, in the Freeman Bldg on campus.

The letters to the editor and council attached are only two of the many written by SMRF's board and staff to refute the shockingly false allegations that "this dam and mill race are good for the river and for endangered species", but we can certainly address some additional items when we speak to you next week at your meeting. We plan to be there to answer any questions as well. These two letters can help you understand the need to remove the dam, we hope. There are attachments also that are letters and power point reports from various scientists.

Building a new dam, which is what would have to be done if the city wanted to have a dam there, would certainly be very difficult. Besides the expense of demolition and construction, there would be years-long permit processes. USFWS knows exactly how harmful the Rio Vista project was, and the impacts later to the river, and we suspect they will find it difficult to permit pouring concrete in the riverbed to create a permanent obstruction. Dam permits are very difficult to get these days, even where there is not a population of endangered species. That is because science now know much more about the harm dams do, and we all realize we did not know those facts 100 years ago. When we know better, we should attempt to do a better job with our scarce and precious natural resources.

I realize you are concerned with history only, but I must remind you that the history of the river and the route the river has taken, pre-dates the dam. And to alter that river route is harmful. Floods are now trying to take the shortcut provided by the ever increasing size of the washed out millrace, and trying to wash away the island now. 1/3 of the river flows into the mill race and that increases with each flood that widens the mill race. This is why Mr. Stokes had to build so much concrete around the mill race, to try to keep it a certain size he preferred. Those concrete edges and sidewalks are now undercut by floods and will collapse. Trying to maintain all that concrete encasement of a river is an expensive losing battle, especially with the increased flooding caused by paving so much of the river's watershed which increases flood velocities and heights of the floods, as well as frequencies.

The area has had much fill and alteration over the past 50 years. We believe that the course of the river will be changed gradually if the dam is kept, and the actual riverbed is not going to have enough water in it, during dry times. Often in the future, we will see less than 100 cfs in river flow, divided even further between mill race and real riverbed. This is not good for

species, to split the river into two small streams. That means that both streams will be warmer which is conducive to bacterial growth very harmful to humans and wildlife. The mill race is particularly vulnerable as a swimming spot used by those who do not know that warm water can carry deadly bacteria in the summer.

History is so important to preserve, we agree. There is much left in the area to preserve and use kiosks and signs to document artifacts and the pieces left of mill or hydro power equipment. This can be done without harm to human health and safety, and without harm to the river and wildlife. We urge you to consider the river itself and its history, as well as human health and safety in your recommendations. There are ways to meet all these critical needs, and other communities have found ways, and removed nonfunctional and harmful dams.

Dianne Wassenich
Executive Director
San Marcos River Foundation

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Dear Mayor and City Council Members:

Thank you for listening to what is best for the specific San Marcos River, and moving the permitting process along to remove Cape's Dam. There are serious public safety problems posed by the crumbling structure, and the sediment accumulating behind it is not good for the species that inhabit the river, nor for recreation. The computer model that the city commissioned by Dr. Hardy was important to determine what the shape and depth of the river channel would be after dam removal, and it is good that you are listening to him and many other scientists who have worked in the San Marcos River for decades. These include scientists at Texas Parks and Wildlife Department, U.S. Fish and Wildlife Service and the Edwards Aquifer Research and Data Center (Dr. Glenn Longley and Dr. Ben Schwartz).

The river in town has two dams and thus much lake-like water in it. The very short stretch of flowing river near Saltgrass is prized for recreation. We anticipate that the stretch of flowing river just below IH 35, once the dam is removed, will also be enjoyed for its flowing characteristics by all kinds of recreation, just as the area near Saltgrass is now. Not having to portage a crumbling and dangerous dam will be an immediate benefit to recreation and to public safety.

We look forward to the planning process for the parks around Thompson's Island and Stokes Park, which we know will include much public input. We know there will be work to repair flood damage and configure the parks with good access points for all kinds of recreation including fishing, boating, and swimming. It will also be a great place for handicapped access points to be created since some of the banks are low at Stokes Park and Thompson's Island in particular.

We believe you were particularly wise to wait on decisions re the use of the mill race until after the dam is removed. Much study will need to be done to understand if there are possible uses of the mill race for stormwater for the Blanco Garden neighborhood, and how much connection to the river the mill race has under Thompson's Island, plus how to preserve historic aspects---before decisions are made on the mill race. And of course you wanted to wait to see how sediment moves downstream from the piles accumulated behind the dam, and how the river channel will take a more natural shape.

SMRF was established over 30 years ago to protect public access, and preserve the natural beauty, purity and flow of the San Marcos River. Removing the dam is an important step to protecting the river, we believe, and making it a safe and fun place for recreation. We know that the science supports this removal, and it is viewed as so important that USFWS has offered to remove it for the city. Thank you for listening to this overwhelming evidence that removing the dam is good for fish and all the species in the river, as well as for recreational use.

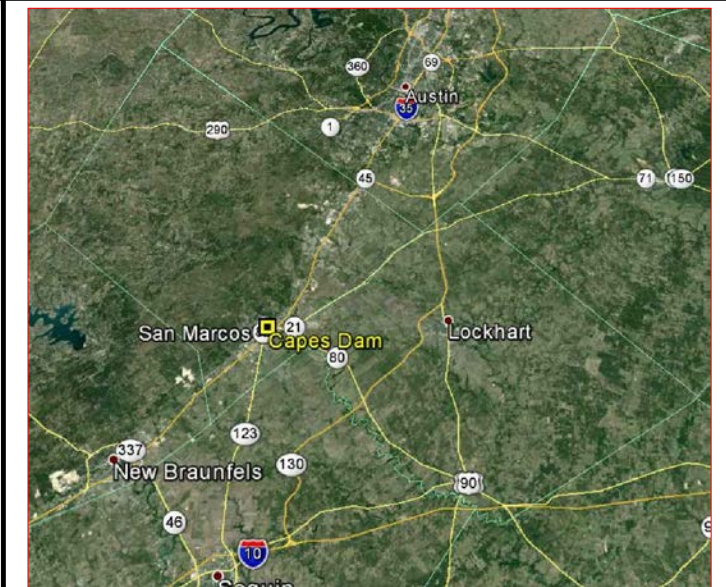
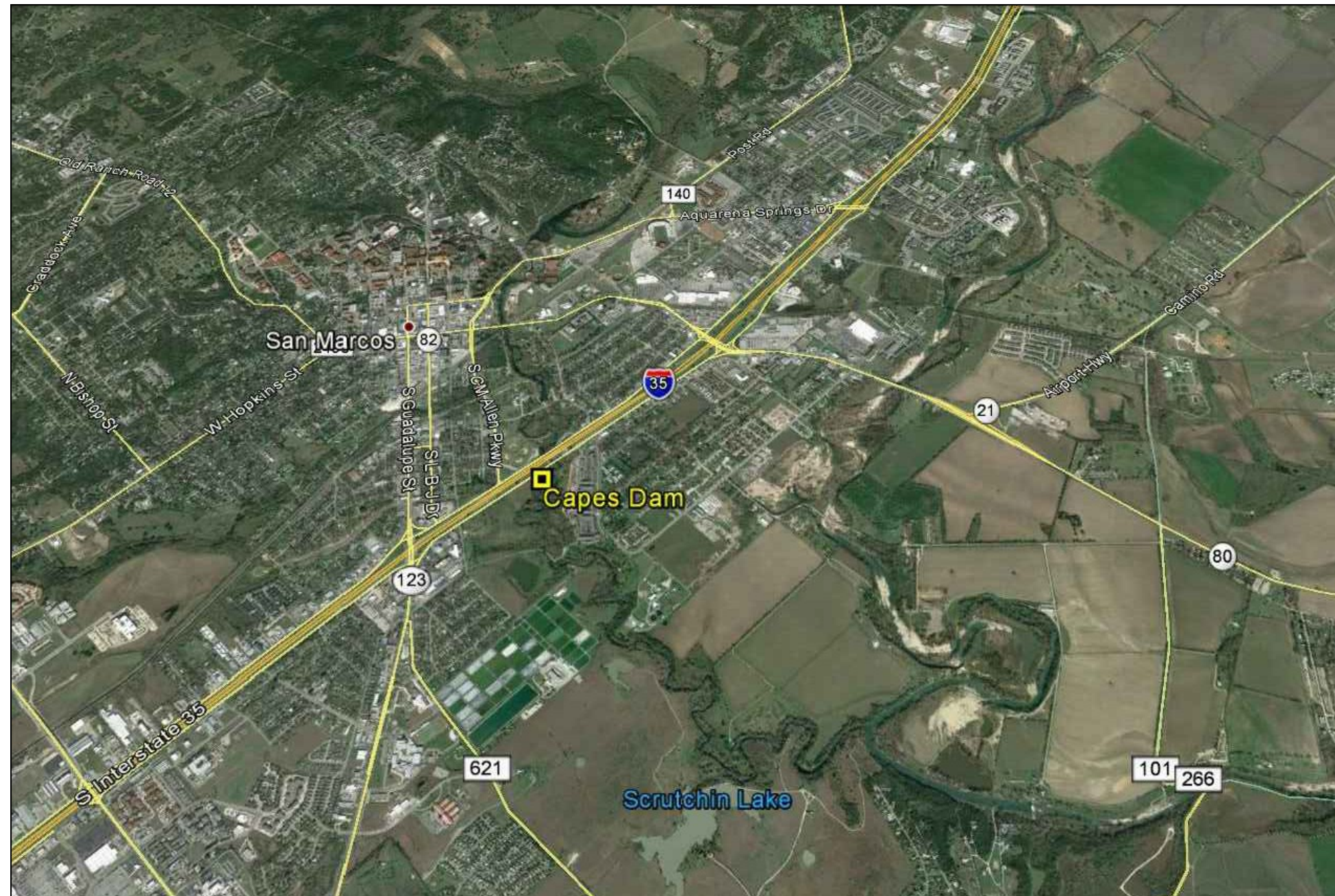
Signed _____ Date _____



U.S. FISH & WILDLIFE SERVICE

SAN MARCOS, TEXAS

CAPE'S DAM-BREACH & CHANNEL RESTORATION



VICINITY MAP
NO SCALE

DRAWING INDEX

SHEET NO.	DRAWING TITLE
1 OF 12	VICINITY MAP, SITE PLAN AND DRAWING INDEX
2 OF 12	EXISTING SITE, ALIGNMENT & SECTION LINE SAMPLING LOCATIONS
3 OF 12	EXISTING SITE PHOTOS
4 OF 12	EXISTING & PROPOSED ALIGNMENT PROFILE DETAILS
5 OF 12	EXISTING SITE SECTION LINE DETAILS
6 OF 12	PROPOSED SITE SECTION LINE DETAILS AT DAM
7 OF 12	MILL RACE GRADE CONTROL & EROSION CONTROL DETAILS
8 OF 12	LOCATION OF ADDITIONAL STRUCTURES SCHEDULED FOR REMOVAL
9 OF 12	PHOTOS OF ADDITIONAL STRUCTURES SCHEDULED FOR REMOVAL
10 OF 12	NEW ACCESS POINT LOCATIONS
11 OF 12	NEW ACCESS POINT PHOTOS
12 OF 12	STAGING AREA LOCATION
13 OF X	PLAN DETAILS
14 OF X	PLAN DETAILS

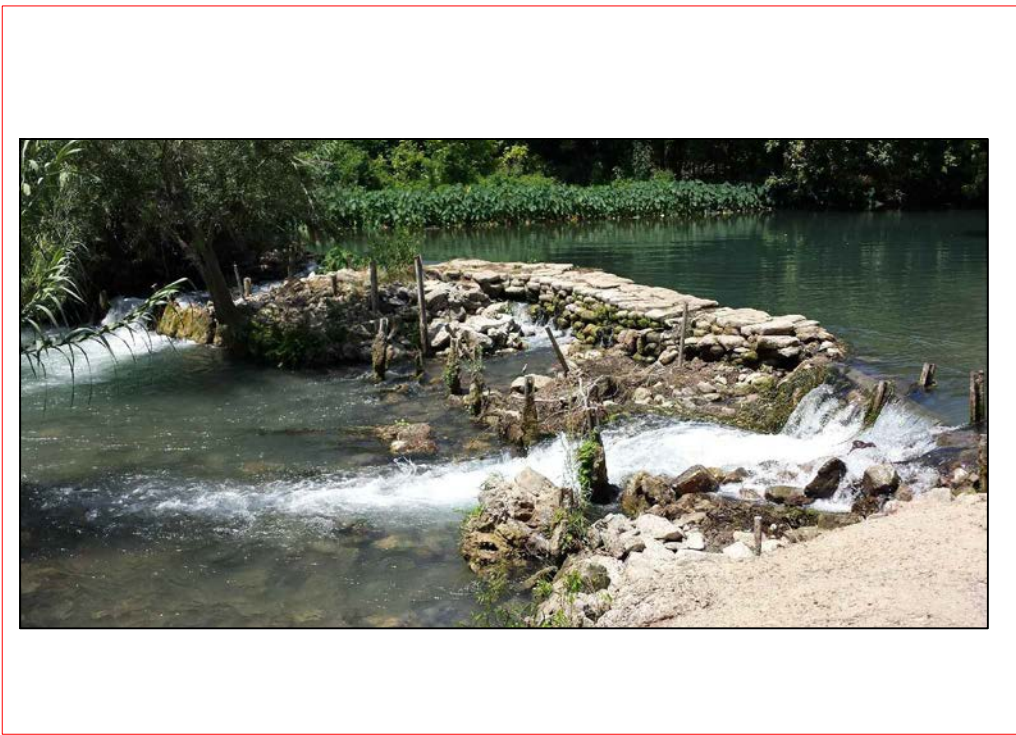


UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
REGION 6 ENGINEERING - DENVER, COLORADO

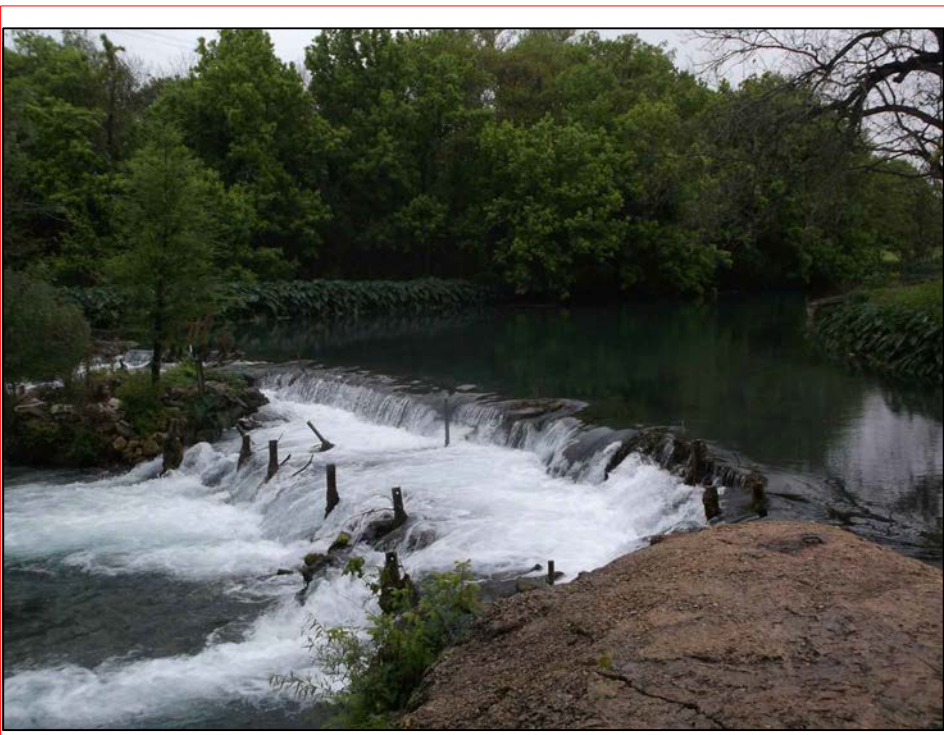
REGIONAL ENGINEER	DATE	SAN MARCOS, TEXAS	
PROGRAM SUPERVISOR	DATE	SAN MARCOS, RIVER	
ASST. REGIONAL DIR.	DATE	HAYS	TEXAS
DIVISION	INITIALS / DATE	CAPES DAM-BREACH & CHANNEL RESTORATION	
SAFETY		VICINITY MAP, SITE PLAN AND DRAWING INDEX	
INDUSTRIAL HYGIENIST		DESIGNED: W. STANCILL	DRAWN: W. STANCILL
CULTURAL RESOURCES		CHECKED: W. RICE	
DATE: 8/5/2016		PROJECT NO.: 6R-TX-2016-002	SHEET 1 OF 12



1. SECTION LINES WERE SAMPLED AT THREE LOCATIONS ALONG THE ALIGNMENT: UPSTREAM (0 + 12.30), CAPES DAM (0 + 73.38) AND DOWNSTREAM (1 + 17.38).
2. SECTION LINES ARE DISPLAYED ON SHEETS 5 & 6.



CAPES DAM, ~ 300 CFS, VIEW ACROSS DAM FROM MILLRACE INLET



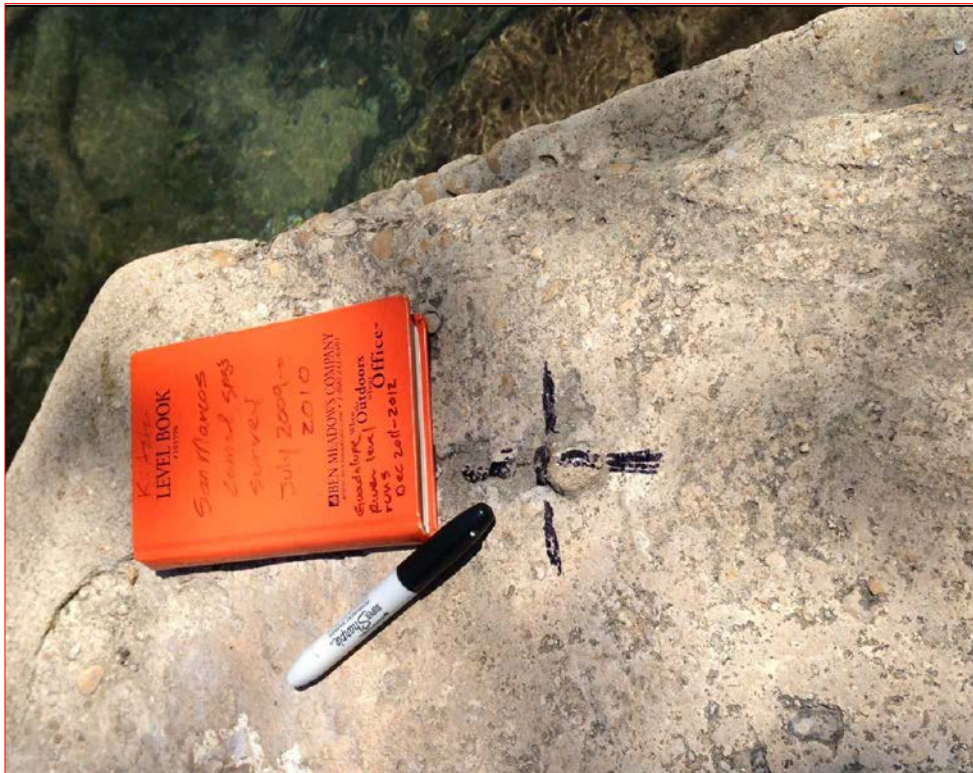
CAPES DAM, ~ 600 CFS, VIEW ACROSS DAM FROM MILLRACE INLET



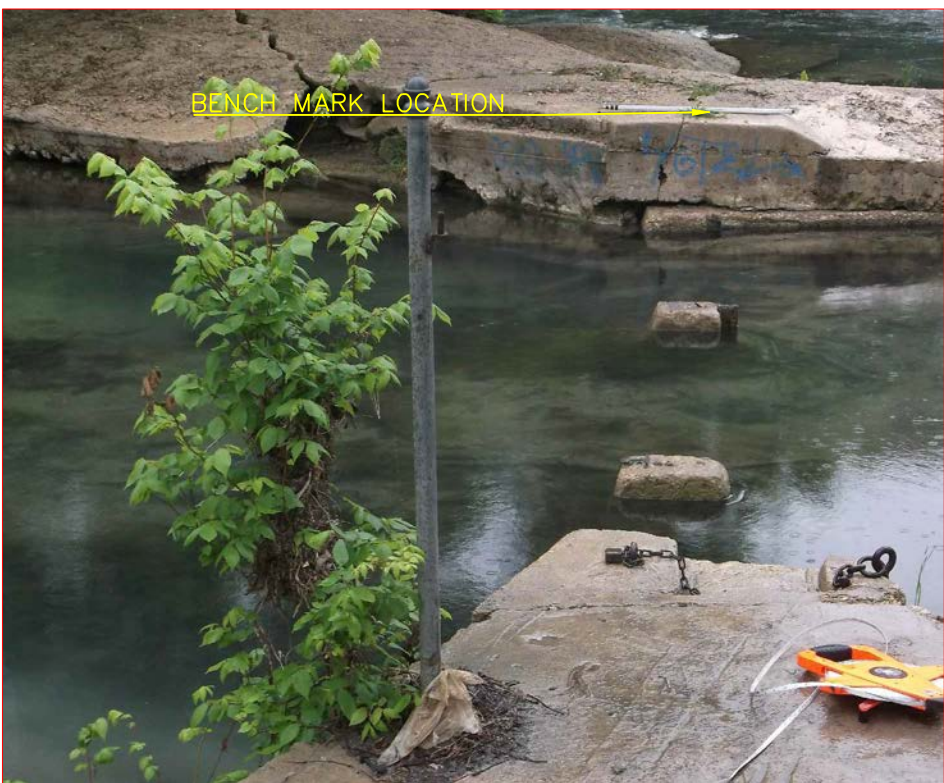
MILLRACE INLET, VIEW DOWNSTREAM TO UPSTREAM



CAPES DAM, ~ 600 CFS, VIEW DOWNSTREAM TO UPSTREAM



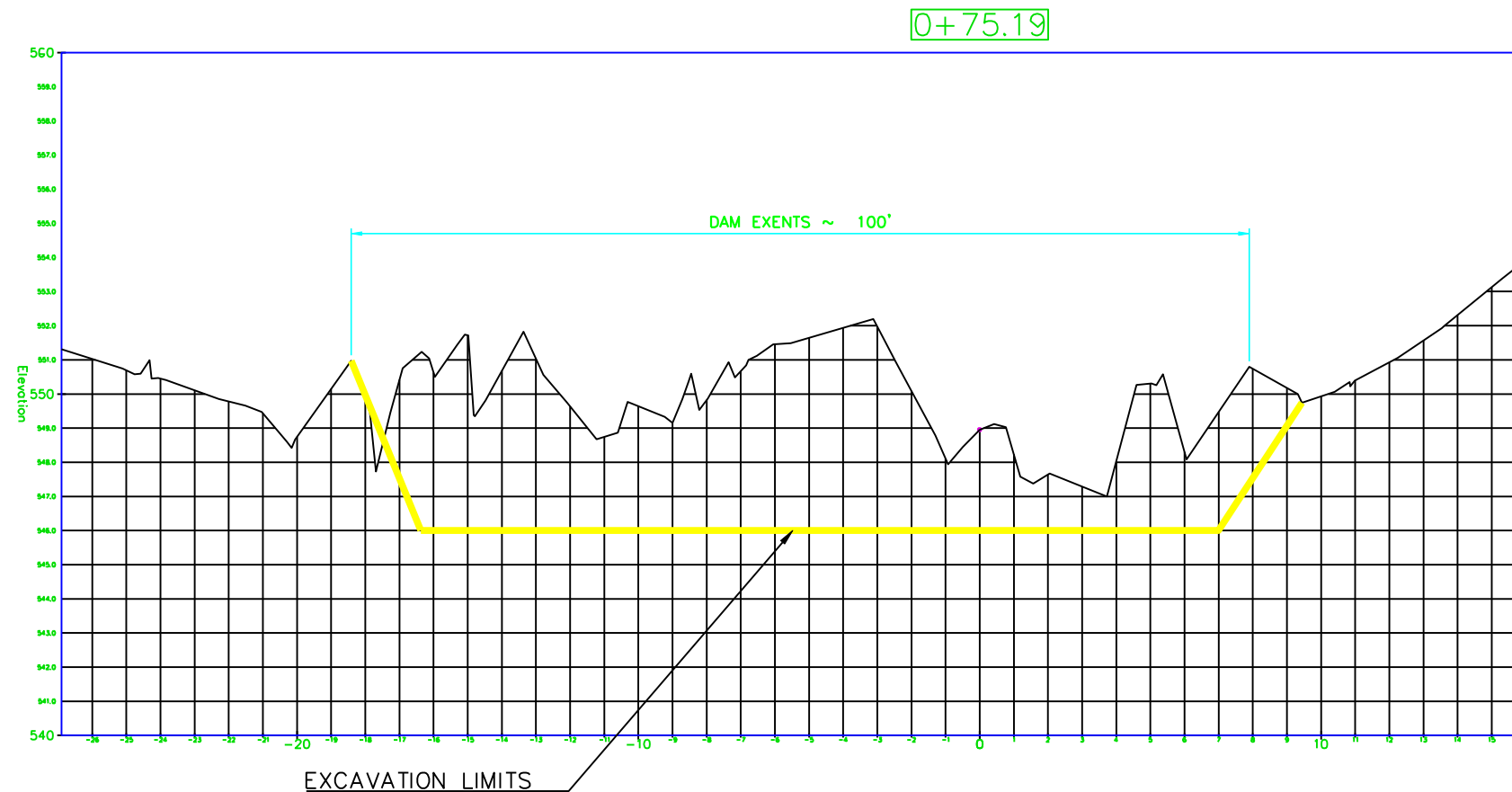
MILLRACE BENCH MARK CLOSEUP



MILLRACE ENTRANCE, VIEW LEFT BANK TO RIGHT BANK

EXISTING SITE
NO SCALE

SAN MARCOS, TEXAS		EXISTING SITE PHOTOS			SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION					3
DESIGNED W STANCILL	DRAWN W STANCILL	CHECKED W RICE	DATE 8/2016	DRAWING NO GR-TX-2016-002	SHEET 3 OF 12



EXISTING AND PROPOSED CROSS SECTION PROFILE PARALLEL WITHLONG AXIS OF DAM CENTERLINE

NOTES:

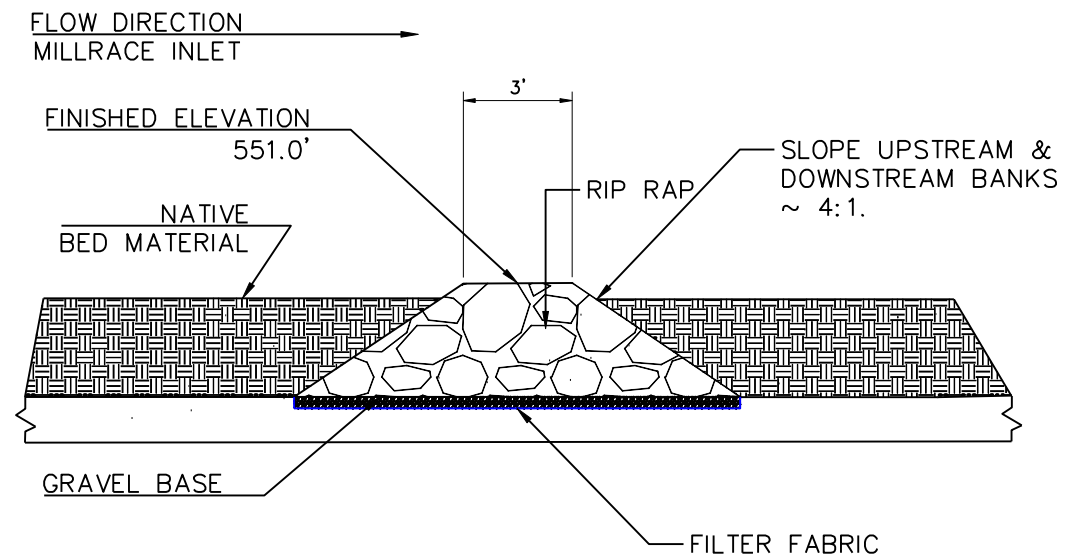
ELEVATIONS ARE REPORTED AS NGVD-88 AND TIED TO THE BENCHMARK LOCATED ON THE RIGHT BANK OF THE MILL RACE RIGHT BANK CONCRETE WALL. SEE SHEET 3 (EXISTING SITE PHOTOS).

DAM REMOVAL & CHANNEL EXCAVATION

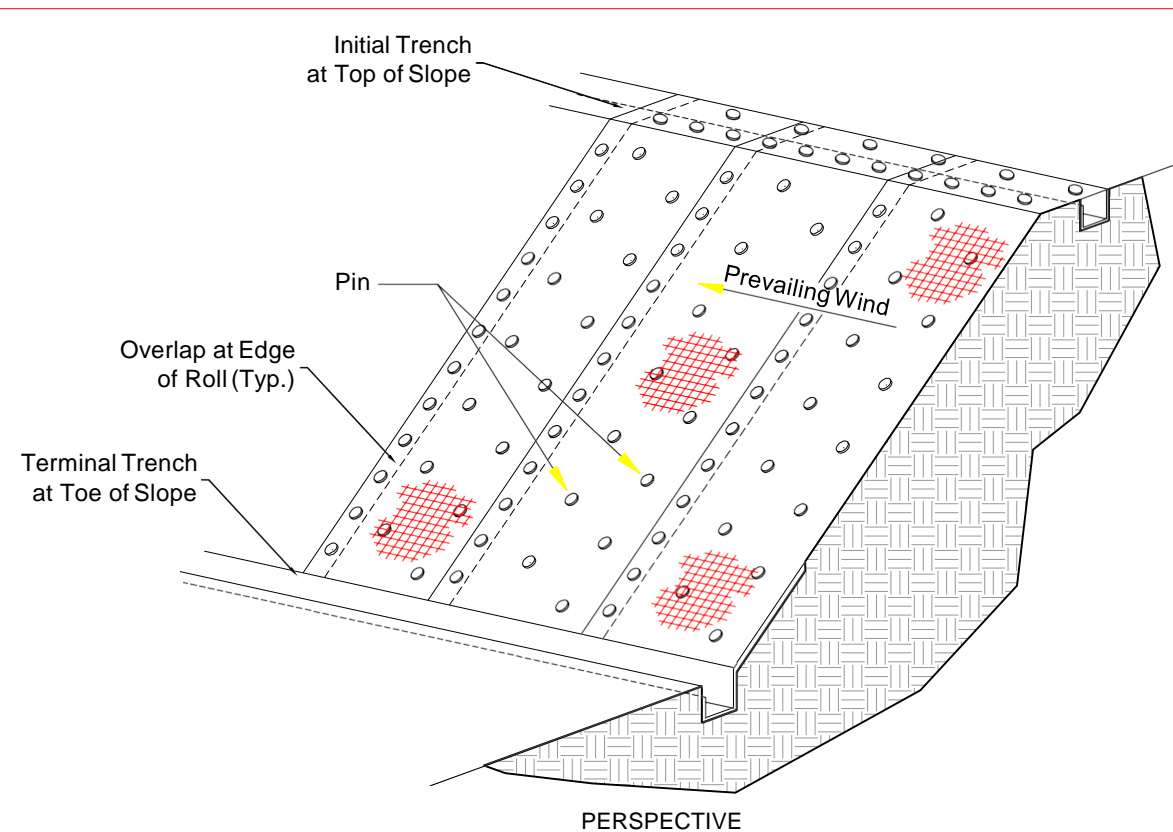
1. DAM WILL BE EXCAVATED FROM BANKLINE TO BANKLINE TO AN ELEVATION OF 546.0' OR REFUSAL.
2. EXCAVATED BANKLINES WILL BE SLOPED TO ~ 2:1 BUT FOLLOW THE EXISTING BANKLINE CONDITIONS WHERE POSSIBLE.
3. ALL EXCESS EXCAVATED MATERIAL WILL BE REMOVED FROM THE CHANNEL AND TRANSPORTED OFF SITE.
4. EXCAVATED MATERIAL TRANSPORTED OFF SITE WILL BE NO LARGER THAN 8 CUBIC FT.
5. REBAR WILL NOT BE REMOVED FROM EXCAVATED MATERIAL.
6. SILT AND OTHER DEPOSITIONAL MATERIAL STORED IN THE RESERVOIR AREA (UPSTREAM OF DAM) WILL NOT BE EXCAVATED.
7. THE LEFT BANK CHANNEL REQUIRES RESTORATION. THIS WORK WILL NOT COMMENCE UNTIL THE EXCAVATED CHANNEL HAS REACHED ITS NEW EQUILIBRIUM (NATURAL GRADE AND PLAN-FORM) AS DETERMINED BY THE US FISH & WILDLIFE SERVICE'S FIELD STAFF.
8. **IF AND WHEN NEEDED, INSTALL ROCK GRADE CONTROL STRUCTURE AT MILLRACE INLET TO CONTROL HEAD CUTTING AS DEPICTED ON SHEET 7 (BANK STAB & EROSION CONT).**

PROPOSED SITE
NO SCALE

SAN MARCOS, TEXAS		PROPOSED SITE			SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION		SECTION LINE DETAILS AT DAM			6
DESIGNED W. STANCILL	DRAWN W. STANCILL	CHECKED W. RICE	DATE 8/2016	DRAWING NO. GR-TX-2016-002	SHEET 6 OF 12



CENTERLINE PROFILE VIEW: RIP RAP GRADE CONTROL STRUCTURE



PLAN VIEW: INSTALLATION OF JUTE BANK STABILIZATION MATERIAL

PROPOSED SITE
NO SCALE



CAPE DAM AREA: EROSION CONTROL INSTALLATION LOCATIONS

NOTES:

RIGHT BANK REFERS TO RIGHT SIDE OF RIVER LOOKING IN THE DOWNSTREAM DIRECTION.

RIGHT BANK EROSION CONTROL:

1. COVER SECTION OF RIGHT BANK EXPOSED DURING DAM REMOVAL WITH JUTE FIBER ROLL.
2. JUTE FIBER ROLL MATERIAL EXTENDS Laterally ALONG THE BANK FOR ~ 60' AS DEPICTED IN THE ATTACHED PHOTO.

MILL RACE ENTRANCE (ONLY IF NEEDED TO AVOID HEAD CUTTING)

(INSTALL ROCK GRADE CONTROL STRUCTURE, ONLY IF AND/WHEN NEEDED, TO CONTROL HEAD CUTTING INTO THE MILLRACE.

1. EXCAVATE MILL RACE ENTRANCE TO ELEVATION 545.0' AND BACKFILL WITH RIP RAP TO ELEVATION 551.0.
2. INSTALL 6" OF GRAVEL OVER GEOTEXTILE FILTER FABRIC BEFORE BACKFILLING EXCAVATED AREA WITH RIP RAP.
3. RIP RAP EXTENDS HORIZONTALLY ~ 40' FROM BANKLINE TO BANKLINE AS DEPICTED IN THE ATTACHED PHOTO.
4. KEY RIP RAP INTO LEFT BANK 5'.
5. RIP RAP SHALL BE TIED INTO THE RIGHT BANK (CONCRETE LINED SIDE) TO MAXIMUM POSSIBLE EXTENT WITHOUT EXCAVATING THE CONCRETE.
6. ENGINEER WILL STAKE GRADE CONTROL STRUCTURE EXTENTS PRIOR TO CONSTRUCTION.

SAN MARCOS, TEXAS					SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION					7
DESIGNED W. STANCILL	DRAWN W. STANCILL	CHECKED W. RICE	DATE 8/2016	DRAWING NO. GR-TX-2016-002	SHEET 7 OF 12

**MILL RACE GRADE CONTROL
& EROSION CONTROL DETAILS**



NOTES

LOCATIONS DEPICTED ON IMAGE ARE APPROXIMATE. SEE GPS COORDINATES AND PICTURES ON SHEET 9 FOR DETAILED LOCATIONS.

ACCESS TO STRUCTURES 1, 2, AND 3 ARE GAINED FROM THE STAGING AREA DEPICTED ON SHEET 12.

ACCESS TO STRUCTURE 4 IS GAINED FROM CAPE STREET AS DEPICTED ON SHEET 12.

DEFICIENT STRUCTURE 1

1. LOCATION: -97.931534; 29.872978.
2. STRUCTURE IS A CONCRETE-SLAB COMPROMISED BY BANK EROSION.
3. NO INFORMATION EXISTS ON THE SLABS CONDITION OR EMBEDMENT DEPTH.
4. THE CONCRETE-SLAB SHALL BE BROKEN INTO PIECES NO LARGER THAN 8 CUBIC FEET AND EXPORTED OFF SITE.

DEFICIENT STRUCTURE 2

1. LOCATION: -97.931794; 29.872696.
2. STRUCTURE IS A CONCRETE-SLAB COMPROMISED BY BANK EROSION.
3. NO INFORMATION EXISTS ON THE SLABS CONDITION OR EMBEDMENT DEPTH.
4. THE CONCRETE-SLAB SHALL BE BROKEN INTO PIECES NO LARGER THAN 8 CUBIC FEET AND EXPORTED OFF SITE.

DEFICIENT STRUCTURE 3

1. LOCATION: -97.931934; 29.870159.
2. STRUCTURES INCLUDE A CONCRETE BRIDGE AND CONCRETE RUBBLE PLACED ON THE BANK FOR EROSION PROTECTION.
3. NO INFORMATION EXISTS ON THE SLABS CONDITION OR EMBEDMENT DEPTH.
4. THE CONCRETE-SLAB SHALL BE BROKEN INTO PIECES NO LARGER THAN 8 CUBIC FEET AND EXPORTED OFF SITE.

DEFICIENT STRUCTURE 4

1. LOCATION: -97.931456; 29.869921.
2. STRUCTURE INCLUDES A DIVERSION STRUCTURE CONSTRUCTED OF CONCRETE.
3. NO INFORMATION EXISTS ON THE STRUCTURES CONDITION OR EMBEDMENT DEPTH.
4. THE STRUCTURE SHALL BE BROKEN INTO PIECES NO LARGER THAN 8 CUBIC FEET AND TRANSPORTED OFF SITE.

SAN MARCOS, TEXAS		DEFICIENT INFRASTRUCTURE REQUIRING REMOVAL			SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION		IN CONJUNCTION WITH DAM REMOVAL			8
DESIGNED W STANCILL	DRAWN W STANCILL	CHECKED W RICE	DATE 8/2016	DRAWING NO GR-TX-2016-002	SHEET 8 OF 13



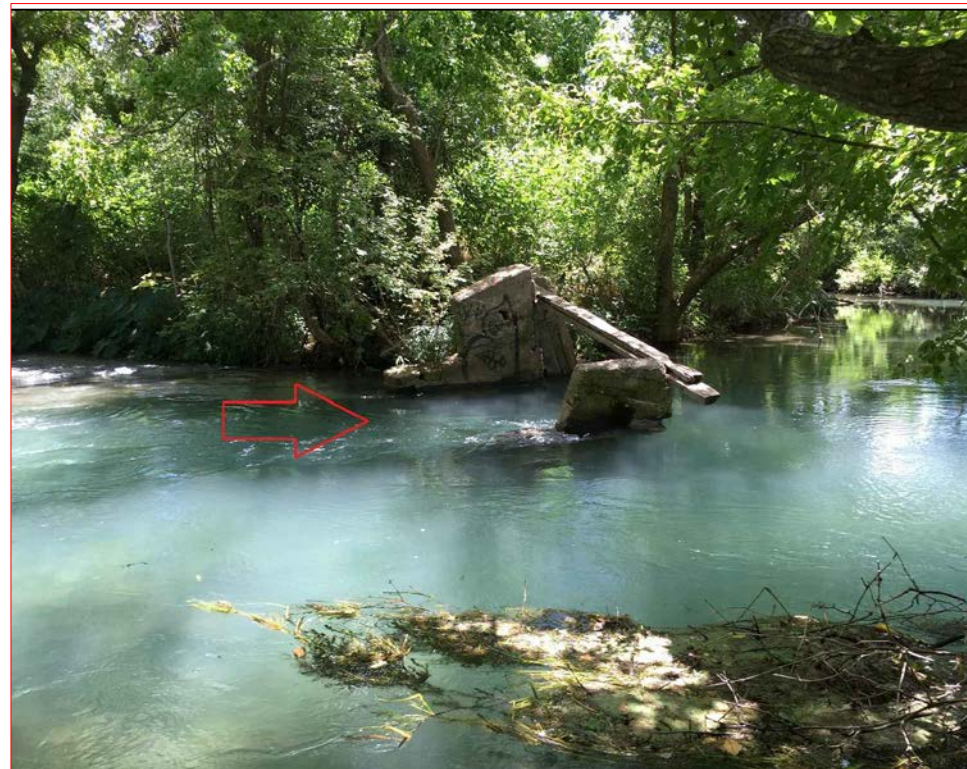
DEFICIENT STRUCTURE 1. CONCRETE BANK-STABILIZAION STRUCTURE



DEFICIENT STRUCTURE 2. CONCRETE BANK-STABILIZATION STRUCTURE



DEFICIENT STRUCTURE 3. COMPROMISED BRIDGE & BANK-STABILIZATION



DEFICIENT STRUCTURE 4. COMPROMISED WATER CONTROL STRUCTURE

EXISTING SITE
NO SCALE



NOTES

LOCATIONS DEPICTED ON IMAGE ARE APPROXIMATE. SEE GPS COORDINATES AND PICTURES ON SHEET 11 FOR DETAILED LOCATIONS. ACCESS POINT DEVELOPMENT STYLES AND METHODS DEPICTED ON SHEET 11 ARE TYPICAL. ACCESS POINTS WILL BE CONSTRUCTED AS DETERMINED BY THE CITY OF SAN MARCOS.

ACCESS TO POINTS 1, 2, AND 3 WILL GAINED FROM THE STAGING AREA DEPICTED ON SHEET 12.

ACCESS TO POINTS 4 AND 5 ARE GAINED FROM CAPE STREET AS DEPICTED.

NEW ACCESS POINT 1

1. LOCATION: -97.931534; 29.872978.
2. SEE SITE PHOTO ON SHEET 11.

NEW ACCESS POINT 2

1. LOCATION: -97.931794; 29.872696.
2. SEE SITE PHOTO ON SHEET 11.

NEW ACCESS POINT 3

1. LOCATION: -97.931914; 29.872242.
2. SEE SITE PHOTO ON SHEET 11.

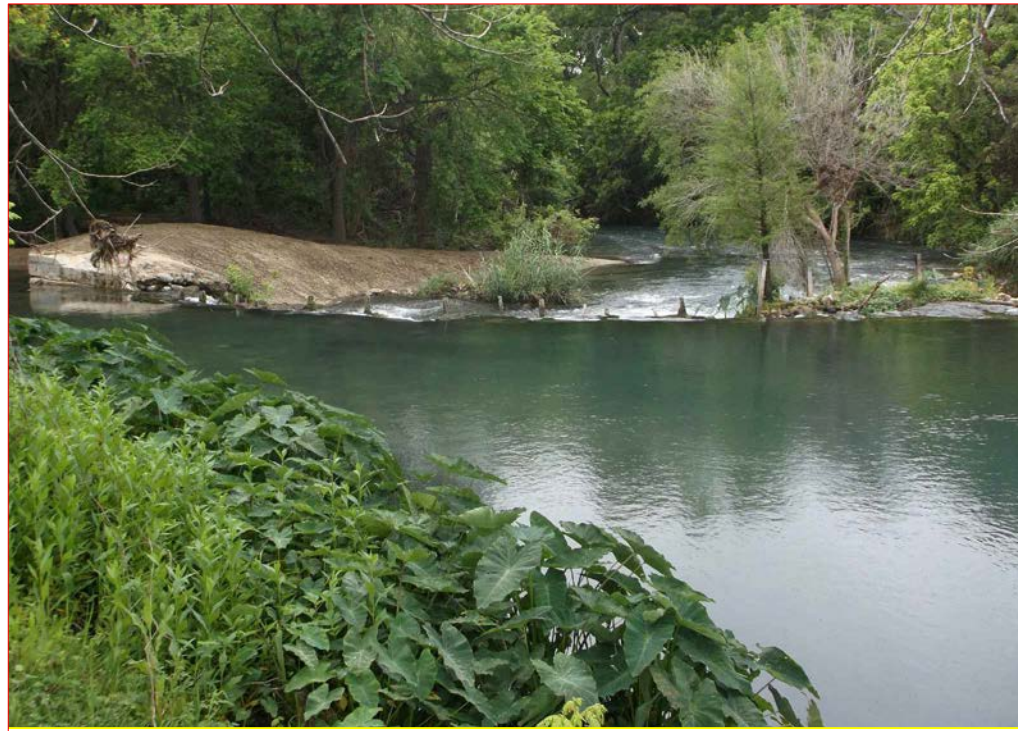
NEW ACCESS POINT 4

1. LOCATION: -97.931456; 29.869921.
2. SEE SITE PHOTO ON SHEET 11.

NEW ACCESS POINT 5

1. LOCATION: -97.930576; 29.869486.
2. SEE SITE PHOTO ON SHEET 11.

SAN MARCOS, TEXAS		NEW ACCESS POINT LOCATIONS			SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION		FUTURE CONSTRUCTION			10
DESIGNED W STANCILL	DRAWN W STANCILL	CHECKED W RICE	DATE 8/2016	DRAWING NO GR-TX-2016-002	SHEET 10 OF 12



NEW ACCESS POINT 1, UPSTREAM OF MILLRACE INLET



NEW ACCESS POINT 2; DOWNSTREAM OF MILLRACE INLET



NEW ACCESS POINT 3



NEW ACCESS POINT 4



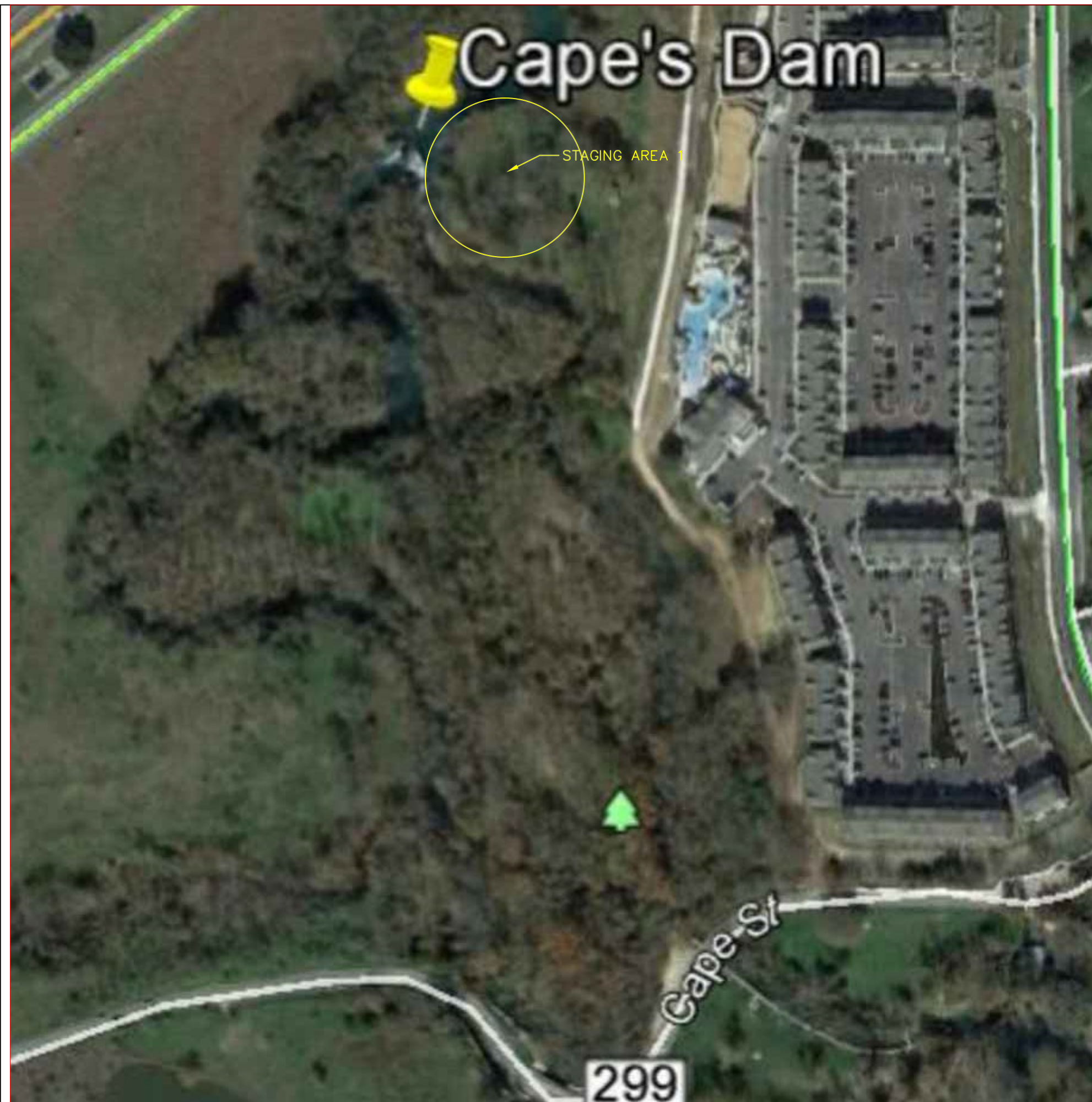
NEW ACCESS POINT 5



NEW ACCESS POINT DESIGN (TYPICAL)

EXISTING SITE
NO SCALE

SAN MARCOS, TEXAS		NEW ACCESS POINTS			SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION		SITE PHOTOS			11
DESIGNED W STANCILL	DRAWN W STANCILL	CHECKED W RICE	DATE 8/2016	DRAWING NO GR-TX-2016-002	SHEET 11 OF 12



NOTES

LOCATIONS DEPICTED ON IMAGE ARE APPROXIMATE. SEE GPS COORDINATES AND PICTURES FOR DETAILED LOCATIONS. STAGING AREA IS APPROXIMATELY 0.5 ACRES. EQUIPMENT AND MATERIALS WILL BE STORED AT STAGING AREA.

STAGING AREA

1. LOCATION: -97.931534; 29.872978.
2. ACCESS TO STAGING AREA WILL BE GAINED FROM EXISTING TRAIL UNDER THE JURISDICTION OF THE CITY OF SAN MARCOS, TEXAS.
3. STAGING AREA WILL BE REHABILITATED AFTER DECONSTRUCTION IS COMPLETED.

SAN MARCOS, TEXAS		NEW ACCESS POINT LOCATIONS			SUB-SHEET
CAPES DAM-BREACH & CHANNEL RESTORATION		FUTURE CONSTRUCTION			12
DESIGNED W STANCILL	DRAWN W STANCILL	CHECKED W RICE	DATE 8/2016	DRAWING NO GR-TX-2016-002	SHEET 12 OF 12

Capes Dam Removal					
Project Performance Tracking and Reporting					
Product	Start	Finish	Actual work	Actual duration	Explanations
Design, Engineer	03/30/16	08/05/16	128	128	Turned in latest plans to USACE and Historical Commission.
Complete USACE Application	05/02/16	05/06/16	4	132	Completed.
Army Corps 404 Nationwide Permit	05/09/16	06/24/16	46	178	Submitted. Waiting for SHPO approval of MOA.
TPWD Sand and Gravel Permit	05/09/16	06/24/16	0	178	In progress. On track.
TCEQ Dam Removal Information Sheet	05/09/16	06/24/16	0	178	Completed.
SHPO Consultation	05/09/16	06/24/16	0	178	In progress. Development of MOA with THC, SM, USFWS
NEPA Catogorical Exclusion	05/09/16	06/24/16	0	178	In progress. On track.
GLO Notification	05/09/16	06/24/16	0	178	Completed.
Section 7 Consultation	05/09/16	09/23/16	137	315	Request submitted 05/03/2016. In progress. On track.
Dam Removal/ Temporary Bank Stabilization	09/26/16	12/31/16	96	411	Will only take about a week to do the work, but must be scheduled first
Temporary Restoration of Disturbed Area	01/01/17	03/31/17	5	416	Revegetate with native plans to avoid non-native intrusion
Natural Sediment Removal and River Adjustment			?		Dependant upon river flows/flooding events
Rebuild Riverbank in Proper Place			?		Dependant upon river flows/flooding events
Restoration of work area			5 years		Dependant upon river flows/flooding events



Life's better outside.

Commissioners

Dan Allen Hughes, Jr.
Chairman
Beeville

Ralph H. Duggins
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Fort Worth

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Fort Worth

Carter P. Smith
Executive Director

August 13, 2014

Mr. Jared Miller
City Manager
City of San Marcos
c/o Mr. Paul Murray
102 Barclay
San Marcos, Texas 78666

Dear Mr. Miller:

I am writing regarding your request for an opinion on the proposed removal of Cape's Dam on the San Marcos River. This dam was built in 1866 or 1867 and was originally intended for milling and ginning of cotton. The dam no longer serves its intended purpose and is currently in disrepair.

Dams on San Marcos River have changed the natural hydrology of the river (i.e., reduced velocities, increased depths, reduced effectiveness of channel-maintenance flows), leading to increased siltation in impounded areas. Siltation has decreased habitat available for native macrophytes including endangered Texas wild rice (*Zizania texana*) which utilizes coarser substrates such as sand and gravel. In addition, the dams act as an impediment to migration of fish, such as the endangered Fountain darter (*Etheostoma fonticola*), freshwater eels (*Anguilla rostrata*), and giant river prawn (*Macrobrachium carolinense*). Removal of Cape's Dam would restore connectivity downstream to the confluence of the Blanco River.

Recent habitat modeling conducted by Dr. Thom Hardy of the Meadows Institute for Water and the Environment indicated removal of Cape's Dam would increase current velocity and reduce fine sediments accrued within the impounded area of the dam. This would increase habitat available for Texas wild rice. In addition, reduced depths would promote overall aquatic macrophyte growth, increasing habitat available for the endangered Fountain darter.

After conferring with biological experts at Texas State University, United States Fish and Wildlife Service and Texas Parks and Wildlife, we are in consensus that removal of Cape's Dam would benefit the San Marcos River ecosystem.

Sincerely,

Gary E. Saul, PhD
Director of Inland Fisheries

GES/TWB/lam

United States Department of the Interior



FISH AND WILDLIFE SERVICE
Texas Fish and Wildlife Conservation Office
500 East McCarty Lane
San Marcos, Texas 78666
512-353-0011 ext 236



Date: 6 August 2014

To: Jared Miller

From: Mike Montagne, Project Leader

Subject: Capes Dam

As the project leader of the Texas Fish and Wildlife Conservation Office (TXFWCO), I am writing in regards to the disposition of Capes Dam now that it is owned by the City of San Marcos. I have conferred with the biological community (TPWD, TSU, and Ecological Services (USFWS)) and we are all in agreement that biologically speaking, the removal of failing dam would be the most ecologically beneficial scenario to the San Marcos River system, and its unique flora and fauna.

Recent modeling completed by Dr. Thom Hardy and others at the Meadows Institute, for the National Fish Passage Program (NFPP), show that the removal of Capes Dam would result in multiple beneficial effects for the San Marcos River system. The removal of the dam would: increase the amount of habitat for Texas Wild Rice (available water depths less than 1.0 meter), increase flow velocity and reduce accumulation of fine sediments directly attributed to the existing backwater effects of the dam, and would likely increase sunlight penetration and consequently promote vegetation growth in more areas (fountain darters preferred habitat) . The combination of these changes and the reconnection of downstream sections of the San Marcos River to the IH-35 reach would have a beneficial effect for fountain darters.

Removal of the dam would also help the City of San Marcos meet some of the Minimization and Mitigation Measures; Measures Specifically Intended to Contribute to Recovery (Section 5) spelled out in the Edwards Aquifer Habitat Conservation Plan.

Section 5.3.2.1.4 states the City of San Marcos will:

Reduce turbidity and sedimentation through the establishment of watershed management strategies. This will decrease erosion and subsequent sedimentation and filter runoff to enhance water quality. Remove silt and accumulated sediment from designated areas within the river to more closely match historical conditions.

According to Dr. Hardy's model, removing the dam would likely reestablish natural current velocities, remove fine sediment accumulation, and restore coarse sediment transport within the San Marcos River, thus providing improved habitat for vegetation growth and expansion.

In addition to the recommendation to remove Capes Dam, the USFWS would like to discuss the opportunity for the City to apply for a grant from the National Fish Passage Program (NFPP). The NFPP is a voluntary, non-regulatory effort that provides financial and technical assistance to remove or bypass artificial barriers that are impeding the movement of fish and contributing to their decline. As the administrator of the NFPP in Texas, I would be glad to assist the City of San Marcos with applying for a grant from the NFPP. These grants typically range from a few thousand dollars up to \$150,000 per project, which is likely more than enough for the removal effort.

Please contact me if you have any questions.

Mike Montagne
Project Leader, TXFWCO
USFWS

SMRF has done its best to provide accurate info about the dangers of the dam, and defend the local, state and federal scientists who have spent decades studying every aspect of this river to come to the conclusion the dam is not good for the endangered species or native species. The city already has all the evidence it needs to remove the dam. No evidence has been presented by any other scientist, regarding any other studies done on the river that show it would be fine to rebuild the dam and divert water away from the river. If the city tries to get permits to rebuild the dam, USFWS will be considering the impacts of diverting water away from the river during droughts, and will also have to consider floods and what effects a dam has on the flood plain and the safety of residents.

The dangers of the dam to recreation need to be considered carefully, including causing canoers to walk across an increasingly busy street to portage, after using the mill race to avoid the dam. With the dam gone, the canoers could use the free flowing river, and the bridge is plenty high enough most of the time to easily paddle under it. If the river is in flood stage, people will not be paddling as much, or if they still want to, they will need to think about portaging, using the new river exits that will be built before the bridge when the dam is removed. The dam itself is dangerous to boaters who can tumble over it unexpectedly; we have already had complaints from people who suffered injuries. The other danger is people jumping from the end of the mill race which recently caused a death. This is now being encouraged by the kayakers who treat this dangerous location as a playground platform, to drop off purposely in their kayaks. Advertised as fun on social media, it encourages more people to do that jump. Another danger is the stagnant and warm, still water in the mill race which grows bacteria as any warm water does. Children and handicapped river users, and every river user deserves clean, clear water and good access points, not the dangerous situation in the mill race.

The mill race also provides poorer habitat than the flowing river, and has less dissolved oxygen for fish, and unsuitable conditions for wild rice and native vegetation. Fish prefer the flowing river, as studies have shown repeatedly. We are for a healthy and safe river, good for recreation and good for fish and wildlife. We believe the dam removal has been firmly established to be the best thing for the river. The diversion of such a large portion of the water away from the river is not good for aquatic life during droughts, nor for recreation.

Historical information needs to be easily available at this site of this former mill to honor the remaining, though highly altered, mill race and structure. A river and its wildlife and fish do not have to be harmed, nor do we have to cause safety problems for people, in order to honor history.

We have been appalled to see efforts by the people wanting to save that dam, who have been attempting to initiate disciplinary action against Dr. Hardy with the Dean of the College of Science and Engineering as well as with Dr. Trauth. Texas State declined to consider those allegations, which are frankly embarrassing to anyone who knows the Meadows Center's wonderful work and Dr. Hardy's position as the chief research officer, as well as his stellar reputation internationally on river science. There were the charges of fraud lobbed at our past city manager, publicly at a Council meeting, also untrue. There have been untrue charges that Dr. Hardy is somehow benefitting from city contracts. He is not and the contracts are following all proper and legal procurement procedures. Threats to city council members have been noted. Untrue claims that the wild rice is somehow hurting paddling in the river have been made by these same individuals publicly, though most San Marcans respect this endangered species and know it is the very reason we even have a flowing river! Even SMRF has been attacked repeatedly for supporting the best thing for a healthy river---removing the dam. And charges

have been repeated often that SMRF has slashed tires of those individuals who want to keep the dam, which are ludicrous. With all this untrue information being spread, many are confused and have given up trying to make sense of all the charges.

Here are a few facts. The many places in town that have still, flat water backed up behind dams are places that can be used to train people who are learning to kayak. If the kayak business has to shuttle people or meet them two minutes away at those spots instead of having lessons at their back door, that can be done. We support real handicapped-accessible points being built, and applaud the Meadows Center for their veterans program and accessible points. We frequently see handicapped groups using the river at Sewell Park or other locations besides the Meadows Center, so we know they enjoy a wide variety of locations on the river.

We have to face the fact that the mill race has been enlarged from its hand-dug shortcut across a bend in the river by floods, and more soil washes away with each flood. Now there are big holes washed by the last flood and the mill race is leaking a lot. Future floods could change the course of the river to abandon its original bed and follow the artificial channel of the mill race. That is no surprise--- that is what happens when a shortcut is dug across a bend in a river. It is going to be increasingly expensive for the city to try to repair the mill race and dam after every flood. Think about that: trying to stop the river from changing its course---how much will that cost over time?

And meanwhile Thompson's Island/Cape's Camp is not available as a park to the neighborhood! It is closed because of the dangerous condition of the dam and uncertainty about how to fix the flood damage to the land since the dam removal is being delayed. The park is just being used illegally by those entering the park and trashing it. It is time to remove the dam and place good exits and access points in the park with piers for handicapped-accessible fishing and other uses, and think through the kind of amenities and security that this park needs to serve San Marcans.

To drag this on---using untrue claims about the dam and everyone involved in trying to do the best thing for the river---is just delaying the good things that could happen now that the city owns the park. The inaccurate, non-scientific, and misleading appeals to "Save the River" by dam defenders in fact run counter to preserving the river in a natural and healthy form for enjoyment by all in the community. The community should not be misled by those who want to back up water for a certain business on the river. This decision should be about the health of the river for all, and a park for the community for decades to come. Additional factual information in several articles, and letters supporting dam removal by Dr Glenn Longley, Dr. Ben Schwartz and both Texas Parks & Wildlife scientists and USFWS scientists is available under River News on the SMRF website, www.sanmarcosriver.org.

OPINION

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GUEST EDITORIAL

Rumors and misinformation discolor dam debate

DR. BEN SCHWARTZ
GLENN LONGLEY

We are concerned to see the May 11 article in the San Marcos Record re Mr. Kvanli's opposition to removing Cape's Dam. Considerable misinformation is being circulated by those who ask local citizens to sign petitions against removing the dam. The dam needs to be removed. It is unstable and dangerous and has up to 10 feet of sediment deposited behind it. Removing the dam will allow all the water to flow naturally in a single channel and for that channel to return to natural conditions. This will be good for recreation AND good for the river; both for its fish population and its endangered species.

Readers should recognize that several points made in the article are misleading or untrue. Thompson's Island was never maintained at "golf course standards" prior to COSM ownership, and was actually private property on which trespassing regularly occurred. It is currently closed due to flood damage and because the city must now deal with how to manage a relatively inaccessible piece of property that they were "gifted" by the developers of The Woods apartment complex; a piece of property which was gifted only

because it lies in the floodplain and could not be developed.

As far as the false charge of the city being an "environmental terrorist" in its work on the river through the HCP (Habitat Conservation Plan), we hope San Marcans recognize how peculiar and false that statement is. The HCP is a plan that many stakeholders in the region worked on for the last 10 years in order to keep San Marcos Springs and Comal Springs flowing, even in drought. It was a long, difficult, and complex process, resulting in a scientific plan that:

1. has ways to conserve and store aquifer water,
2. reduces agricultural pumping by paying farmers not to use water from the aquifer during drought, and
3. simultaneously preserves recreation opportunities and improves habitat in the river for the endangered species that are the reason we have an HCP and why the springs are still flowing during droughts.

Many individuals, state and federal and city governments, non-profit environmental groups, and scientists worked hard to create the HCP. The city and University are now charged with implementing the work in the river (#3 above). The Edwards Aquifer

Authority is implementing the first two parts regarding aquifer pumping. For more information, please read the website www.eahcp.org. Please understand how important this HCP is, if we are to have a flowing river in our city's future. To claim that protecting flow and habitat in the river is ecoterrorism is a twisted view of reality.

Mr. Kvanli owns a kayaking business, and some of his supporters are kayakers. Despite his obvious business interest, he has never provided any information to show how or if removing the dam might harm his business. Instead, he and some of his supporters have presented misleading and false information, and attacked the science, scientists, the HCP, and city council. In simple terms, a single business owner is demanding that the HCP be violated and that many millions of taxpayer dollars be spent on rebuilding the dam in a way that would directly benefit the business. The costs associated with rebuilding would be far more than the one million dollars mentioned in the article.

Contrary to what has been stated by opponents to its removal, dam removal will not "drain the river" or turn it into a "muddy ditch." It will return the river to a natural state (very similar to what already exists in the upper portion of the

river), which will create a free flowing section of river that the recreating public will enjoy. This will result in a natural river channel that protects recreation and habitat during drought conditions. Additionally, false claims have been made about the San Marcos River being a river which has historically had natural travertine dams. This is untrue: the upper San Marcos River has never had travertine dams and the most natural state for the river is undammed and free-flowing.

Mr. Kvanli claims that "every single study shows that there is more habitat at Thompson's Island with Cape's Dam than without it". Unfortunately, he has never provided a single study or piece of evidence to support this claim. Repeating untrue claims and twisting real data does not make them truth. Instead, he and some supporters have spread pieces of information taken out of context from scientific reports and papers, sometimes without recognizing who performed the research, and have used these to try and confuse the issue by manufacturing doubt about the scientific findings and consensus.

There are also rumors being spread claiming that some US-FWS and TPWD staff are against the removal of the dam. As far as

we know, these are nothing more than rumors and these agencies have publicly and privately stated that they are in favor of dam removal. All scientific evidence available shows that removing the dam is the best option for recreation and habitat restoration for endangered species.

Finally, Mr. Kvanli has repeatedly made the claim that the Willow Creek Super Fund site has some relevance to removing the dam and on water quality in the San Marcos River. This is irrelevant to dam removal and there has never been a single water, sediment, or fish tissue sample collected in the lower San Marcos River during the many years of Super Fund monitoring which has detected any of the contaminants. These data are on public record at the San Marcos Public Library, and on request from TCEQ, if anyone wishes to confirm this for themselves. Mr. Kvanli's repeated reference to this site is yet another example of spreading misleading misinformation and of manufacturing doubt.

We offer our complete support to the Cape's Dam removal and hope everyone in San Marcos will as well.