



Flood Protection Planning for Watersheds – Category 1

Due October 19, 2020 at 5:00 p.m. CST

Email to FIF@twdb.texas.gov Include the Applicant's Name, Abridged Application Number, and Category in the subject line.

Submittal Instructions: Please email one indexed, electronic copy to FIF@twdb.texas.gov using MS Word, Shapefile, Excel, and/or Adobe Acrobat. All Adobe Acrobat PDFs **must be searchable**. Include the Applicant's Name, Abridged Application Number, and Category in the subject line of the email. For applications in excess of 150 MB, please contact FIF@twdb.texas.gov for submission instructions.

For more information, please email FIF@twdb.texas.gov. Include the Applicant's Name, Abridged Application Number, and Category in the subject line of the email.

Example email subject line: Applicant Name, Abridged Application 12345, Category 1

Thank you.

Project information submitted in this application must be consistent with the project's submitted abridged application; any information that is inconsistent with the project's ranking in the prioritization list as approved by the board could result in the project losing prioritization points to the extent that the project may fall below the board-approved funding line. By submitting this Application, you understand and confirm that the information provided is true and correct to the best of your knowledge and further understand that the failure to submit a complete Application by the stated deadline, or to respond in a timely manner to additional requests for information, may result in the withdrawal of the Application without review.

GENERAL INFORMATION

Entity Name
San Jacinto River Authority
Entity Type
River Authority
A citation of the law under which the political subdivision operates and was created
Chapter 426, Acts of the 45 th Texas Legislature, Regular Session, 1937
Physical Address
1577 Dam Site Road, Conroe, TX 77304
Mailing Address
P.O. Box 329, Conroe, Texas 77305

Primary Contact Please list the primary project contact for day to day project implementation	Name	Amber Batson, P.E.
	Title	Engineering Manager

	Phone	936-588-7189
	Email	abatson@sjra.net

Grant Coordinator Internal <input checked="" type="checkbox"/> External <input type="checkbox"/>	Name	Matthew Barrett, P.E.
	Title	Division Engineer
	Phone	936-588-7177
	Email	mbarrett@sjra.net

Other Contact (Financial Advisor, Legal/Bond Counsel, Project Engineer, etc.) <u>Assistant Grant</u> <u>Coordinator</u>	Name	Briana Gallagher
	Title	Project Coordinator
	Phone	936-588-7127
	Email	bgallagher@sjra.net

Other Contact (Financial Advisor, Legal/Bond Counsel, Project Engineer, etc.) _____	Name	
	Title	
	Phone	
	Email	

Other Contact (Financial Advisor, Legal/Bond Counsel, Project Engineer, etc.) _____	Name	
	Title	
	Phone	
	Email	

GENERAL PROJECT INFORMATION

Abridged Application Number(s)	13820		
Project Name	Spring Creek Watershed Flood Control Dams Conceptual Engineering Feasibility Study		
Project Location (Latitude/Longitude)	30.187469° N, 95.820495° W		
Counties in Project's Area List counties where the project is located or providing service	Montgomery, Harris, Grimes, Waller		
Category Invited For			
<input checked="" type="checkbox"/> <u>Category 1</u> Flood Protection Planning for Watersheds	<input type="checkbox"/> <u>Category 2</u> Planning, Acquisition, and Design, Construction / Rehabilitation (All combinations)	<input type="checkbox"/> <u>Category 3</u> Federal Award Matching Funds	<input type="checkbox"/> <u>Category 4</u> Measures immediately effective in protecting life and property

STATEMENT OF FUNDING

Please indicate the funding sources anticipated to sufficiently fund the project. Insert the dollar amounts applicable to the sources identified below. Entities may either use its own available funds or borrow FIF funds at 0% for any portion of the required local share not provided through the FIF grant funds. Other funding sources indicated below must be committed/awarded or under consideration by the funding agency. If federal funding is a source, please indicate the specific source and federal disaster number in the box below. While you may propose to use in-kind services on this form, any proposal must receive TWDB's approval.

Sources of Funding	Amount (\$)	Percent of Total Project Cost
a. Federal Funding Disaster Number:	\$0	0%
b. Local Contribution (All cash/loan/bond proceeds/non-federal grant sources excluding FIF)	\$396,593	39.7%
c. In-Kind Contribution (estimated value)	\$103,407	10.3%
d. TWDB FIF Grant	\$500,000	50%
e. TWDB FIF Loan Applicants with a loan component MUST FILL OUT the loan component questions below		
TOTAL PROJECT COST (equals a+b+c+d+e)	\$1,000,000	100%
Attach a budget and explanation of funds if needed	<input type="checkbox"/> Attached <input checked="" type="checkbox"/> NA	

DESCRIPTION OF PROPOSED PROJECT – LIMIT PROJECT NEED AND DESCRIPTION TO ONE PAGE

Project Need: Description of Project Need:

Many residential and commercial structures along Spring Creek are at significant risk of flooding. The Spring Creek watershed begins on the western edge of the Upper San Jacinto River Basin draining to Lake Houston, and ultimately flows to the West Fork of the San Jacinto River and into Lake Houston. The watershed covers portions of Montgomery, Harris, Grimes, and Waller counties. In August 2017, Hurricane Harvey caused widespread flooding in the Spring Creek watershed. There are at least 6,700 documented flood insurance claims in the study area. In response to Harvey, the Harris County Flood Control District, the San Jacinto River Authority, Montgomery County, and the City of Houston applied for and were awarded a grant through the FEMA Hazard Mitigation Grant Program to study the entire Upper San Jacinto River basin, including Spring Creek.

This study, the San Jacinto Watershed Master Drainage Plan (SJMDP), produced new, detailed hydrologic and hydraulic models based on the latest Atlas 14 rainfall data. The models documented 2,909 structures in the Spring Creek watershed at risk of flooding during the 1% annual chance event (ACE). More detailed statistical and benefit-cost analyses found that approximately 5,899 instances of structural flooding can be expected to occur along Spring Creek over any given 50-year period.

The SJMDP explored multiple alternative projects to alleviate flood risk, not only in the Spring Creek watershed but also in the Lake Creek, West Fork San Jacinto River, East Fork San Jacinto River, Caney Creek, and Peach Creek watersheds. These projects were modeled at a screening level to estimate approximate costs and benefits. Two proposed dry dams along two tributaries of Spring Creek – Walnut Creek and Birch Creek – were two of the more effective projects at reducing flood risk in a cost-beneficial manner. The next step for these projects is to perform a conceptual engineering feasibility study.

Project Description: Description of Project, including a bulleted list of project elements/components, flood risk evaluation and alternatives considered (including existing facilities):

The proposed project is a continuation or next phase of the SJMDP and Spring Creek Siting Study, a separate sub-task of the SJMDP funded by several municipal utility districts (MUDs) within The Woodlands area, including MUD1, MUD7, MUD46, MUD60, and MUD386. The Spring Creek Siting Study explored multiple alternative projects and detention siting locations to provide flood mitigation benefits to the Spring Creek watershed. Two of the more cost-effective alternatives identified in the Spring Creek watershed – the Walnut Creek Dam and Birch Creek Dam – were recommended for implementation in the draft SJMDP. Approximately 12 alternative detention locations and 4 channelization locations in the Spring Creek watershed were considered as part of this study. The watershed contains no existing regional flood control facilities.

Based on preliminary modeling and benefit-cost analysis, the Walnut Creek Dam is expected to remove 1,205 structures from the 1% ACE floodplain, reduce expected instances of structural flooding by 1,653 instances over a 50-year period, and provide \$101.2 million in benefits associated with reduced structural flooding. The Birch Creek Dam is expected to remove 815 structures from the 1% ACE floodplain, reduce expected instances of structural flooding by 1,084 instances over a 50-year period, and provide \$66.0 million in benefits associated with reduced structural flooding. Together, the two dams are expected to remove 1,766 structures from the 1% ACE floodplain, reduce expected instances of structural flooding by 2,464 instances over a 50-year period, and provide \$151.6 million in benefits associated with reduced structural flooding.

The proposed project includes a conceptual-level design for each of the two dams, as well as definition of benefits and costs for each dam and a combination of the two dams. The outcome of this study will allow project sponsors to determine the most feasible and economical alternative for possible future development. Specific tasks will include, but are not necessarily limited to, the following:

1. Project management, meetings with project sponsors and subconsultants, public meetings, QA/QC, and document control.
2. Environmental due diligence, including preliminary site investigations, desktop assessments, meetings with the Galveston District of the US Army Corps of Engineers, and development and documentation of environmental mitigation.
3. Conceptual design, including site visits, geotechnical investigation, spillway siting, development of up to three alternative configurations for each dam, hydrologic and hydraulic model updates, selection of a recommended alternative, and a conceptual design technical memorandum with conceptual drawings for each dam.
4. Cost estimates (AACE Class 4 designation), including an estimate of land requirements and costs, utility screening, relocation estimates, environmental mitigation costs, and a project cost technical memorandum.
5. Extending the hydraulic models to include Walnut Creek and Birch Creek and updating benefit-cost ratios for the two dams, both individually and in combination.
6. A conceptual design report that combines memoranda from the previous tasks and incorporates comments from the project sponsors.

FLOOD INFRASTRUCTURE FUND QUESTIONS

Category 1: Flood Protection Planning for Watersheds

Projects must conduct planning of entire watersheds no smaller than Hydrologic Unit Code 10-digit (HUC-10) to better inform the development of strategies using structural and nonstructural measures before a flood event, such as determining and describing problems from or related to flooding, identifying and planning solutions to flooding problems, and estimating the benefits and costs of these solutions.

All activities under this category must be considered “flood control planning” as defined in [Texas Water Code Section 15.405](#). It does not include the actual preparation of a Federal Emergency Management Agency Flood Insurance Rate Map.

Questions to meet Flood Intended Use Plan and/or Statutory Requirements:

1. Attach a map showing project location and delineation of project watershed, conforming to [31 TAC §363.408\(b\)\(4\)](#).

See Exhibit 1 – Study Area and Watershed Location Map.

2. **Project Area and Component Map.** Attach a GIS map at the appropriate scale to show the project location, proposed project area, watersheds including HUC boundaries, and all major project components. Add a GIS shapefile of the project area boundary.
 Attached NA

See Exhibit 2 – Study Area and HUC-10 Component Map.

3. Has the applicant fulfilled Notice Requirements for Category 1 Projects as outlined in the [Flood Intended Use Plan](#)?
 Yes, Attach Documentation, including
 - i. one copy of the notice sent to affected political subdivisions,
 - ii. a list of the political subdivisions to which notice was sent, and
 - iii. the date on which the notice was sent. No

See Attachment A for copy of public notice and a list of political subdivisions provided notice.

4. Has the applicant acted cooperatively with other political subdivisions to address flood control needs in the area?
 Yes, Attach Documentation (Flood Application Affidavit TWDB-0171)
 No

See Attachment B for completed Flood Application Affidavit TWDB-0171

5. Have all political subdivisions been notified of the proposed study, were provided adequate notice, and will have ample opportunity to participate in the study? Providing adequate notice and ample opportunity to any such eligible political subdivision that elects not to participate further would fulfill this requirement, provided evidence of notification is included in the application.
 Yes, Attach Documentation (Flood Application Affidavit TWDB-0171 or evidence of adequate notification)
 No

See Attachment B for completed Flood Application Affidavit TWDB-0171

6. Will in-kind services be substituted for any part of the local share? [Note: In-kind services may be substituted for any part of the local share, if such services are directly in support of the planning effort, are fully explained and documented in the complete application, and approved as part of the TWDB commitment.]
 Yes, Attach Documentation with full explanation of applicant’s in-kind contribution including a description of in-kind services to be provided
 No

In-kind services to be provided by SJRA on the project are anticipated to include, but are not necessarily limited to: project management (meetings, project/document controls, invoicing, grant and consultant contract management, etc.), obtaining right-of-entry for and participating in consultant site investigations, assisting with consultant data collection, technical analyses, document/exhibit/model development and production, etc. where appropriate, reviewing and providing input on consultant technical submittals, coordinating with stakeholders, and preparing for and participating in public meetings in an effort to engage the public on the project. Refer to Attachment G for an estimated level of effort for SJRA in-kind services. The in-kind services are also summarized in the Statement of Funding on page 3 and the expense budget on page 11.

Other Pertinent Attachments:

7. Detailed description of the degree to which proposed planning duplicates previous or ongoing flood plans.

The proposed project (referred to as the Spring Creek FIF study) will perform conceptual level design of two proposed flood control dams in the Spring Creek watershed – Walnut Creek Dam and Birch Creek Dam – and evaluate their flood protection benefits in detail. The benefits expected from the proposed Walnut Creek Dam and Birch Creek Dam are primarily concentrated in the Spring Creek watershed (refer to the attached Exhibit 4 – Study Area and Project Benefit Map), but some of the benefits are located along the West Fork of the San Jacinto River downstream of the Spring Creek confluence. The benefit area noted in Exhibit 4 is the census block groups including any group within or overlapping the approximate area of benefit along Walnut Creek, Birch Creek, Spring Creek, Willow Creek, and the West Fork.

The initial hydrologic and hydraulic (H&H) modeling and high-level benefit-cost analyses for the two proposed dams was developed as part of the San Jacinto Regional Watershed Master Drainage Plan (SJMDP) in 2019 and 2020. This study was prepared for the Harris County Flood Control District (HCFCD), San Jacinto River Authority (SJRA), City of Houston, and Harris County and was partially funded by the FEMA Hazard Mitigation Grant Program. The initial draft SJMDP was completed in July 2020 and the final draft will be completed in October 2020. The information about the proposed dams provided in this FIF application is based on analysis conducted for the SJMDP, including the expected level and location of flood reduction benefits. The proposed planning efforts described in this FIF application would develop these projects further to a conceptual level of design.

HCFCD's ongoing MAAPnext project also includes development of detailed existing-conditions H&H models for the Spring Creek watershed. SJRA plans to evaluate whether data from these models could be used to inform the H&H modeling to be conducted as part of the Spring Creek FIF study.

SJRA is also planning to develop a joint reservoir operations strategy for Lake Conroe and Lake Houston, and is submitting a parallel FIF application for this effort. Lake Conroe discharges into the West Fork of the San Jacinto River, and the West Fork confluences with Spring Creek before discharging into Lake Houston. The scope of the Lake Conroe and Lake Houston gate operations study is not anticipated to significantly impact the outcome of this Spring Creek FIF study, because the majority of anticipated flood benefits provided by Walnut Creek Dam and Birch Creek Dam are concentrated in the Spring Creek watershed, upstream of its confluence with the West Fork. The Spring Creek FIF project team and the Lake Conroe and Lake Houston joint reservoir operations strategy FIF project team will coordinate to use common base data and H&H models where applicable.

In addition, the Houston-Galveston Subsidence District (HGSD) is currently evaluating the impacts of subsidence on flooding along Spring Creek. This scope is independent of the scope of this Spring Creek FIF study. SJRA plans to provide project updates to HGSD and to request updates from HGSD on the progress of the subsidence study.

SJRA is also aware that Waller County is conducting a parallel flood reduction study in the Waller Creek portion of the Spring Creek watershed and plans to coordinate with the project sponsor and consulting team to avoid duplicating efforts. Municipal Utility District 67 in the Woodlands has also submitted for FIF funding for a series of local drainage improvement projects. Because this Spring Creek FIF study is a regional flood protection approach across the watershed, and these two projects are more localized, duplication of effort is not expected.

SJRA is also applying for three other FIF grant projects, as well as identifying a project for submittal of a CDBG-MIT grant application. None of these projects will duplicate the effort described in this application.

8. Detailed description of project service area including

a. identification of the watershed (USGS HUC-10 or larger) or watersheds to be studied for this project,

The Spring Creek watershed aligns with USGS HUC-10 watershed 1204010202 as shown on Exhibit 2 – Study Area and HUC-10 Component Map. The two proposed dams, Walnut Creek Dam and Birch Creek Dam, are expected to lower peak flow rates and peak water surface elevations for storms ranging from the 50% annual chance event (ACE) up to the 0.2% ACE. The lowering of peak flow rates and peak water surface elevations is anticipated to primarily benefit structures on the banks of Spring Creek, Walnut Creek, and Birch Creek. There may also be some ancillary benefits at the downstream reaches of Willow Creek (a tributary of Spring Creek) and the West Fork of the San Jacinto River.

b. a map of identified watershed or watersheds showing major hydrologic features and political subdivision boundaries as applicable,

See Exhibit 3 – Study Area and Political Subdivisions. Boundaries are not shown on Exhibit 3 due to the excessive number of political subdivisions, but these can be provided if necessary.

c. historical flooding and flood damages,

Two flood-related disaster declarations (See Attachment C) within the most recent 36 months, Hurricane Harvey (FEMA-4332-DR) and Tropical Storm Imelda (FEMA-4466-DR), justify the need for flood hazard mitigation actions to address a clear and imminent threat to public health, safety, welfare, and property in the project area. Significant flood damages occurred during these events in both Montgomery and Harris Counties, including areas along the San Jacinto River between Lake Conroe and Lake Houston. There are at least 6,700 documented flood claims within the study area boundary.

d. existing or potential flood hazards this project intends to address, including how the proposed planning will address those hazards, and

According to the October 2020 draft of the San Jacinto Regional Watershed Master Drainage Plan (SJMDP), along the main stem of Spring Creek there are 11,125 structures at risk of flooding during the 0.2% ACE storm, 2,909 structures at risk of flooding during the 1% ACE storm, and 1,158 structures, 270 structures, and 139 structures at risk of flooding during the 2%, 4%, and 10% ACE storms, respectively. The main stem of Spring Creek is shown on Exhibit 4 – Study Area and Project Benefit Map. These metrics for Spring Creek, along with those listed below, do not yet include structures along smaller tributaries of Spring Creek such as Walnut Creek or Birch Creek.

The SJMDP also developed an approach to estimate the expected instances of structural flooding over a 50-year period; this metric collapses data from multiple storm events into a single statistical metric. If no mitigation measures are put in place, 5,899 instances of structural flooding can be expected to occur along Spring Creek over a given 50-year period; this includes some structures with a higher risk of flooding that may flood multiple times, as well as others with a lower risk of flooding that may flood only once. Similarly, the study estimated 1,988 instances of structural flooding along Willow Creek and 6,681 instances of structural flooding along the West Fork of the San Jacinto River.

The SJMDP also included depth-damage assessments of thousands of individual structures based on H&H modeling. Under existing conditions, this analysis showed total expected damages over the next 50 years of approximately \$458 million in the Spring Creek watershed, that is, along the Spring Creek and Willow Creek main stems.

The proposed Walnut Creek Dam and Birch Creek Dam would reduce these existing flood hazards by storing runoff and slowly releasing it during large storm events. The 1% ACE storm and smaller would engage low-flow culvert outlets while larger events up to the probable maximum flood (PMF) would engage the dam spillways. The Walnut Creek Dam is expected to remove approximately 1,205 structures from the 1% ACE floodplain, reduce instances of flooding over a 50-year period by approximately 1,653, and reduce structural flood damages by approximately \$101.2 million. Similarly, the Birch Creek Dam is expected to remove approximately 815 structures from the 1% ACE floodplain, reduce instances of flooding over a 50-year period by approximately 1,084, and reduce structural flood damages by approximately \$66.0 million. Together, the Walnut and Birch Creek dams are expected to remove approximately 1,766 structures from the 1% ACE floodplain, reduce instances of flooding over a 50-year period by approximately 2,464, and reduce structural flood damages by approximately \$151.6 million. Approximately 90% of the benefits described in this paragraph are expected to be provided to structures in the Spring Creek watershed, with about 10% of the benefits provided to structures along the West Fork downstream.

e. identification of which eligible entities do or do not participate in the National Flood Insurance Program.

The study area for the Spring Creek Watershed Flood Control Dams Conceptual Engineering Feasibility Study includes Waller County, Montgomery County, Harris County, the City of Pinehurst, the City of Tomball, the City of Houston, and the City of Humble, all participants in the National Flood Insurance Program (NFIP) that are currently enforcing floodplain management standards at least equivalent to NFIP minimum standards. The Woodlands, Spring, Atascocita, Sheldon, Barrett, and Highlands are all unincorporated communities that fall under the NFIP participation of Harris and Montgomery counties.

9. Description of areas identified for flood risk evaluation, including hydrologic and hydraulic modeling, mapping, and proposed method of evaluation.

As described above, the hydrologic and hydraulic (H&H) evaluation will be based on models developed as part of the San Jacinto Regional Watershed Master Drainage Plan (SJMDP) or MAAPnext projects. These include detailed HEC-HMS and unsteady 1D/2D HEC-RAS models of Spring Creek, Willow Creek, and the West Fork, as well as other major streams draining to Lake Houston. These models will be extended along Walnut Creek and Birch Creek, tributaries to Spring Creek, not only to model the hydraulics of these tributaries but also to evaluate the benefits to existing structures along the tributaries. This is anticipated to add to the overall expected benefits from the proposed dams.

The models will be used to simulate a range of Atlas 14 rainfall events, ranging from the 50% annual chance event (ACE) up to the 0.2% ACE. Scenarios evaluated will include existing conditions, Walnut Creek Dam, Birch Creek Dam, and both dams together. The resulting peak water surface elevations in Walnut Creek, Birch Creek, Spring Creek, Willow Creek, and the West Fork will be assigned to individual structures using the structural inventory developed as part of the SJMDP. These water surface elevations will then be used to conduct the benefit-cost analysis based on structural depth damage curves as described under the next attachment.

The 1% ACE event for each scenario will also be mapped in order to depict the changes in 1% ACE extents resulting from Walnut Creek Dam and Birch Creek Dam, both separately and together.

10. Detailed description of the proposed method for estimating the benefits and costs of potential solutions to identified flooding problems.

For a straightforward comparison to project costs, project benefits must be measured in dollars of reduced flood damages over the project life. This calculation will be performed using spreadsheet calculations that follow the general methodology typically used for FEMA grant applications, and will be based upon the structural inventory developed as part of the San Jacinto Regional Watershed Master Drainage Plan (SJMDP).

This structural inventory consists of HCFCD's structural inventory in Harris County supplemented with structure data from Houston-Galveston Area Council (H-GAC) lidar in areas outside Harris County. The combined inventory currently includes 108,006 building footprints within a 1,000-foot buffer of the 0.2% ACE floodplain extents along the main stems modeled for the SJMDP. Of the 108,006 building footprints, 31,374 are located along the Spring Creek and Willow Creek main stems. (The structural inventory will be supplemented with additional structures along Walnut Creek and Birch Creek based on the H-GAC structural data.) Each structure was assigned an assumed finished floor elevation of 1 foot above the LiDAR surface; this elevation was manually adjusted using Google Street View or aerial imagery for structures situated near the channel that may be elevated or on piers. The structures were also stationed along each stream centerline using cross sections from the calibrated existing-conditions hydraulic model. Peak water surface elevations from hydraulic model results can then be interpolated from the model results at each individual structure for the 50% ACE through 0.2% ACE storms. The finished floor elevations will be subtracted from these water surface elevations to obtain flooding depths at each structure.

To facilitate calculation of pre-project and post-project flood damages, the structural inventory also includes appraisal district valuation data for the improvement (structure) value and the parcel's market value for the 2019 tax year. Parcel values for Harris and Montgomery County were obtained from their respective appraisal districts; parcel values for Waller,

Walker, Liberty, Grimes, and San Jacinto County were obtained from TNRIS, which obtained the values from each respective county appraisal district.

At each structure, the depth of flooding during each frequency storm will be translated to flood damage expressed as a percentage of the structure’s value. These depth-damage curves relate flooding depth to multiple types of damage associated with structural flooding, including structural damage, damage to contents, and displacement costs.

This process will result in a list of expected flood damages for each frequency storm, which has a defined probability of occurring in any given year. This probability versus expected-damages curve will then be integrated using the trapezoidal rule to obtain an annualized damages value. The annualized structural damages will then be converted to a net present value using a typical 50-year project life for drainage improvement projects and the typical discount rate of 7 percent. This discount rate for flood damage calculations, which converts future benefits to present dollar values, is mandated by the Office of Management and Budget for FEMA projects and is intended to reflect the average rate of return of a typical investment.

This calculation will be repeated for the reduced peak water surface elevations under each proposed alternative. The difference between the net present value of existing and proposed damages represents the project benefit in today’s dollars. Assigning project benefits in this manner allows for a direct comparison of each alternative’s benefit and cost.

The table below summarizes the net present value (NPV) of expected structural damages over a 50-year period under existing conditions along each modeled stream in the SJMDP. These existing-conditions damages served as the basis for the SJMDP benefit calculations of each individual evaluated alternative.

Table 1. Net Present Value of Structural Damages (from the SJMDP)

Stream	Expected Structural Damages (NPV, 50-yr Period) (\$M)
Spring Creek	339.3
Willow Creek	119.1
Cypress Creek	373.1
Little Cypress Creek	196.6
East Fork San Jacinto River	128.2
West Fork San Jacinto River	396.7
Lake Creek	16.5
Peach Creek	163.5
Caney Creek	140.9
Luce Bayou	20.0
Tarkington Bayou	75.1
Jackson Bayou	3.9
Gum Gully	6.3
Total	1,979.2

The benefits calculated for the Walnut Creek Dam and Birch Creek Dam projects as part of the SJMDP are summarized below. These benefits, along with the existing conditions damages presented above, will be re-evaluated as part of the Spring Creek FIF Study after incorporating hydraulic model updates and additional structures along the Walnut Creek and Birch Creek tributaries to Spring Creek. The costs will also be re-evaluated as part of the Spring Creek FIF Study after conceptual design is completed.

Table 2. Preliminary Benefits and Costs (from the SJMDP)

Alternative	Benefit (\$M)	Cost Range (\$M)	Benefit-Cost Ratio Range
Walnut Creek Dam	101.2	97–132	0.77–1.04
Birch Creek Dam	66.0	80–120	0.55–0.83
Walnut Creek Dam and Birch Creek Dam	151.6	177–252	0.60–0.86

Additional social benefits may also be considered to reflect reduced mental stress, anxiety, and lost productivity as a result of reduced risk of flooding. These benefits are typically evaluated for each residence that is benefited by the project. FEMA typically allows these benefits to be included if a project's structural damage evaluation reaches a threshold. These benefits are not currently reflected in the benefits shown above but may be evaluated as part of the Spring Creek FIF Study.

11. **Detailed scope of work for the proposed flood protection planning project including**
 - a. **project organization,**
 - b. **a description of how flood protection needs of the entire watershed will be considered,**
 - c. **identification of tasks,**
 - d. **a task budget*,**
 - e. **a time schedule for completing tasks,**
 - f. **an expense budget by category*, and**
 - g. **potential benefits of the project.**

*see attached example task and expense budgets.

See Attachment D for detailed Scope of Work. This scope is a draft and details are subject to change. Refer to the Statement of Funding on page 3 and the Task and Expense budgets on page 11. Approximately 10.3% of the project will be provided as in-kind services as shown in Attachment G.

12. **Detailed description of why state funding assistance is needed.**

River authorities have historically not undertaken a large role in regional flood management. This is primarily due to the fact that only a few river authorities in Texas have taxing authority and a dedicated funding source to support such activities. However, in March 2018, Texas Governor Greg Abbott challenged SJRA to play a larger role in helping to identify regional solutions to flooding issues in the San Jacinto River basin. The Board of Directors and leadership of SJRA decided to embrace this challenge and take action by asserting a flood management leadership role in the region by launching a new Flood Management Division in 2018. In the time since the creation of the new division, SJRA has become very active in coordinating with public entities and other stakeholders in the watershed in working towards providing region-wide flood mitigation solutions by identifying projects, studies, etc. that will benefit the region. Because SJRA does not have taxing authority or a dedicated funding source for flood mitigation projects and activities, SJRA is required to seek out financial assistance in the form of grants, regional partnerships, etc. in order to fund major projects and studies. It is for this reason that SJRA is seeking state funding assistance for this project.

13. **Applicants Consultants. Please attach copies of all draft and/or executed contracts for consultant services to be used by the applicant. If there are any significant scope components that the applicant will be handling in-house, please attach a brief description of those services.**

See Attachment E for Draft SJRA Professional Services Agreement. The draft agreement does not include TWDB clauses that may be required, but SJRA will coordinate with TWDB before executing any contracts, or will amend any existing contracts as necessary to include required TWDB clauses if grant is awarded.

14. **Legal Documents:**

- a. **Resolution. Attach the resolution from the governing body requesting financial assistance. (TWDB-0201A)**
 Attached
- b. **Application Affidavit. Attach the Application Affidavit. (TWDB-0201)**
 Attached
- c. **Certificate of Secretary. Attach the Certificate of Secretary. (TWDB -0201B)**
 Attached

See Attachment F for completed Resolution Requesting Financial Assistance TWDB-0201A, Application Affidavit TWDB-0201, and Certificate of Secretary TWDB-0201B.

TASK AND EXPENSE BUDGETS

TASK BUDGET

TASK	DESCRIPTION	AMOUNT
1	Project Management	\$70,000
2	Environmental Due Diligence	\$110,000
3	Conceptual Design of Proposed Flood Control Dams	\$400,000
4	Develop Opinion of Probable Project Costs	\$70,000
5	Hydrologic, Hydraulic, and Benefit-Cost Analysis	\$270,000
6	Conceptual Design Report	\$80,000
TOTAL		\$1,000,000

EXPENSE BUDGET

CATEGORY	AMOUNT
Salaries & Wages ¹	\$72,821.83
Fringe ²	\$30,585.17
Travel ³	\$
Subcontract Services	\$896,593.00
Other Expenses ⁴	\$
Overhead ⁵	\$
Profit	\$
TOTAL	\$1,000,000

¹ Salaries and Wages is defined as the cost of salaries of engineers, draftsmen, stenographers, surveyors, clerks, laborers, etc., for time directly chargeable to this contract.

² Fringe is defined as the cost of social security contributions, unemployment, excise, and payroll taxes, workers' compensation insurance, retirement benefits, medical and insurance benefits, sick leave, vacation, and holiday pay applicable thereto.

³ Travel is limited to the maximum amounts authorized for state employees by the General Appropriations Act, Tex. Leg. Regular Session, 2011, Article IX, Part 5, as amended or superseded

⁴ Other Expenses is defined to include expendable supplies, communications, reproduction, and postage directly chargeable to this CONTRACT.

⁵ Overhead is defined as the costs incurred in maintaining a place of business and performing professional services similar to those specified in this contract. These costs shall include the following:

- Indirect salaries, including that portion of the salary of principals and executives that is allocable to general supervision;
- Indirect salary fringe benefits;
- Accounting and legal services related to normal management and business operations; Travel costs incurred in the normal course of overall administration of the business; Equipment rental;
- Depreciation of furniture, fixtures, equipment, and vehicles;
- Dues, subscriptions, and fees associated with trade, business, technical, and professional organizations;
- Other insurance; Rent and utilities; and Repairs and maintenance of furniture, fixtures, and equipment

LOAN COMPONENT QUESTIONS – APPLICANTS NOT SEEKING FUNDING IN THE FORM OF A LOAN DO NOT NEED TO ANSWER THE QUESTIONS BELOW

Legal Information

1. **Pledge.** What type of pledge will be used to repay the proposed debt?
 Systems Revenue Taxes Combination of System Revenues & Taxes
 Contract Revenue Other (Explain)
2. **Proposed Debt Issue.** Provide the full legal name of the security for the proposed debt issue(s).
3. **Parity of Debt.** Is the applicant proposing to issue Certificates of Obligation or bonds on parity with outstanding obligations?
 Yes No

 If yes:
 - a. Please describe any reserve requirements and additional debt requirements: _____;
 - b. Attach the most recent resolution or ordinance authorizing the outstanding parity debt.
4. **Rate Covenants.** Describe any existing rate covenants.

Financial Information

5. **Utilities Provided.** Indicate the services the Applicant provides its customers. Check all that apply.
 Regional/Wholesale Water Services Retail Water Wastewater
 Storm water/Drainage None of these
6. **Current Average Residential Usage and Rate Information.**

<u>Service</u>	<u>Date of Last Rate Increase</u>	<u>Avg. Monthly Usage (Gal)</u>	<u>Avg. Monthly Bill (\$)</u>	<u>Avg. Monthly Increase Per Customer (\$) at Last Rate Increase</u>	<u>Projected Monthly Increase Necessary to Repay Loan (\$)</u>
Water			\$	\$	\$
Wastewater			\$	\$	\$
Drainage		N/A	\$	\$	\$

Comments: _____

7. **Authorized Rates/Fees/Charges Schedules.** Please attach a schedule of current water, wastewater, and/or storm/drainage rates or fees (whichever is applicable) and the proposed rates/fees needed to finance the project and ongoing maintenance and operation (include the tentative schedule for the necessary proposed rate/fee increase).
 Attached
8. **Collection Procedures.** Please describe the procedures for collecting customer’s monthly bills, including penalties for delinquent accounts and the standard procedures in place to remedy these accounts.

 N/A

9. **Number of Connections.** Provide the number of active connections for each of the past FIVE years.

N/A

a. **WATER**

<u>Year</u>	<u>Number of Active Connections</u>

N/A - No water service provided by applicant

b. **WASTEWATER**

<u>Year</u>	<u>Number of Active Connections</u>

N/A - No wastewater service provided by applicant

10. **Customer Usage.** List the top TEN customers of the water/wastewater system by annual usage in gallons and percentage total use.

N/A

a. **WATER**

<u>Customer Name</u>	<u>Annual Usage (Gal)</u>	<u>Percent of Usage</u>
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%

Comments: _____

N/A - No water service provided by applicant

b. WASTEWATER

<u>Customer Name</u>	<u>Annual Usage (Gal)</u>	<u>Percent of Usage</u>
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%

Comments: _____

N/A - No wastewater service provided by applicant

11. Customer Annual Revenue. List the top TEN customers of the water and/or wastewater system by annual revenue with corresponding usage and percentage total use.

N/A

a. WATER

<u>Customer Name</u>	<u>Annual Usage (Gal)</u>	<u>Annual Revenue</u>	<u>Percent Total Water Revenue</u>
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%

Comments: _____

N/A - No water service provided by applicant

b. WASTEWATER

<u>Customer Name</u>	<u>Annual Usage (Gal)</u>	<u>Annual Revenue</u>	<u>Percent Total Wastewater Revenue</u>
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%
		\$	%

Comments: _____

N/A - No wastewater service provided by applicant

12. **Wholesale Contracts.** Provide a summary of the wholesale contracts with customers.

<u>Contract Type</u>	<u>Minimum Annual Amount</u>	<u>Usage Fee per 1,000 gallons</u>	<u>Annual Operations and Maintenance</u>	<u>Annual Capital Costs</u>	<u>Annual Debt Service</u>	<u>Other</u>	<u>Annual Use for the Most Current Fiscal Year End</u>	<u>Annual Revenue for the Most Current Fiscal Year End</u>
	\$	\$	\$	\$	\$	\$		\$
	\$	\$	\$	\$	\$	\$		\$
	\$	\$	\$	\$	\$	\$		\$
	\$	\$	\$	\$	\$	\$		\$
	\$	\$	\$	\$	\$	\$		\$

Comments: _____

N/A - No water service provided by applicant

13. **Tax Status.** Indicate the tax status of the proposed loan.

Tax-Exempt Taxable N/A

14. **Taxing Authority.** Does the applicant have taxing authority?

Yes No

15. **Maximum Tax Rate.** Provide the maximum tax rate permitted by law per \$100 of property value.

\$ _____ N/A

16. **Principal Employers.** Please list the TEN largest employers of the applicant's service area:

<u>Name</u>	<u>Number of Employees</u>

Comments (example: any anticipated changes to the tax base, employers etc.): _____

17. **Bond Ratings.** Provide any current bond ratings with date received and attach corresponding rating reports. If any are not applicable, enter "N/A".

	<u>Standard & Poor's</u>	<u>Date Received</u>	<u>Moody's</u>	<u>Date Received</u>	<u>Fitch</u>	<u>Date Received</u>
G.O. Revenue						

Attached

18. Overlapping Debt and Tax Rate Table. Attach the direct and overlapping debt and tax rate table.

Attached N/A

19. Taxable Assessed Valuation. Please provide the last FIVE years of data showing total taxable assessed valuation including net ad valorem taxes levies, corresponding tax rate (detailing debt service and general purposes), and tax collection rate.

<u>Fiscal Year Ending</u>	<u>Net Taxable Assessed Value (\$)</u>	<u>Tax Rate</u>	<u>Maintenance & Operating Rate</u>	<u>Interest & Sinking Rate</u>	<u>Tax Levy (\$)</u>	<u>Percentage Current Collections</u>	<u>Percentage Total Collections</u>
	\$				\$		
	\$				\$		
	\$				\$		
	\$				\$		
	\$				\$		

N/A

20. Tax Assessed Values by Classification. Please attach the last FIVE years of tax assessed values delineated by Classification (Residential, Commercial, and Industrial).

Attached No direct tax assessed N/A

21. Taxpayer – Assessed Valuation. Please provide the current top TEN taxpayers showing percentage of ownership to total assessed valuation. Explain anticipated impacts in the Comments blank, below. If any of these have changed in the past three years, please provide information on the changes to the top ten.

<u>Taxpayer Name</u>	<u>Assessed Value</u>	<u>Percent of Total</u>
	\$	%
	\$	%
	\$	%
	\$	%
	\$	%
	\$	%
	\$	%
	\$	%
	\$	%
	\$	%

Comments: _____

No direct tax assessed

22. Sales Tax. Does the applicant collect sales tax? If yes, provide the sales tax collection history for the past FIVE years.

Yes No

<u>Fiscal Year Ending</u>	<u>Total Collections</u>
20	\$
20	\$
20	\$
20	\$
20	\$

23. Annual Audit and Management Letter. Attach ONE copy of the preceding fiscal year’s Annual Audit and management letter prepared and certified by a Certified Public Accountant or Firm of Accountants.

Attached

24. **Five-Year Comparative System Operating Statement.** Please attach:

- a five-year comparative statement including audited prior years, and**
- unaudited year-to-date statement of the following: Operating Statement (not condensed), Balance Sheet, Statement of Cash Flows**

25. **Proforma / Loan Amortization Schedule.** Please select one of the repayment methods from the options below. The proforma should indicate all the information listed under the selection for all years that the debt will be outstanding. Please be sure the proforma reflects the requested debt structure, including multi-phased funding options.

- System Revenues (Attached)**
 - Projected Gross Revenues
 - Operating and Maintenance Expenditures
 - Outstanding and Proposed Debt Service Requirements
 - Net Revenues Available for Debt Service and Coverage of Current and Proposed Debt Paid from Revenues
- Taxes (Attached)**
 - Outstanding and Proposed Debt Service Requirements
 - Tax Rate Necessary to Repay Current and Proposed Debt Paid from Taxes
 - List the Assumed Collection Rate and Tax Base Used to Prepare the Schedule
- Combination of System Revenues and Taxes (Attached)**
 - Projected Gross Revenues
 - Operating and Maintenance Expenditures
 - Net Revenues available for debt service
 - Outstanding and Proposed Debt Service Requirements
 - Tax Rate Necessary to Repay Current and Proposed Debt Paid from Taxes
 - List the Assumed Collection Rate and Tax Base Used to Prepare the Schedule
- Contract Revenues (Attached)**
 - Participant's Projected Gross Revenues
 - Participant's Operating and Maintenance Expenditures
 - Outstanding and Proposed Debt Service Requirements
 - Net Revenues Available for Debt Service and Coverage of Current and Proposed Debt Paid from Revenues
- Other (Attached)**
 - Projected Gross Revenues
 - Annual Expenditures
 - Outstanding and Proposed Debt Service Requirements
 - Revenues Available for Debt Service

26. **Outstanding Debt.** Does the applicant have any outstanding debt? Check all that apply and attach a list of total outstanding debt and identify the debt holder. Segregate by type (General Obligation or Revenue) and present a consolidated schedule for each, showing total annual requirements. Note any authorized but unissued debt.

- General Obligation Debt (Attached)**
- Revenue (Attached)**
- Authorized but Unissued Debt (Attached)**
- Other Debt**
- None**

27. **Repayment Issues.** Disclose all issues that may affect the project or the applicant's ability to issue and/or repay debt (such as anticipated lawsuits, judgements, bankruptcies, major customer closings. etc.).

28. **Default Debt.** Has the applicant ever defaulted on any debt? If yes, disclose all circumstances surrounding prior default(s).

Yes No

If yes, explain: _____

ATTACHMENT CHECKLIST

- | <u>✓</u> | <u>N/A</u> | <u>Attachment Description</u> |
|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Maps - Project Area Boundary GIS Shapefile of Feature Class |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Notice Requirements |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Flood Application Affidavit (TWDB-0171) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Evidence of Adequate Notification |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Detailed description of the degree to which proposed planning duplicates previous or ongoing flood plans |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Detailed description of project service area |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Benefit-Cost Ratio required information |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Detailed scope of work |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Description of why state funding assistance is needed |

✓ N/A Loan Component Attachment Description

 The most recent resolution or ordinance authorizing outstanding parity debt

 Rate Schedule

 Bond Ratings

 Overlapping Debt and Tax Rate Table

 Tax Assessed Values by Classification

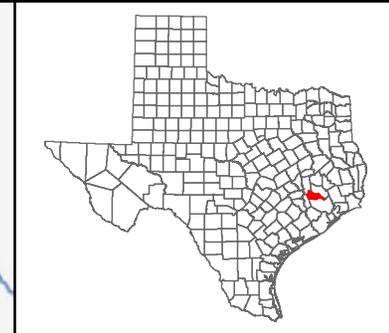
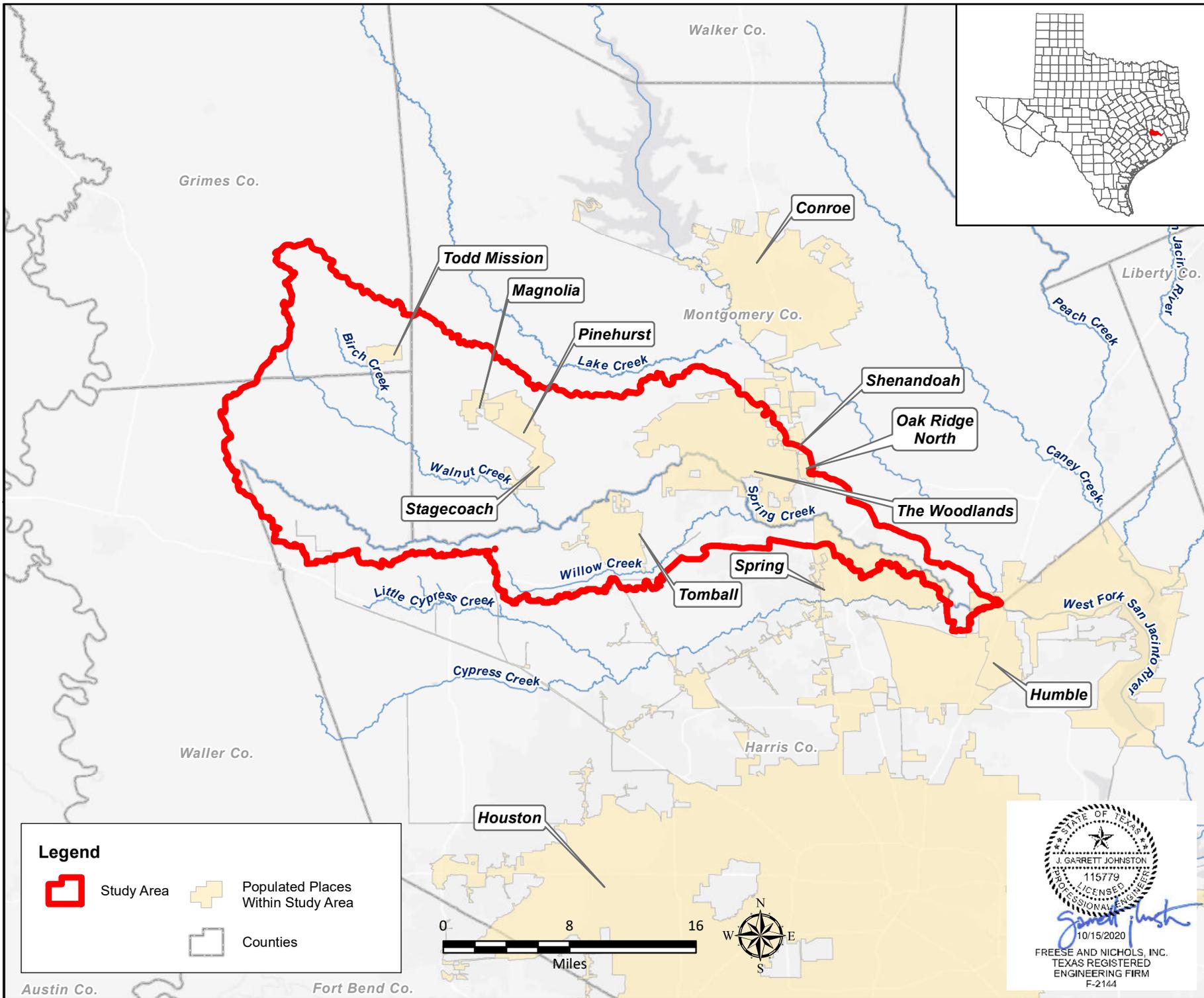
 Annual Audit & Management Letter

 Five Year Comparative Operating Statement

 Proforma/Amortization Schedule

 Outstanding Debt Schedule

EXHIBITS

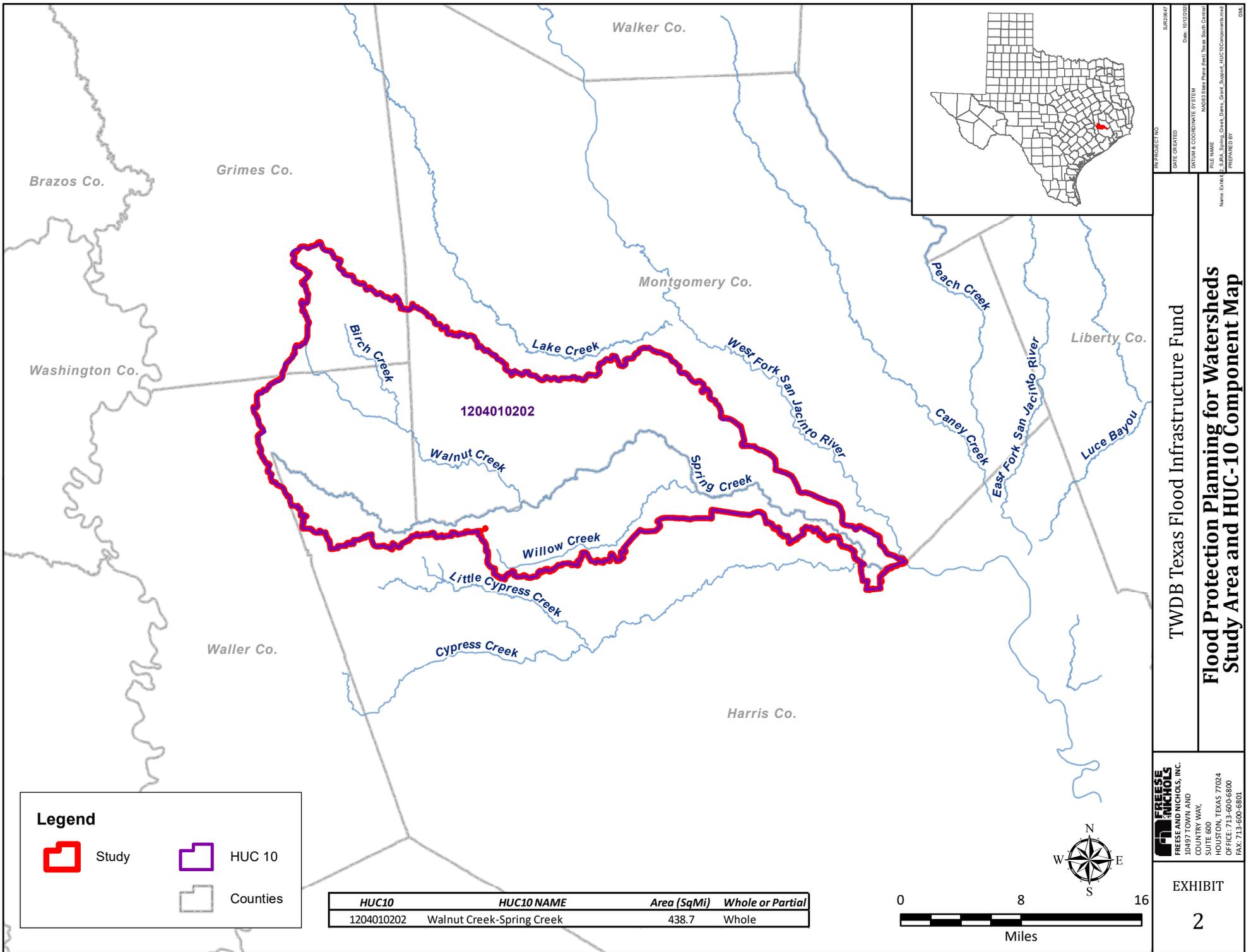


PROJECT NO. SUR-2019-04
 DATE CREATED Date: 10/12/2020
 DATUM & COORDINATE SYSTEM NAD83 State Plane East Texas Spher. Central
 FILE NAME J:\SRA_Sprng_Crks_Dams_Grnt_Support_StudyArea
 PREPARED BY

**TWDB Texas Flood Infrastructure Fund
 Flood Protection Planning for Watersheds
 Study Area and Watershed Location Map**

FRESE AND NICHOLS, INC.
 10497 TOWN AND
 COUNTRY WAY,
 SUITE 600
 HOUSTON, TEXAS 77024
 OFFICE: 713-600-6800
 FAX: 713-600-6801





PROJECT NO. SUR20647
 DATE CREATED Date: 10/12/2020
 DATUM & COORDINATE SYSTEM NAD83 State Plane (East Texas State Central)
 FILE NAME C:\SJA_Spring_Creek_Dams_Grant_Support_HUC10Components.mxd
 PREPARED BY

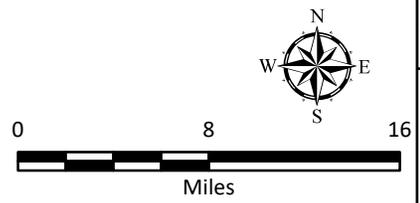
**TWDB Texas Flood Infrastructure Fund
 Flood Protection Planning for Watersheds
 Study Area and HUC-10 Component Map**

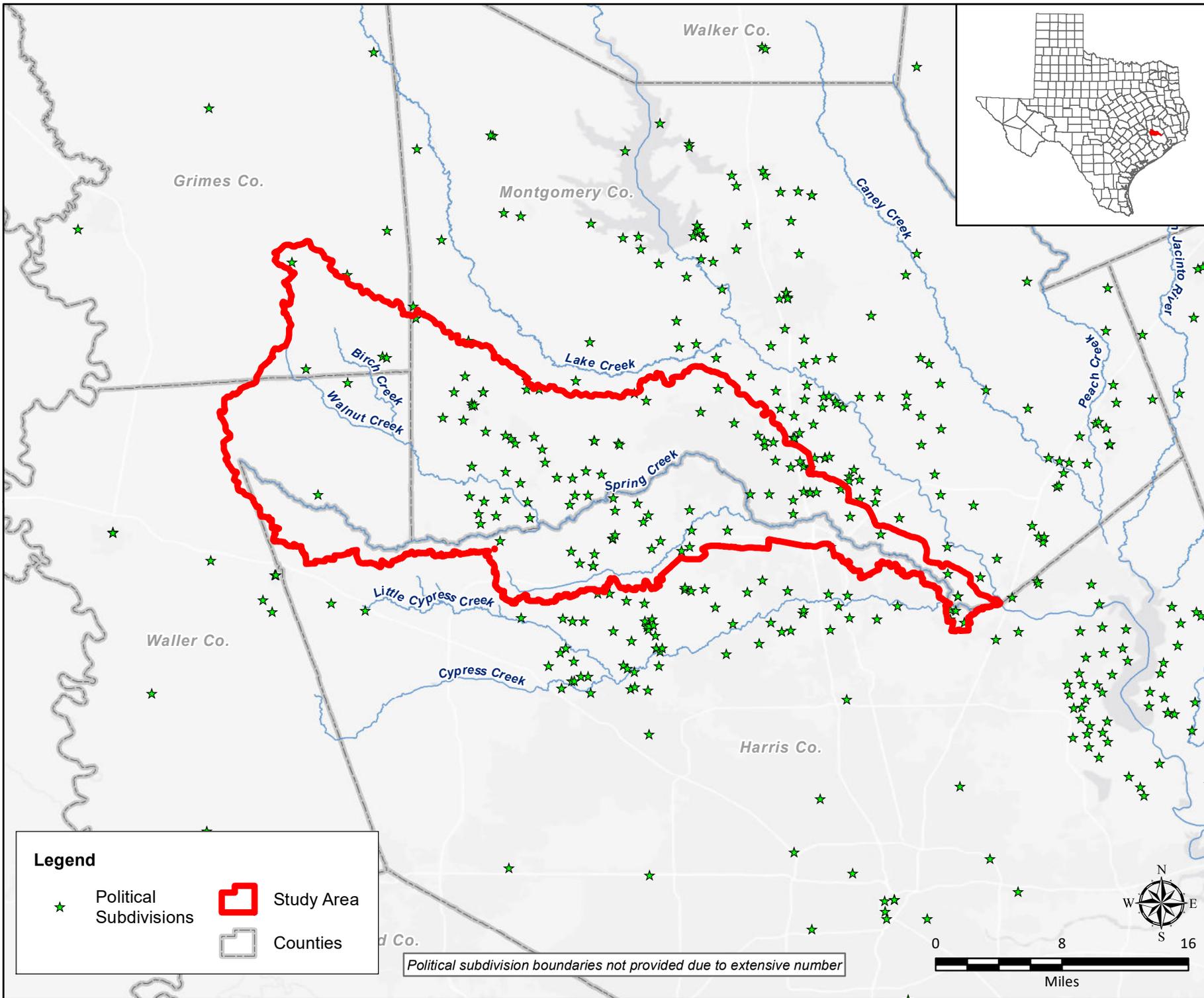
FRESE AND NICHOLS, INC.
 10497 TOWN AND COUNTRY WAY,
 SUITE 600,
 HOUSTON, TEXAS 77024
 OFFICE: 713-600-6800
 FAX: 713-600-6801

Legend

- Study
- HUC 10
- Counties

HUC10	HUC10 NAME	Area (SqMi)	Whole or Partial
1204010202	Walnut Creek-Spring Creek	438.7	Whole

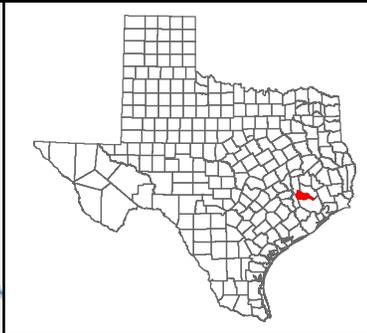




Legend

- ★ Political Subdivisions
- Study Area
- Counties

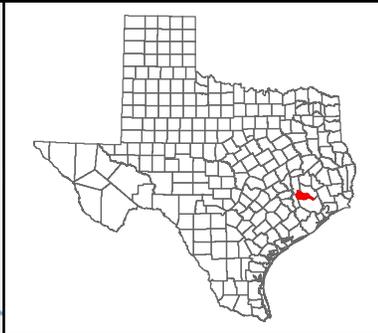
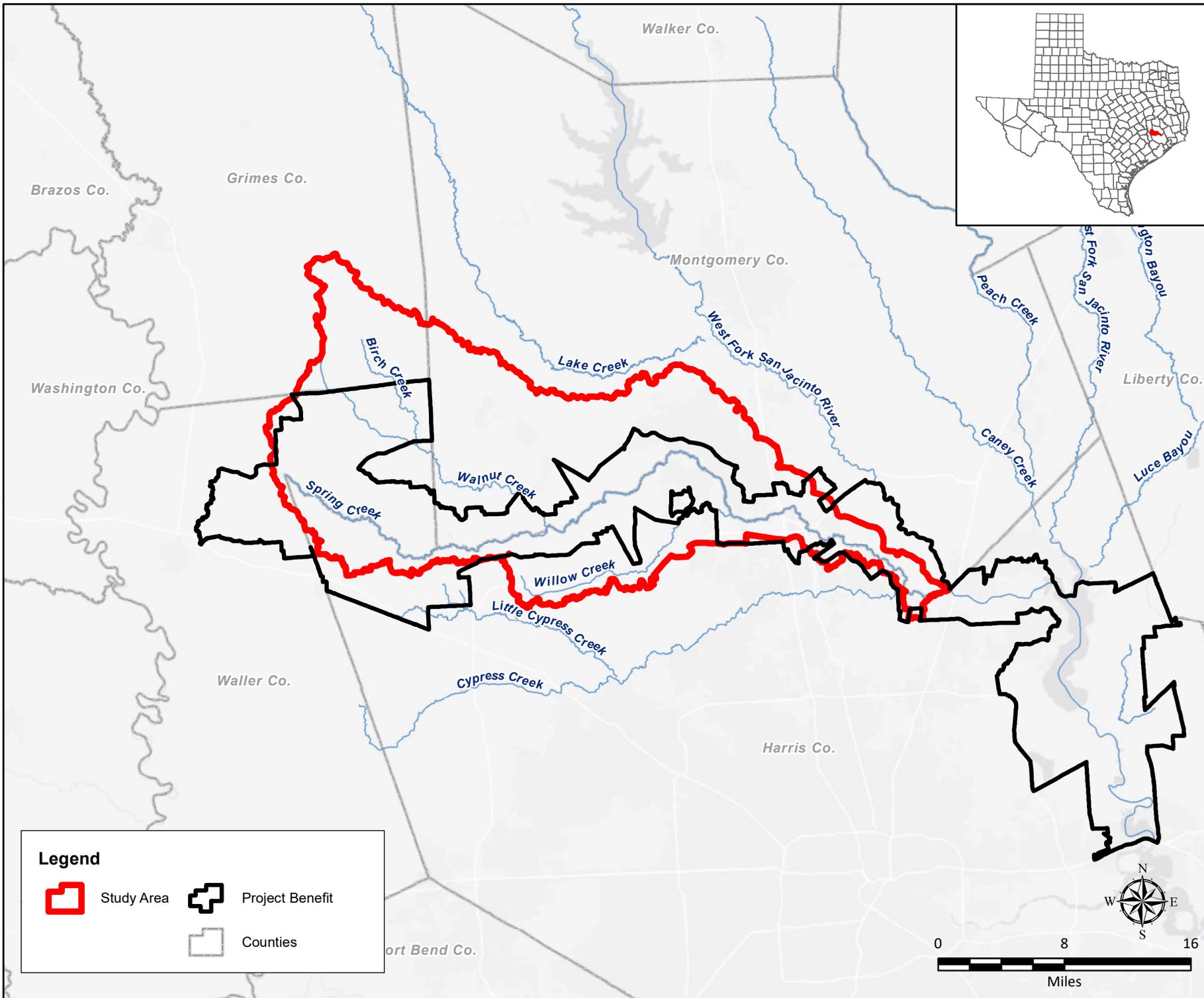
Political subdivision boundaries not provided due to extensive number



IN PROJECT NO. SUR-20647
 DATE CREATED Date: 10/10/2020
 DATUM & COORDINATE SYSTEM NAD83 State Plane East Texas Spher. Central
 FILE NAME 10_SJRA_Spring_Creek_Dams_Grant_Support_PoliticalSubdivisions
 PREPARED BY

**TWDB Texas Flood Infrastructure Fund
 Flood Protection Planning for Watersheds
 Study Area and Political Subdivisions**

FREESE & NICHOLS, INC.
 10497 TOWN AND COUNTRY WAY,
 SUITE 600
 HOUSTON, TEXAS 77024
 OFFICE: 713-600-6800
 FAX: 713-600-6801



PROJECT NO.	SUR20647
DATE CREATED	Date: 10/12/2020
DATUM & COORDINATE SYSTEM	NAD83 StatePlane East Texas Spher. Central
FILE NAME	EXHIBIT_4_SJRA_Spring_Creek_Dams_Grant_Support_ProjectBenefitArea.mxd
PREPARED BY	Name:

TWDB Texas Flood Infrastructure Fund
Flood Protection Planning for Watersheds
Study Area and Project Benefit Map

FREESE AND NICHOLS, INC.
 10497 TOWN AND COUNTRY WAY,
 SUITE 600
 HOUSTON, TEXAS 77024
 OFFICE: 713-600-6800
 FAX: 713-600-6801

ATTACHMENT A

PUBLIC NOTICE AND LIST OF POLITICAL SUBDIVISION



San Jacinto River Authority

ADMINISTRATIVE OFFICE
P.O. Box 329 · Conroe, Texas 77305
(T) 936.588.3111 · (F) 936.588.3043

October 7, 2020

[Recipient Name]
[Title or Department]
[Company Name]
[Street Address]
[City, State, Zip]

Re: San Jacinto River Authority Grant Applications to Texas Water Development Board

Dear [Recipient]:

The Texas Water Development Board (TWDB) is in the process of facilitating applications for the Flood Infrastructure Fund (FIF), a program made possible by Senate Bill 7, sponsored by Senator Brandon Creighton in the last legislative session. In a two-stage process, applicants were first required to submit an abridged application for each project. Based on the abridged applications, TWDB ranked the projects utilizing multiple criteria and prioritized them within the overall available funding capacity of the program. The prioritized projects selected from the first stage of submittals are now eligible for submittal as full applications. San Jacinto River Authority (SJRA) submitted five abridged grant applications for FIF funding. TWDB has invited SJRA to submit a full grant application for four of the five projects.

As an applicant, SJRA is required to notify certain entities of the intent to submit full applications to TWDB. You are receiving this letter because your organization or jurisdiction is located within the project planning area for one or more of the four projects for which SJRA is planning to submit a full application. Detailed information on these four projects, including project description/purpose and planning/project benefit area, as well as the abridged application for each, can be found at: www.sjra.net/floodmanagement/grants/. Any comments from your organization or office must be filed with the TWDB Executive Administrator and SJRA within 30 days of the date on which this notice was mailed.

Texas Water Development Board
James Bronikowski, P.E.
1700 North Congress Avenue, Austin, TX 78701

San Jacinto River Authority
Matt Barrett, P.E.
1577 Dam Site Road, Conroe, TX 77304
mbarrett@sjra.net

Sincerely,

Matt Barrett, P.E.
Division Engineer

FLOOD MANAGEMENT DIVISION
P.O. Box 329
Conroe, Texas 77305
(T) 936.588.3111
(F) 936.588.1114

GRP DIVISION
P.O. Box 329
Conroe, Texas 77305
(T) 936.588.1662
(F) 936.588.7182

HIGHLANDS DIVISION
P.O. Box 861
Highlands, Texas 77562
(T) 281.843.3300
(F) 281.426.2877

LAKE CONROE DIVISION
P.O. Box 329
Conroe, Texas 77305
(T) 936.588.1111
(F) 936.588.1114

WOODLANDS DIVISION
2436 Sawdust Road
The Woodlands, Texas 77380
(T) 281.367.9511
(F) 281.362.4385



San Jacinto River Authority

ADMINISTRATIVE OFFICE
P.O. Box 329 · Conroe, Texas 77305
(T) 936.588.3111 · (F) 936.588.3043

October 7, 2020

[Recipient Name]
[Title or Department]
[Company Name]
[Street Address]
[City, State, Zip]

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As an applicant, SJRA is required to notify certain entities of the intent to submit full applications to TWDB. You are receiving this letter because your organization or jurisdiction is located within the project planning area for one or more of the four projects for which SJRA is planning to submit a full application.

As a key stakeholder and/or an entity substantially affected by one or more of SJRA's four proposed flood projects, SJRA requests your comments **by October 12, 2020** to ensure your input is addressed in the full applications. Detailed information on these four projects, including project description/purpose and planning/project benefit area, as well as the abridged application for each, can be found at: www.sjra.net/floodmanagement/grants/.

Comments must be submitted in writing to the TWDB Executive Administrator and SJRA within 30 days of the date on which this notice was mailed.

Texas Water Development Board
James Bronikowski, P.E.
1700 North Congress Avenue, Austin, TX 78701

San Jacinto River Authority
Chuck Gilman, P.E.
1577 Dam Site Road, Conroe, TX 77304

FLOOD MANAGEMENT DIVISION
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Conroe, Texas 77305
(T) 936.588.3111
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San Jacinto River Authority

ADMINISTRATIVE OFFICE
P.O. Box 329 · Conroe, Texas 77305
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In order to expedite SJRA receipt of input, you may also submit any comments and/or questions via email to cgilman@sjra.net.

Comments and/or letters of support for the applications may be submitted for 30 days, however due to TWDB's compressed schedule, comments submitted after **October 12, 2020** may not be fully addressed in the final applications.

SJRA greatly appreciates your time and looks forward to receiving your feedback.

Sincerely,

Chuck Gilman, P.E.
Director of Water Resources and Flood Management

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P.O. Box 329
Conroe, Texas 77305
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(F) 281.362.4385

Egypt							Standard
Evergreen							Standard
Fostoria							Standard
Four Corners							Standard
Grangerland							Standard
Highlands							Standard
Hockley							Standard
Huffman							Standard
Hufsmith							Standard
Kingwood							Standard
Klein							Standard
Kohrville							Standard
Magnolia Garden							Standard
Maynard							Standard
Mostyn							Standard
Phelps							Standard
Pine Grove							Standard
Pinehurst							Standard
Porter							Standard
Pumpkin							Standard
Rayburn							Standard
Richards							Standard
Rose Hill							Standard
Security							Standard
Sheldon							Standard
Shiro							Standard
Snuff Ridge							Standard
Spring							Standard
Stoneham							Standard
Tarkington Prairie							Standard
The Woodlands							Standard
Westfield							Standard
White Hall							Standard
Wigginsville							Standard
Williams							Standard
Houston Dave Martin	City Council Member, District E	900 Bagby, 1st Floor	Houston	Texas	77002	Special	
Stagecoach Galen Mansee	Mayor	16930 Boot Hill Road	Stagecoach	Texas	77355	Special	
Tomball Gretchen Fagan	Mayor	401 Market Street	Tomball	Texas	77375	Special	
Humble Merle Don Aaron, Sr.	Mayor	114 W. Higgins	Humble	Texas	77338	Special	
Houston Sylvester Turner	Mayor	P.O. Box 1562	Houston	Texas	77251	Special	
Atascosita						Special	

Local Officials

U.S. Congress for the State of Texas, 2nd Congressional District	Dan Crenshaw	Congressman	1849 Kingwood Drive, Suite 100	Kingwood	Texas	77339	Special
U.S. Congress for the State of Texas, 8th Congressional District	Kevin Brady	Congressman	200 River Point, Suite 304	Conroe	Texas	77304	Special
Texas Senate, District 3	Robert Nichols	Senator	15260 Highway 105 West, Suite 230-H, Box 5	Montgomery	Texas	77356	Special
Texas Senate, District 4	Brandon Creighton	Senator	350 Pine Street, Suite 1450	Beaumont	Texas	77701	Special
Texas Senate, District 5	Charles Schwertner	Senator	3000 Briarcrest Drive, Suite 202	Bryan	Texas	77802	Special
Texas Senate, District 6	Carol Alvarado	Senator	4450 Harrisburg, Suite 400	Houston	Texas	77011	Special
Texas Senate, District 7	Paul Bettencourt	Senator	11451 Katy Freeway, Suite 209	Houston	Texas	77079	Special
Texas Senate, District 15	John Whitmire	Senator	803 Yale Street	Houston	Texas	77007	Special
Texas Senate, District 18	Lois Kolkhorst	Senator	2000 S. Market Street, #101	Brenham	Texas	77833	Special
Texas House of Representatives, District 3	Cecil Bell	State Representative	18230 FM 1488, Suite 302	Magnolia	Texas	77354	Special
Texas House of Representatives, District 13	Ben Leman	State Representative	401 South Austin Street	Brenham	Texas	77833	Special
Texas House of Representatives, District 15	Steve Toth	State Representative	25700 Interstate Highway 45, Suite 100	Spring	Texas	77386	Special
Texas House of Representatives, District 16	Will Metcalf	State Representative	1835 Spirit of Texas Way, Suite 100	Conroe	Texas	77301	Special
Texas House of Representatives, District 18	Ernest Bailes	State Representative	10501 Highway 150, Suite B	Sheperd	Texas	77371	Special
Texas House of Representatives, District 57	Trent Ashby	State Representative	2915 Atkinson Drive	Lufkin	Texas	75901	Special
Texas House of Representatives, District 126	Sam Harless	State Representative	6630 Cypresswood Drive, Suite 150	Spring	Texas	77379	Special
Texas House of Representatives, District 127	Dan Huberty	State Representative	4501 Magnolia Cove, Suite 201	Kingwood	Texas	77345	Special
Texas House of Representatives, District 128	Briscoe Cain	State Representative	606 Rollingbrook Drive, Suite 1E	Baytown	Texas	77521	Special
Texas House of Representatives, District 130	Tom Oliverson	State Representative	12345 Jones Road, #221	Houston	Texas	77070	Special
Texas House of Representatives, District 132	Gina Calami	State Representative	1550 Foxlake Drive, Suite 120	Houston	Texas	77084	Special
Texas House of Representatives, District 135	Jon Rosenthal	State Representative	9601 Jones Road, Suite 215	Houston	Texas	77065	Special
Texas House of Representatives, District 139	Jarvis Johnson	State Representative	6112 Wheatley Street	Houston	Texas	77091	Special
Texas House of Representatives, District 141	Senfonia Thompson	State Representative	10527 Homestead Road	Houston	Texas	77016	Special
Texas House of Representatives, District 142	Harold V. Dutton, Jr.	State Representative	8799 N. Loop East, Suite 200	Houston	Texas	77029	Special
Texas House of Representatives, District 143	Ana Hernandez	State Representative	1233 Mercury Drive	Houston	Texas	77029	Special
Texas House of Representatives, District 150	Valoree Swanson	State Representative	23008 Northcrest	Spring	Texas	77389	Special
Grimes County Precinct 1	Chad Mallett	Commissioner	P.O. Box 160	Anderson	Texas	77830	Special
Grimes County Precinct 2	David E Dobyanski	Commissioner	P.O. Box 572	Anderson	Texas	77830	Special
Grimes County Precinct 3	Barbara Walker	Commissioner	205 Veteran's Memorial Drive	Navasota	Texas	77868	Special
Grimes County Precinct 4	Phillip Cox	Commissioner	205 Veteran's Memorial Drive	Navasota	Texas	77868	Special
Harris County Precinct 1	Rodney Ellis	Commissioner	1001 Preston, 9th Floor	Houston	Texas	77002	Special
Harris County Precinct 2	Adrian Garcia	Commissioner	1001 Preston, R. 924	Houston	Texas	77002	Special
Harris County Precinct 4	R. Jack Cagle	Commissioner	14444 Holderrieth Road	Tomball	Texas	77377	Special
Liberty County Precinct 2	Greg Arthur	Commissioner	588 CR 2010	Hardin	Texas	77561	Special
Liberty County Precinct 3	James Reaves	Commissioner	119 S. Fenner Avenue	Cleveland	Texas	77327	Special
Liberty County Precinct 4	Leon Wilson	Commissioner	1034 CR 605	Dayton	Texas	77535	Special
Montgomery County Precinct 1	Mike Meador	Commissioner	510 Highway 75 North	Willis	Texas	77378	Special
Montgomery County Precinct 2	Charlie Riley	Commissioner	19910 Unity Park Drive	Magnolia	Texas	77355	Special

	Montgomery County Precinct 3 James Noack	Commissioner	1130 Pruitt Road	Spring	Texas	77380	Special	
	Montgomery County Precinct 4 James Metts	Commissioner	23628 Roberts Road	New Caney	Texas	77357	Special	
	San Jacinto County Precinct 1 Laddie McAnally	Commissioner	P.O. Box 997	Coldspring	Texas	77331	Special	
	San Jacinto County Precinct 2 Donny Marrs	Commissioner	P.O. Box 203	Shepherd	Texas	77371	Special	
	San Jacinto County Precinct 3 David Brandon	Commissioner	31 Lilly Yeager Loop North	Cleveland	Texas	77327	Special	
	San Jacinto County Precinct 4 Mark Nettuno	Commissioner	221 Boat Launch Road	Point Blank	Texas	77364	Special	
	Waller County Precinct 1 John A. Amsler	Commissioner	836 Austin, Suite 203	Hempstead	Texas	77445	Special	
	Waller County Precinct 2 Walter E. Smith	Commissioner	836 Austin, Suite 203	Hempstead	Texas	77445	Special	
	Waller County Precinct 3 Jeron Barnett	Commissioner	12620 FM 1887	Hempstead	Texas	77445	Special	
	Waller County Precinct 4 Justin Beckendorff	Commissioner	3410 1st Street	Pattison	Texas	77466	Special	
	Walker County Precinct 2 Ronnie White	Commissioner	123 Booker Rd	Huntsville	Texas	77340	Special	
	Walker County Precinct 4 Jimmy Henry	Commissioner	9368 SH 75 S	New Waverly	Texas	77358	Special	
Regional Water Planning Groups								
	Region H Water Planning Group Mark Evans	Chairman	3648 Cypress Creek Parkway, Suite 110	Houston	Texas	77068	Standard	
Regional Planning Agencies								
Districts and Authorities created under Texas Constitution, Article III, Chapter 52, or Article XVI, Chapter 59								
	Brazos River Authority David Collinsworth	General Manager	4600 Cobbs Drive	Waco	Texas	76710		
	Lone Star Conservation District Samantha Reiter	General Manager	655 Conroe Park North Drive	Conroe	Texas	77303	Standard	
	North Harris County Regional Water Authority Jimmie Schindewolf, P.E.	General Manager	3648 Cypress Creek Parkway, Suite 110	Houston	Texas	77068	Standard	
	Trinity River Authority Kevin Ward	General Manager	5300 S. Collins	Arlington	Texas	76018	Standard	
Grimes County Water District								
	Grimes County MUD 1		1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County Water District								
	Harris County FWS 58		1 Greenway Plaza, Suite 1020	Houston	Texas	77046	Standard	not deliverable
	Harris County MUD 48		1001 McKinney Street, Suite 1000	Houston	Texas	77002	Standard	
	Cypress Creek Utility District		10643 Mills Walk	Houston	Texas	77070	Standard	
	Spanish Cove PUD		1100 Louisiana Street, Suite 400	Houston	Texas	77002	Standard	not deliverable
	Harris County MUD 361		11111 Katy Freeway, Suite 725	Houston	Texas	77079	Standard	
	North Park PUD		112 Bammel Road	Houston	Texas	77090	Standard	
	Harris County MUD 154		11302 Tanner Road	Houston	Texas	77041	Standard	not deliverable
	Harris County MUD 151		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Harris County MUD 365		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Harris County MUD 391		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Harris County MUD 46		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Newport MUD		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Northeast Harris County MUD 1		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Northwood MUD 1		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Spring West MUD		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Tattor Road MUD		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
	Harris County MUD 249		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 281		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 344		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 360		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 489		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 490		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 491		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 494		1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Harris County MUD 153		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 280		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 282		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 316		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 342		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 36		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 367		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 383		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 389		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 419		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County MUD 434		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County WCID 119		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Hunter's Glen MUD		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Westador MUD		1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County WCID 157		1300 Post Oak Boulevard, Suite 1400	Houston	Texas	77056	Standard	
	Harris-montgomery Counties MUD 386		1300 Post Oak Boulevard, Suite 1400	Houston	Texas	77056	Standard	
	Northpointe WCID		1300 Post Oak Boulevard, Suite 1400	Houston	Texas	77056	Standard	
	Northwest Freeway MUD		1300 Post Oak Boulevard, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Northwest Harris County MUD 10		1300 Post Oak Boulevard, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Harris County WCID 155		1301 McKinney St., Suite 5100	Houston	Texas	77010	Standard	
	Harris County MUD 396		1301 McKinney Street, Suite 5100	Houston	Texas	77010	Standard	
	Harris County MUD 397		1301 McKinney Street, Suite 5100	Houston	Texas	77010	Standard	
	Malcomson Road Utility District		1345 Campbell Rd Suite 205	Houston	Texas	77055	Standard	not deliverable
	Harris County MUD 165		1345 Campbell Road, Suite 205	Houston	Texas	77055	Standard	not deliverable
	Harris County MUD 18		1345 Campbell Road, Suite 205	Houston	Texas	77055	Standard	not deliverable
	Harris County MUD 221		1345 Campbell Road, Suite 205	Houston	Texas	77055	Standard	not deliverable
	Harris County MUD 401		1345 Campbell Road, Suite 205	Houston	Texas	77055	Standard	not deliverable
	Lake Forest Utility District		1345 Campbell Road, Suite 205	Houston	Texas	77055	Standard	not deliverable
	CY Champ PUD		13455 Cutten, Suite 1A	Houston	Texas	77069	Standard	
	Harris County MUD 450		145003 W Lake Houston Parkway	Houston	Texas	77049	Standard	not deliverable
	Grant Road PUD		1506 Whispering Pines	Houston	Texas	77055	Standard	
	Harris County MUD 43		1506 Whispering Pines	Houston	Texas	77055	Standard	
	Harris County WCID 116		1506 Whispering Pines	Houston	Texas	77055	Standard	

Faulkey Gully MUD	15503 Hermitage Oaks Drive	Tomball	Texas	77377	Standard	not deliverable
Dowdell PUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 132	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 152	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 211	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 233	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 26	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 290	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 322	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 354	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 358	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 364	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 405	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 412	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County MUD 480	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County WCID 110	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County WCID 114	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Harris County WCID 136	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Louetta North PUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Louetta Road Utility District	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Luce Bayou PUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Meadowhill Regional MUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northgate Crossing MUD 1	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northgate Crossing MUD 2	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northwest Harris County MUD 19	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northwest Harris County MUD 20	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northwest Harris County MUD 28	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northwest Harris County MUD 30	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northwest Harris County MUD 32	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Northwest Harris County MUD 36	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Pine Bough PUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Prestonwood Forest Utility District	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Richey Road MUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Terranova West MUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Timber Lane Utility District	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Timberlake Improvement District	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Woodcreek MUD	1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
Cypress Forest PUD	16215 Champion Forest Drive	Spring	Texas	77379	Standard	
Charterwood MUD	16444 Cutten Road	Houston	Texas	77070	Standard	
Ponderosa Forest Utility District	17111 Rolling Creek Drive, Suite 108	Houston	Texas	77090	Standard	
Cypresswood Utility District	17495 Village Green Drive	Houston	Texas	77040	Standard	
Bridgestone MUD	19720 Kuykendahl	Spring	Texas	77379	Standard	
Harris County MUD 551	1980 Post Oak Blvd, Suite 1380	Houston	Texas	77056	Standard	
Harris Montgomery Counties Management District	1980 Post Oak Boulevard, Suite 1380	Houston	Texas	77056	Standard	
Harris County Improvement District 14	1980 S Post Oak Lane #1580	Houston	Texas	77056	Standard	not deliverable
Harris County MUD 368	200 River Pointe Drive, Suite 240	Conroe	Texas	77304	Standard	not deliverable
Shasla PUD	200 River Pointe Drive, Suite 240	Conroe	Texas	77304	Standard	not deliverable
Harris County MUD 1	2727 Allen Parkway, Suite 1100	Houston	Texas	77019	Standard	
Harris County FWSD 52	2929 Allen Parkway, Suite 3150	Houston	Texas	77019	Standard	
Bilma PUD	2929 Allen Parkway, Suite 3450	Houston	Texas	77019	Standard	
Harris County WCID 70	2935 Foley Road	Crosby	Texas	77532	Standard	
Harris County MUD 106	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 230	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 319	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 423	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 468	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 503	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 530	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 531	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Harris County MUD 542	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
CNP Utility District	3700 Buffalo Speedway, Suite 830	Houston	Texas	77098	Standard	
Harris County MUD 387	406 W. Grand Pkwy. S., Suite 260	Katy	Texas	77494	Standard	
Cypress Hill MUD 1	5118 Spring Cypress Road	Spring	Texas	77379	Standard	
Cypress-Klein Utility District	5118 Spring Cypress Road	Spring	Texas	77379	Standard	
Crosby MUD	5507 Ave C	Crosby	Texas	77532	Standard	not deliverable
Kings Manor MUD	5635 NW Central Drive, Suite 104E	Houston	Texas	77092	Standard	
Harris County Improvement District 18	5805 Westview Drive	Houston	Texas	77055	Standard	
Old Town Spring Improvement District	606 Spring Cypress Road	Spring	Texas	77373	Standard	
Sheldon Road MUD	9419 Lamkin	Houston	Texas	77049	Standard	
Harris County WCID 99	P.O. Box 11750	Spring	Texas	77391	Standard	
Harris County MUD 286	P.O. Box 11890	Houston	Texas	77391	Standard	
Kleinwood MUD	P.O. Box 11890	Spring	Texas	77391	Standard	
Memorial Hills Utility District	P.O. Box 11890	Spring	Texas	77391	Standard	
Spring Creek Forest PUD	P.O. Box 11890	Spring	Texas	77391	Standard	
Encanto Real Utility District	P.O. Box 1627	Spring	Texas	77383	Standard	
Harris County MUD 44	P.O. Box 579	Spring	Texas	77383	Standard	
Bammel Utility District	P.O. Box 695	Spring	Texas	77383	Standard	
Harris County MUD 24	P.O. Box 73109	Houston	Texas	77273	Standard	
Harris County MUD 82	P.O. Box 73109	Houston	Texas	77273	Standard	
Harris County WCID 91	P.O. Box 73109	Houston	Texas	77273	Standard	

	Klein PUD		P.O. Box 73109	Houston	Texas	77273	Standard		
	Harris County MUD 109		P.O. Box 80	Tomball	Texas	77377	Standard		
	Harris County WCID 132		P.O. Box 80	Tomball	Texas	77377	Standard		
	Harris County WCID 92		P.O. Box 80	Tomball	Texas	77377	Standard		
	Heatherloch MUD		P.O. Box 80	Tomball	Texas	77377	Standard		
	Inverness Forest Improvement District		P.O. Box 80	Tomball	Texas	77377	Standard		
	Northampton MUD		P.O. Box 80	Tomball	Texas	77377	Standard		
	Northwest Harris County MUD 15		P.O. Box 80	Tomball	Texas	77377	Standard		
	Oakmont Public Utility District		P.O. Box 80	Tomball	Texas	77377	Standard		
	H-M-A-W SUD		P.O. Box 837	Pinehurst	Texas	77362	Standard		
	Harris County MUD 104		P.O. Box 890466	Houston	Texas	77289	Standard		
	Harris County MUD 275		P.O. Box 890466	Houston	Texas	77289	Standard		
	Harris County WCID 113		P.O. Box 890466	Houston	Texas	77289	Standard		
	Northwest Harris County MUD 5		P.O. Box 890466	Houston	Texas	77289	Standard		
	Northwest Harris County MUD 9		P.O. Box 890466	Houston	Texas	77289	Standard		
	Post Wood MUD		P.O. Box 897	Spring	Texas	77383	Standard		
	Grand Northwest MUD						Standard		
	Harris County MUD 273						Standard		
	Harris County MUD 415						Standard		
	Harris County MUD 416						Standard		
	Harris County MUD 418						Standard		
	Harris County MUD 465						Standard		
	Harris County MUD 499						Standard		
	Harris County MUD 525						Standard		
	Northgate Crossing Road Utility District						Standard		
	Tower Oaks Plaza MUD						Standard		
	Waller Town Center Management District						Standard		
Liberty County Water District									
	Liberty County MMD 1						Standard		
	Liberty County MUD 7						Standard		
	Liberty Lakes FWSD 1						Standard		
	Tarkington SUD		19396 Highway 321	Cleveland	Texas	77327	Standard		
Other Montgomery County Water District									
	Montgomery County MUD 56	Clarence Bull	President and Investment Officer	10000 Memorial Drive, Suite 260	Houston	Texas	77024	Standard	
	Chateau Woods MUD	David Schoop	Board President	10224 Fairview Drive	Conroe	Texas	77385	Standard	
	Roman Forest PUD 3			103 Kerry Road	Highlands	Texas	77562	Standard	
	Far Hills Utility District	James Marvin Haymon	Board President	10320 Cude Cemetery Road	Willis	Texas	77318	Standard	
	Montgomery County Drainage District 6			1100 Louisiana Street, Suite 400	Houston	Texas	77002	Standard	not deliverable
	Montgomery County FWSD 6			12081 Lakeview Manor Drive	Willis	Texas	77318	Standard	
	Montgomery County MUD 126	Gary Calfee	Board President	1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Montgomery County MUD 83			1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Montgomery County MUD 84			1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Montgomery County MUD 94	Jim Spitzmiller	Board President	1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Montgomery County MUD 95			1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Montgomery County MUD 96	Robert C. Watson	Board President	1300 Post Oak Blvd, Suite 1400	Houston	Texas	77056	Standard	
	Montgomery County MUD 98			1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Wood Trace MUD 1			1300 Post Oak Blvd, Suite 1600	Houston	Texas	77056	Standard	not deliverable
	Montgomery County MUD 18			1345 Campbell Road, Suite 205	Houston	Texas	77056	Standard	not deliverable
	Montgomery County MUD 42			1506 Whispering Pines	Houston	Texas	77055	Standard	
	Montgomery County Utility District 3			1506 Whispering Pines	Houston	Texas	77055	Standard	
	Montgomery County MUD 112			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Montgomery County MUD 115			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Montgomery County MUD 15			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Montgomery County MUD 24			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Montgomery County MUD 88			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Montgomery County MUD 99			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Roman Forest PUD 4			1621 Milam Street Fl 3	Houston	Texas	77002	Standard	not deliverable
	Corinthian Point MUD 2	John Burgin	Board President	17707 Old Louetta	Houston	Texas	77070	Standard	
	Lazy River Improvement District	Mike Edwards	Board President	17707 Old Louetta	Houston	Texas	77070	Standard	
	Montgomery County MUD 132	Brandon Macey	Board President	1980 Post Oak Blvd, Suite 1380	Houston	Texas	77056	Standard	
	Montgomery County MUD 141	Scott Day	Board President	1980 Post Oak Blvd, Suite 1380	Houston	Texas	77056	Standard	
	Montgomery County MUD 173	Juan Galvan	Board President	1980 Post Oak Blvd, Suite 1380	Houston	Texas	77056	Standard	
	Montgomery County MUD 8			200 River Pointe, Suite 240	Conroe	Texas	77304	Standard	not deliverable
	Montgomery County MUD 9			200 River Pointe, Suite 240	Conroe	Texas	77304	Standard	not deliverable
	Montgomery County MUD 121	James D. Pell	Board President	202 Century Square Blvd.	Sugar Land	Texas	77478	Standard	
	East Montgomery County Improvement District	Frank McCrady	President/CEO	21575 US Highway 59 North, Suite 200	New Caney	Texas	77357	Standard	
	Porter SUD			22162 Water Well Road	Porter	Texas	77365	Standard	
	Southern Montgomery County MUD			25212 Interstate Highway 45	Spring	Texas	77386	Standard	
	Montgomery County MUD 127	John Dee Vaughn	Board President	2727 Allen Parkway, Suite 1100	Houston	Texas	77019	Standard	
	Rayford Road MUD			2727 Allen Parkway, Suite 1100	Houston	Texas	77019	Standard	
	Spring Creek Utility District	Dale Healy	Board President	27316 Spectrum Way	Oak Ridge North	Texas	77385	Standard	
	Lake Conroe Hills MUD	James R. Schmidt	Board President	2929 Allen Parkway, Suite 3450	Houston	Texas	77019	Standard	
	Conroe MUD 1	David Townsend	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	East Montgomery County MUD 12	Rachel Maybray	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	Montgomery County MUD 107	Ken Schoppe	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	Montgomery County MUD 113			3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	Montgomery County MUD 137	Robert S. Wempe	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	Montgomery County MUD 138	Guillermo Machado	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	Montgomery County MUD 145	Robert Graham	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
	Montgomery County MUD 149	Walt Rosenbusch	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	

Montgomery County MUD 150 Phillip Dautrich	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Montgomery County MUD 151 P. "Blake" McGregor	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Montgomery County MUD 89 Paul Cote	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Valley Ranch Medical Center Management District Gregory P. Schneider	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Valley Ranch MUD 1 Chris Baughman	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Valley Ranch Town Center Management District Temple Brown	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
Woodridge MUD Joseph Manning	Board President	3200 Southwest Freeway, Suite 2600	Houston	Texas	77027	Standard	
East Montgomery County MUD 3 Andrew Persson	Board President	3700 Buffalo Speedway, Suite 830	Houston	Texas	77098	Standard	
East Montgomery County MUD 4 Raymond Hedden	Board President	3700 Buffalo Speedway, Suite 830	Houston	Texas	77098	Standard	
East Plantation Utility District William B. Knapp	Board President	447 Cumberland Trail	Conroe	Texas	77302	Standard	
Montgomery County MUD 119		4600 Highway 6 North, Suite 315	Houston	Texas	77084	Standard	not deliverable
Montgomery County MUD 19		5 Grogans Park, Suite 112	Spring	Texas	77380	Standard	not deliverable
Montgomery County MUD 90		501 N. Thompson Street, Suite 401	Conroe	Texas	77301	Standard	
Grand Oaks MUD		5635 NW Central Drive, Suite 104E	Houston	Texas	77092	Standard	
Roman Forest Consolidated MUD Billy W. Goss	Board President	6750 West Loop South, Suite 865	Bellaire	Texas	77401	Standard	
Texas National MUD LaVerne Woodruff	Board President	704 North Thompson Street	Conroe	Texas	77301	Standard	
Stanley Lake MUD Kerry Masson	Board President	875 Lake View Drive	Montgomery	Texas	77356	Standard	
Montgomery County Utility District 4		9 Greenway Plaza, Suite 1000	Houston	Texas	77046	Standard	
Blaketree MUD 1 of Montgomery County Tammy Pizzitola	President	9 Greenway Plaza, Suite 1100	Houston	Texas	77046	Standard	
Clovercreek MUD Anthony Roubik	Board President	9 Greenway Plaza, Suite 1100	Houston	Texas	77046	Standard	
East Montgomery County MUD 5 John G. Patterson	Board President	9 Greenway Plaza, Suite 1100	Houston	Texas	77046	Standard	
East Montgomery County MUD 6 Todd Mueller	Board President	9 Greenway Plaza, Suite 1100	Houston	Texas	77046	Standard	
East Montgomery County MUD 7 Beau Kaleel	Board President	9 Greenway Plaza, Suite 1100	Houston	Texas	77046	Standard	
Montgomery County MUD 111 Brett Beardsley	Board President	9 Greenway Plaza, Suite 1100	Houston	Texas	77046	Standard	
Montgomery County MUD 92		East O Fm 1314 And Bisecte	Conroe	Texas	77385	Standard	not deliverable
Montgomery County Utility District 2		P. O. Box 690406	Houston	Texas	77269	Standard	
Porter MUD		P.O. Box 1030	Porter	Texas	77365	Standard	
Point Aquarius MUD		P.O. Box 11890	Spring	Texas	77391	Standard	
New Caney MUD		P.O. Box 1799	New Caney	Texas	77357	Standard	
Montgomery County MUD 16		P.O. Box 690406	Houston	Texas	77269	Standard	
River Plantation MUD		P.O. Box 747	Conroe	Texas	77305	Standard	
Montgomery County WCID 1		P.O. Box 7690	The Woodlands	Texas	77387	Standard	
Blaketree MUD 2 of Montgomery County						Standard	
Cleveland MUD 1						Standard	
Montgomery County Drainage District 10						Standard	
Montgomery County MUD 108						Standard	
Montgomery County MUD 116						Standard	
Montgomery County MUD 123						Standard	
Montgomery County MUD 124						Standard	
Montgomery County MUD 128						Standard	
Montgomery County MUD 142						Standard	
Montgomery County MUD 148						Standard	
Montgomery County MUD 154A						Standard	
Montgomery County MUD 157						Standard	
Montgomery County MUD 158						Standard	
Montgomery County WCID 4						Standard	
Trinity Lakes MUD of Montgomery County						Standard	
Wood Trace MUD 4A						Standard	
Wood Trace MUD 4B						Standard	
Walker County Water District							
Phelps SUD Roark Rohe	General Manager	455 FM 2296	Huntsville	Texas	77340	Standard	
Waller County Water District							
Kickapoo FWSD of Waller County		12012 Wickchester Lane, Suite 120	Houston	Texas	77079	Standard	
Waller County MUD 33						Standard	
Non-Profit (Other)							
Bayou Land Conservancy	Jill Boullion	Executive Director	10330 Lake Road, Building J	Houston	Texas	77070	Special
HARC	Lisa Gonzalez	President and Chief Executive Officer	8801 Gosling Road	The Woodlands	Texas	77381	Standard
Houston-Galveston Area Council	Charles Wemple	Executive Director	3555 Timmons Lane, Suite 100	Houston	Texas	77027	Standard
North Houston Association			16825 Northchase Drive #160	Houston	Texas	77060	Standard

ALL SENT ON 9.25

COLOR-CODED LEGEND

Single letter sent to multiple MUDS at 1300 Post Oak Blvd, Suite 1600

Single letter sent to multiple MUDS at 200 River Pointe, Suite 240

Single letter sent to multiple MUDS at 1621 Milam Street Fl 3

Single letter sent to multiple MUDS at 1345 Campbell Road, Suite 205

ATTACHMENT B

FLOOD APPLICATION AFFIDAVIT TWDB-0171

Flood Application Affidavit (Category 1)

THE STATE OF TEXAS §
COUNTY OF Montgomery §
APPLICANT San Jacinto River Authority §

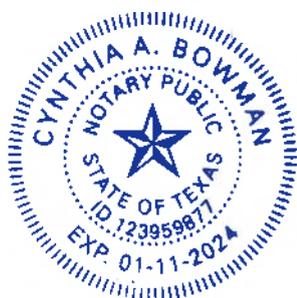
BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared Jace A. Houston as the Authorized Representative of the San Jacinto River Authority, who being by me duly sworn, upon oath says that:

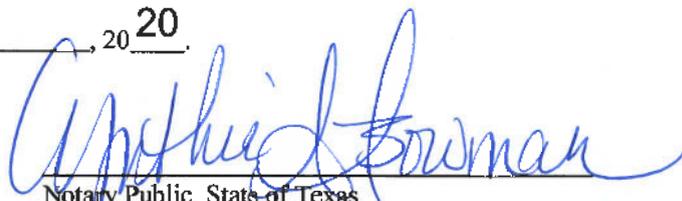
1. in accordance with the 2020 Flood Intended Use Plan, the San Jacinto River Authority (city, county, district, authority) has acted cooperatively with other political subdivisions to address flood control needs in the area in which the eligible political subdivisions are located; and
2. in accordance with the 2020 Flood Intended Use Plan, all eligible political subdivisions substantially affected by the proposed flood project have participated in the process of developing the proposed flood project.


Official Representative
Title: General Manager

SWORN TO AND SUBSCRIBED BEFORE ME, by Jace A. Houston,
on this 7th day of October, 2020.

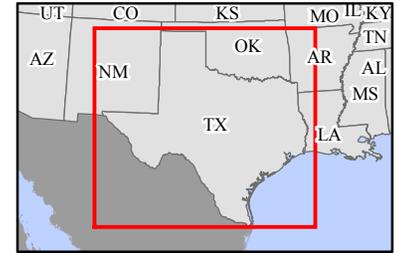
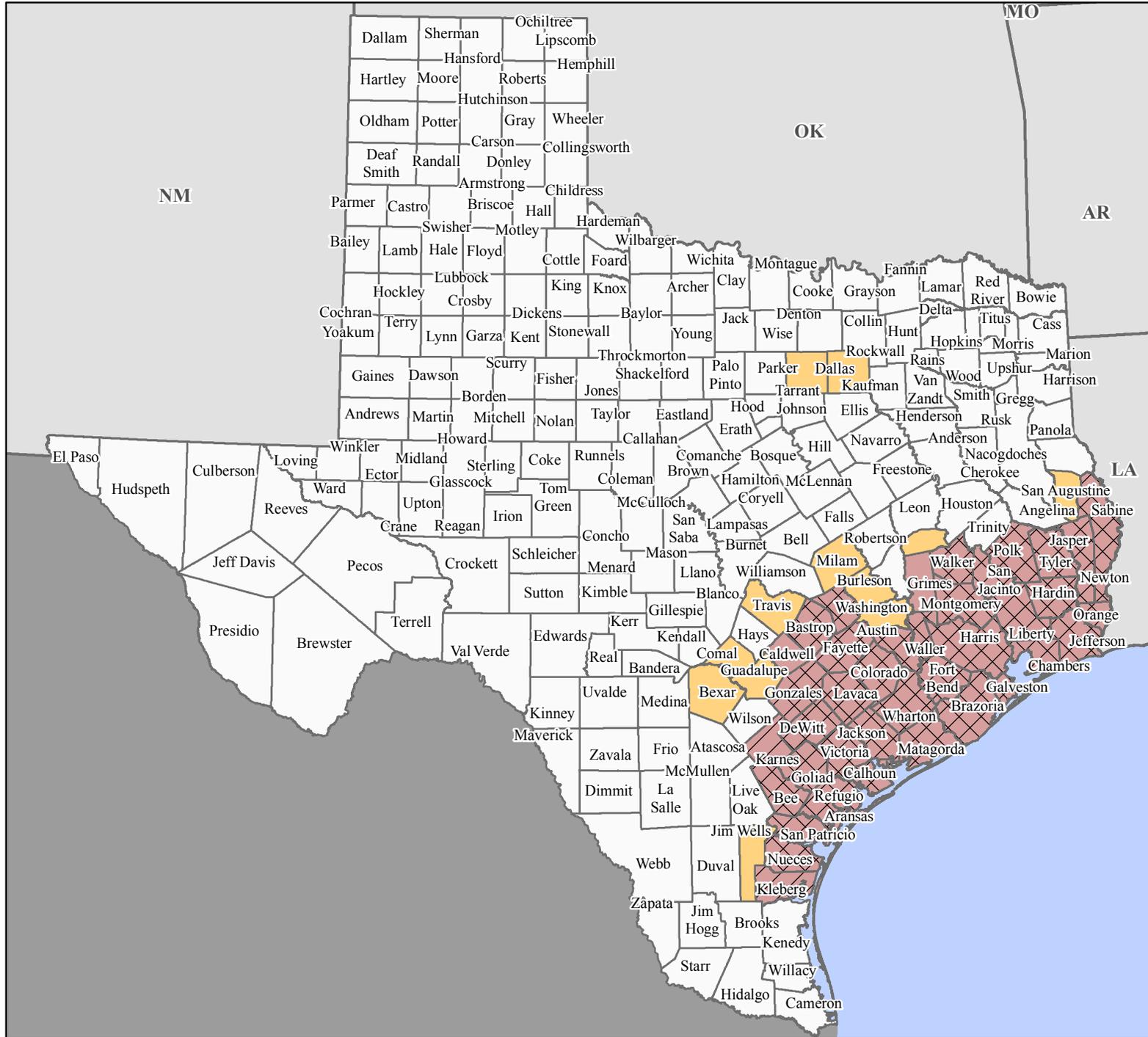
(NOTARY'S SEAL)




Notary Public, State of Texas

ATTACHMENT C
FLOOD DISASTER DECLARATIONS

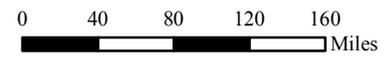
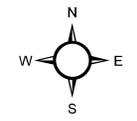
FEMA-4332-DR, Texas Disaster Declaration as of 10/11/2017



Data Layer/Map Description:
The types of assistance that have been designated for selected areas in the State of Texas.

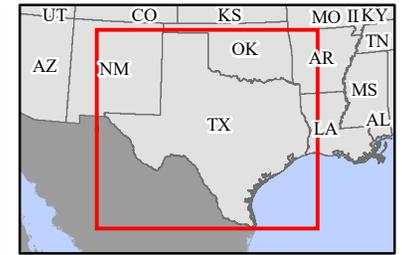
All designated areas in the State of Texas are eligible to apply for assistance under the Hazard Mitigation Grant Program.

- Designated Counties**
- No Designation
 - Public Assistance
 - Individual Assistance and Public Assistance
 - Public Assistance (Category B)
 - Individual Assistance and Public Assistance (Categories A and B)
 - Individual Assistance and Public Assistance (Categories A - G)



Data Sources:
FEMA, ESRI;
Initial Declaration: 08/25/2017
Disaster Federal Registry Notice:
Amendment #10 - 10/11/2017
Datum: North American 1983
Projection: Lambert Conformal Conic

FEMA-4466-DR, Texas Disaster Declaration as of 10/24/2019

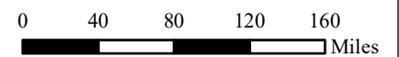
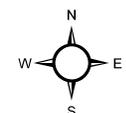


Data Layer/Map Description:
The types of assistance that have been designated for selected areas in the State of Texas.

All areas within the State of Texas are eligible for assistance under the Hazard Mitigation Grant Program.

Designated Counties

- No Designation
- Individual Assistance



Data Sources:
 FEMA, ESRI;
 Initial Declaration: 10/04/2019
 Disaster Federal Registry Notice:
 Amendment #1: 10/24/2019
 Datum: North American 1983
 Projection: Lambert Conformal Conic

ATTACHMENT D
SCOPE OF WORK

ATTACHMENT D
SPRING CREEK WATERSHED FLOOD CONTROL
ENGINEERING FEASIBILITY STUDY

SCOPE OF WORK

Project Organization

The San Jacinto River Authority (SJRA) is submitting an application to the Texas Water Development Board (TWDB) for a Flood Infrastructure Fund (FIF) grant to further study the feasibility of potential flood control dams in the Spring Creek watershed and will be the lead agency for the study. The study is expected to be funded partially by the TWDB FIF grant and partially by local funds from SJRA and several funding partners including the Woodlands Water Association, the City of Humble, and Harris County Flood Control District (HCFCD). The majority of the scope below will be provided by a consulting engineer. The purpose of the following scope of work and budgetary estimate is to outline the tasks and associated costs for a study to meet this objective. Further scoping and detailed level of effort is required to finalize the scope and associated fees to complete this study. This PRELIMINARY SCOPE AND BUDGETARY COST ESTIMATE is not meant to be used as a basis for contracting professional services.

Project Background and Potential Benefits to Address Watershed Needs

As part of the San Jacinto Watershed Master Drainage Plan (SJMDP) prepared for HCFCD, SJRA, City of Houston, and Harris County, the study team conducted a separate sub-task funded by several Municipal Utility Districts (MUDs) within The Woodlands area including MUD1, MUD7, MUD46, MUD60, and MUD386. This sub-task focused on the identification and assessment of alternative flood control dams within the Spring Creek watershed to reduce flooding in the Woodlands area as well as downstream to the confluence with the San Jacinto River.

As a result of this sub-task, two potential flood control sites were identified for further study, the Walnut Creek Dam and the Birch Creek Dam. The purpose of this study is to perform a conceptual level design for each of the two sites as flood control dams, and to define benefits and costs for each dam and a combination of the dams that will allow SJRA to determine the most feasible and economical project for possible future development.

The proposed flood control dams are expected to lower peak flow rates and peak water surface elevations to benefit structures along Walnut Creek, Birch Creek, and Spring Creek, but are also expected to provide some ancillary benefits at the downstream reaches of Willow Creek (a tributary of Spring Creek) and the West Fork of the San Jacinto River.

Task 1 – Project Management

- A. General: Provide for the management of the resources of the Consultant to meet the technical, financial, and schedule requirements of the Project Sponsors. This will include the overall management of the Project and the various specialized discipline teams responsible for the development of the Project.
- B. Baseline Schedule Development and Updates: Develop, manage, monitor, update, and coordinate (in coordination with Project Sponsors) the baseline schedule throughout the life of the Project based on changes or necessary updates.
- C. Project Status Reports: Provide written Project status reports to Project Sponsors once per month throughout the duration of the Project. Project status reports will include, at a minimum, a

ATTACHMENT D
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ENGINEERING FEASIBILITY STUDY

SCOPE OF WORK

summary description of activities completed, description of activities planned for the next 30 days, financial status of the Project, status of schedule for the Project, and identification of any technical or other issues which may have an impact to the overall Project budget and/or schedule. Project status reports will be provided to Project Sponsors with each invoice.

- D. Meetings: Schedule and participate in regular meetings (in person, by videoconference, or by phone, as appropriate) with Project Sponsors, Consultant's sub-consultants, Project Sponsors, third party consultants, and other stakeholders (as appropriate). Consultant will disseminate pertinent Project information internally and externally, implement Quality Assurance (QA) and Quality Control (QC) measures, and submit deliverables as required per the attached Project schedule. All meeting agendas, workshop planning information and handouts, meeting notes, and other applicable information pertaining to each specific meeting or workshop will be developed and distributed by the Consultant. Meetings will consist of:
1. One initial kick-off meeting with Project Sponsors to discuss Project expectations, schedule, and deliverables and confirm Project goals.
 2. One internal kick-off meeting with Project Team to discuss Project scope, schedule, budget, and deliverables.
 3. Monthly in-person Project update meetings with Project Sponsors as well as appropriate team members to present detailed status updates of the Project's progress and budget and discuss any major issues identified. Several of these will review the contents of and/or comments on the various Task Technical Memoranda.
 4. Occasional conference call meetings as needed to address specific issues and detailed project coordination.
 5. Up to three (3) presentations of results and recommendations to the Project Sponsors.
 6. Up to six (6) public meetings. This includes developing community outreach materials suitable to convey information to the public about the study purpose, findings, and recommendations.
- E. Quality Control and Quality Assurance (QA/QC): Consultant will develop a Quality Control and Quality Assurance Plan and perform QA/QC activities according to the Plan as part of its work. Documentation of these activities will be provided with each design deliverable. A QA/QC Audit may be performed by Project Sponsors. Audit date/time will be scheduled in advance of audit.
- F. Document Control: Consultant shall provide a Document Control Specialist to assist in the planning, execution, filing, and retrieval of all Project documentation during the Project including applicable Project Management Information Systems (PMIS), i.e. SharePoint. Project Sponsors will setup a SharePoint site to be used for this Project. Consultant shall utilize this system as a management tool and repository of all data, reports, photographs, letters, memoranda, models, invoices, and other information as directed by Project Sponsors.
- G. Invoicing: Consultant shall submit invoices monthly by the 10th day of the month following the month being invoiced for. Invoices shall include a brief summary of Consultant's activities and deliverables completed within the month and activities planned for the next month. Invoices shall be submitted to location defined by Project Sponsors. Coordinate with Project Sponsors to determine appropriate format and content for invoice submittals.

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SPRING CREEK WATERSHED FLOOD CONTROL
ENGINEERING FEASIBILITY STUDY

SCOPE OF WORK

Task 2 - Environmental Due Diligence

- A. Preliminary Environmental Field Investigation: Conduct preliminary site investigations of the two proposed flood control dam sites, Walnut Creek and Birch Creek Dams, to assess potential environmental issues. Site investigation will consist of reviewing existing literature and mapping as well as readily apparent environmental issues that may be present on the site visits. The investigation will review Section 404 permitting triggers including the locations and approximate size of streams, wetlands, and other potentially jurisdictional waters of the United States. These will be based on National Wetlands Inventory (NWI) maps, National Hydrography Dataset (NHD) data, and aerial photograph interpretation as well as a field visit to identify potential issues. The presence and locations of wetlands would be identified; however, an on-site detailed field wetland delineation will not be performed as part of this preliminary due diligence assessment. It is assumed that SJRA will arrange right-of entry as necessary to complete site visits. Other potential issues will include:
1. Presence of potential habitat for listed federal threatened and endangered species
 2. Visual indicators of potential contamination by hazardous materials
 3. Other readily observable environmental issues that have the potential of impacting the development of each dam site.
 4. Assume that each dam is “dry bottom” with no permanent storage of water. Therefore, no water rights permitting activities are assumed to be required.
- B. Cultural resources desktop survey: Review existing remotely accessible sources of information pertaining to each of the two sites, including archaeological resource maps, soil maps, vegetation maps, aerial imagery, historic maps, and historic aerial imagery. Prepare a coordination letter for submittal to the Texas Historical Commission to determine if a survey is required. The on-site investigation will not include a field survey for cultural resources as part of this preliminary due diligence assessment.
- C. Limited Desktop Phase 1 Environmental Site Assessment (ESA)
1. Historical Land Use Review: Perform an investigation into prior ownership and past land uses for each alternative dam site location and affected properties. Attempt to identify obvious uses of the subject properties from the present back to the property’s first developed use based on review of the following records (if available):
 - i. Interviews with local representatives and property owners/tenants.
 - ii. Historical aerial photography.
 - iii. Sanborn fire insurance maps.
 2. Regulatory Agency Records Review: Review information found in federal and state regulatory records for the subject property’s associated with each alternative dam site location, including records related to
 - i. Environmental-related permits.
 - ii. Notices-of-violation and incidents involving use, disposal, or accidental release of hazardous substances, petroleum products, or other waste materials.

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SPRING CREEK WATERSHED FLOOD CONTROL
ENGINEERING FEASIBILITY STUDY

SCOPE OF WORK

- iii. Local records, if available, related to the subject property will also be reviewed for indications of environmental concern.
 - 3. Document the condition of each proposed flood control dam site using representative photographs.
 - i. Description of the water bodies within each alternative dam site location
 - ii. Representative photographs of the area for each alternative dam site location
 - iii. Description of the area(s) that will be inundated by each alternative dam site location
- D. Conduct one (1) agency pre-application meeting with the Galveston District of the US Army Corps of Engineers (USACE) to discuss project scope, goals, initial permitting findings and assumptions, as well as mitigation needs and assumptions. Note: alternatively, this meeting may be a joint evaluation meeting involving multiple regulatory agencies in addition to the USACE.
- E. Environmental Mitigation: Develop general concepts for potential required mitigation for each of the proposed flood control dam sites related to Section 404 issues. Research availability of regional environmental bank credits that may be available for mitigation or determine if permittee responsible mitigation will be required. No conceptual design of environmental mitigation will be performed. Review environmental issues and identify constraints and any apparent fatal flaws noted in the field survey and from the review of readily available public aerial photography and database review. Evaluate conceptual dam design alternatives developed in Task 3 to minimize or avoid impacts to sensitive or regulated environmental resources present in or adjacent to the footprint of each alternative dam site.
- F. Develop an estimated schedule for permitting, environmental mitigation, and cultural resources mitigation.
- G. Prepare Draft Environmental Due Diligence Technical Memorandum and submit to Project Sponsors for review and comment. Note: this scope does not include preparation of grant or permit applications or pre-construction notifications to the USACE.
- H. Incorporate comments from Project Sponsors and prepare Final Environmental Due Diligence and Constraints Identification portions of the full report, described in Task 6.

Task 3 – Conceptual Design of Proposed Flood Control Dams

- A. Review available mapping and soil maps to confirm dam location identified from the screening study. Adjustments to the location may be made within the general area but changes will be avoided that affect the results of the hydraulic analysis.
- B. Conduct a site visit to each of the two proposed sites to develop a general understanding of access, possible boring locations, and potentially critical conflicts. This site visit may be conducted either in conjunction with the environmental site visit or separately.
- C. Geotechnical Field and Laboratory Investigation: Drill up to 6 geotechnical borings, each of which will be up to 75 feet deep, on or near the selected centerline location of each of the two proposed flood control dams, Walnut Creek and Birch Creek Dams. Locations of the borings may be adjusted based on access constraints, but it is assumed clearing will be needed. Samples will be collected

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intermittently using continuous flight augers and either split-spoon (coarse-grained soils) or tube (fine-grained soils) samplers. At completion, the boreholes will be backfilled with cement-bentonite grout. An Engineer or Geologist experienced in logging borings will direct the drilling, log the borings, handle, and transport the samples. Testing shall be performed on samples obtained from the borings to determine soil classification and pertinent engineering properties of the subsurface materials. It is assumed that SJRA will arrange right-of entry as necessary to complete site visits.

- D. Based on the geotechnical borings, develop a centerline profile of the surface and foundation material and select proposed locations for the spillway structure(s). Soil maps will also be used for review of potential borrow materials.
- E. Develop up to three alternative configurations for each of the two proposed dams. Each will consist primarily of an earthen embankment with minimal permanent storage, an uncontrolled low-flow discharge structure and an uncontrolled spillway. The uncontrolled spillway will flow only during events greater than the Atlas 14 1% annual chance (100-year) storm and up to the Probable Maximum Flood (PMF). The uncontrolled spillway could be a Rolled Compacted Concrete (RCC) ogee spillway, an earthen channel spillway in one of the abutments, or another type of structural spillway. No gated or controlled spillway alternatives will be reviewed. All configurations will assume a high hazard dam classification.
- F. For the alternatives analysis, hydrologic and hydraulic models from the SJMDP (to be provided by SJRA to the consultant) will be utilized with updates reflecting the hydraulic capacities of the particular spillway alternatives. These preliminary model results will be used to evaluate and compare the spillway alternatives.
- G. For each of the two sites, develop a single recommended configuration for the dam, low flow discharge structure and uncontrolled spillway to be used in the cost-benefit analysis.
- H. Prepare Draft Conceptual Design Technical Memorandum and submit to Project Sponsors for review and comment. This will include approximately 4 to 6 sheets of conceptual drawings of the recommended configuration for each site as well as exhibits showing the boring locations, copies of the borings logs, laboratory test results, and a key to the symbols used.
- I. Incorporate comments from Project Sponsors and prepare Final Conceptual Design portions of the full report, described in Task 6.

Task 4 – Develop Opinion of Probable Project Costs

- A. Develop opinions of probable construction costs (OPCC) for each of the two recommended flood control dams. Comparative costs may be used to differentiate between the two alternatives evaluated at each site, but a complete OPCC will not be prepared for each alternative. OPCC will be a Class 4 estimate in accordance with AACE International (formerly the Association for the Advancement of Cost Engineering) Recommended Practice No. 17R-97. A Class 4 estimate is representative of a level of project definition between 1% and 15% and has an expected accuracy of -30% to +50% according to AACE.
- B. Develop up to four alternative estimates of land requirements for each dam. These alternative estimates will be based on a combination of land acquisition and/or flood easement acquisition

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at various flood pool elevations. Based on available market prices for property in the area, develop an estimate of land costs.

- C. Conduct a screening of utilities in the general locations of the two proposed sites using information that is available in the public domain.
- D. Obtain data/information related to necessary relocations and conflict resolutions for each dam site (roads, cemeteries, houses, buildings, and utilities, including electrical transmission, natural gas, petroleum, water, wastewater, etc.) It is assumed that all roads, cemeteries, and utilities will be relocated or raised to a reasonable level outside the Atlas 14 1% annual chance (100-year) flood pool. Houses and buildings will be assumed to be purchased and demolished. Develop an estimate of costs for conflicts and relocations.
- E. Develop an estimate of environmental mitigation costs, based on current bank credit costs in the region, if available, and similar mitigation projects, if not. No conceptual mitigation design is planned.
- F. Develop an estimate of total project costs, including estimates of annual operations and maintenance costs for the dams and financing costs, resulting in a total annual cost over a 30-year period with financing and additional 20 years without financing costs. Costs will account for the estimated environmental permitting schedule, which could prevent initiation of construction for many years.
- G. Prepare Draft Project Cost Technical Memorandum describing the assumptions, methods, and results of the cost estimate and submit to Project Sponsors for review and comment.
- H. Incorporate comments from Project Sponsors and prepare Final Opinion of Probable Project Costs portions of the full report, described in Task 6.

Task 5 – Hydrologic, Hydraulic, and Benefit Cost Analysis for Alternative Dam Sites

- A. Using the hydraulic models developed as part of the SJMDP (to be provided by SJRA to the consultant), develop hydraulic reaches for Walnut Creek and Birch Creek from Spring Creek to a location past the flood pools. Include structures and roadway crossings as appropriate. Refine hydrology for the Birch and Walnut Creek watersheds as necessary. Results from these models will be compared against previous calibration points along Spring Creek to ensure the updated hydraulic model adequately represents Walnut Creek and Birch Creek.
- B. Using the updated hydrologic and hydraulic models, evaluate and quantify reductions in flood damages over a 50-year period for:
 - 1. Each of the two recommended flood control dams, as stand-alone projects, and
 - 2. The two dams in combination.
- C. Using construction and annual costs developed in Task 4 above and the benefits defined as the estimated reductions in flood damages over a 50-year period, determine an updated benefit cost ratio(s) for each alternative dam site location, both during the 30 year financing period and the 20 year subsequent period without financing costs. Cost benefit methodology will be primarily based on hydrologic and hydraulic model results and estimated long-term reductions to structural flood damages.

ATTACHMENT D
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- D. Prepare Draft Benefit Cost Technical Memorandum and submit to Project Sponsors for review and comment. The memorandum will also include general identification of potential funding sources.
- E. Incorporate comments from Project Sponsors and prepare Final Benefit Cost Analysis portions of the full report, described in Task 6.

Task 6 – Conceptual Design Report for Proposed Flood Control Dams

- A. Prepare Draft Conceptual Engineering Design documents consisting of a combination of the various task technical memoranda, adjusted to include comments from the Project Sponsor and to be incorporated into a single full report. Provide to the Project Sponsors for review and comment.
- B. Incorporate Project Sponsors’ comments and prepare Final Conceptual Design Report.

Schedule

The proposed total duration for this study is eighteen (18) months. See below for an estimate of project schedule by Task:

Task	Duration
Task 1 – Project Management	18 Months
Task 2 – Environmental Due Diligence	3 Months
Task 3 – Conceptual Design of Proposed Flood Control Dams	12 Months
Task 4 – Develop Opinion of Probable Project Costs	3 Months
Task 5 – Hydrologic, Hydraulic, and Benefit Cost Analysis for Alternative Dam Sites	9 Months
Task 6 – Conceptual Design Report for Proposed Flood Control Dams	3 Months
Total Project Duration	18 Months

ATTACHMENT E

DRAFT SJRA PROFESSIONAL SERVICES AGREEMENT

{MASTER} PROFESSIONAL SERVICES AGREEMENT
CONTRACT NO. _____

This **{MASTER}** Professional Services Agreement (the “Agreement”) is made and entered into effective as of the ____ day of ____, 2020, by and between the San Jacinto River Authority, a conservation and reclamation district of the State of Texas, (“SJRA”) with general and administration offices located at 1577 Dam Site Road, Conroe, Texas 77304,

and

_____, a [corporation, limited partnership, limited liability company] organized under the laws of the State of _____, (“CONSULTANT”) with principal offices located at _____.

SJRA and CONSULTANT are sometimes referred to herein collectively as the “Parties” or individually as a “Party.”

The Parties hereby agree as follows:

ARTICLE 1 – SCOPE OF SERVICES

1.1 CONSULTANT agrees to perform professional services (the “Services”) related to _____ as are requested from time to time by SJRA, which Services shall be set forth more particularly in Work Orders, the form of which is attached hereto as **Attachment B**, issued from time to time by SJRA and accepted by CONSULTANT. Each Work Order shall constitute a separate and independent agreement between CONSULTANT and SJRA.

1.2 Work Orders shall contain the schedule, price, and payment terms applicable to the Services within the scope of such orders. Time is of the essence to this Agreement and all Work Orders. Work Orders shall become effective when an acknowledged copy thereof is signed by a duly authorized officer of CONSULTANT, returned to SJRA and countersigned by SJRA. The specific terms of a Work Order may not be modified unless such modifications are agreed to in writing by SJRA and CONSULTANT.

1.3 All Work Orders incorporate and shall be governed by and subject to the terms, conditions, and other provisions of this Agreement; provided, however, that a Work Order may specifically state a term, condition, or other provision of this Agreement that is being modified thereby. Unless so stated, the terms, conditions, or other provisions contained in any Work Order or any proposal attached to or incorporated into a Work Order that conflict with any terms, conditions, or other provisions of this Agreement shall have no effect and shall be deemed stricken and severed from such Work Orders, and the balance of the terms, conditions, and other provisions contained in such Work Orders shall remain in full force and effect. Modifications of the terms, conditions, or other provisions of this Agreement with respect to a particular Work Order shall not modify the terms, conditions or other provisions of this Agreement with respect to any other Work Order.

1.4 Nothing herein shall obligate SJRA to issue, or CONSULTANT to accept, any Work Orders. Further, the Parties agree that nothing in this Agreement shall prohibit the Parties, or either of them, from entering into agreements other than this Agreement for professional services or other work.

ARTICLE 2 – TERM OF AGREEMENT

2.1 **OPTION 1 for Master Agreement:** This Agreement shall be effective for a term of three (3) years from the date first set forth above unless terminated earlier in writing in accordance with Article 12. **OR** **OPTION 2 for Project-Specific PSA:** This Agreement shall be effective for a term of one (1) year from the date first set forth above and shall be automatically renewed without action by either Party for subsequent terms of one year unless terminated earlier in writing in accordance with Article 12.

2.2 Notwithstanding the foregoing Paragraph 2.1, this Agreement shall apply to and remain in effect for Work Orders issued and accepted during the term of this Agreement until such time as Consultant's obligations in connection with the Services under such Work Orders have been completed and fulfilled; provided however, that, pursuant to Article 12, either Party shall have the right to terminate any Work Order for cause and SJRA shall have the right to terminate any Work Order for convenience.

2.3 Without limiting the generality of the foregoing Paragraph 2.2, Consultant's obligations under Articles 5, 6, 8, 9, 10, 11, 18, 19 and 20 shall survive the expiration of termination of this Agreement or any Work Order.

ARTICLE 3 – COMPENSATION AND PAYMENT

3.1 SJRA agrees to pay CONSULTANT, and CONSULTANT agrees to accept, as full and complete compensation for Services properly performed by CONSULTANT in accordance with this Agreement and applicable Work Order, the rates and charges agreed upon for a specific Work Order. Paragraphs A.1 or A.2 of **Attachment A**, which is attached hereto and incorporated herein by reference, shall be used to negotiate the compensation payable for each Work Order issued hereunder.

3.2 On or before the tenth day of each calendar month, CONSULTANT shall submit an invoice to SJRA, together with backup documentation required by SJRA and releases and waivers in forms acceptable to SJRA, covering all Services performed under any Work Order by CONSULTANT and its subconsultants, subcontractors and suppliers during the preceding calendar month. CONSULTANT shall separately itemize on each invoice: (i) each Work Order for which payment is sought, (ii) the amount budgeted for each such Work Order, (iii) the amount of payment requested pursuant to each such Work Order, (iv) the amount previously paid pursuant to each such Work Order, (v) descriptions of Services performed during the prior month pursuant to each such Work Order, and (vi) the total payment requested by such invoice. SJRA shall pay the amount it agrees to be due within thirty (30) days after receipt of such complete invoice and backup documentation.

3.3 SJRA shall have the right but not the obligation to withhold all or any part of payment requested in any invoice to protect SJRA from loss or expected loss because of:

(a) Services that are not in compliance with this Agreement or the applicable Work Order or any failure of CONSULTANT to perform Services in accordance with the provisions of this Agreement or the applicable Work Order;

(b) third party suits, stop notices, claims or liens arising out of Services performed for which CONSULTANT is responsible pursuant to this Agreement and asserted or filed against SJRA or any of its property or portion thereof or improvements thereon provided that CONSULTANT fails to provide SJRA with sufficient evidence that CONSULTANT's insurance is adequate or shall cover the claim(s);

(c) uninsured damage to any INDEMNITEE (hereinafter defined) which results from CONSULTANT's failure to obtain or maintain the insurance required by this Agreement or from any action or inaction by CONSULTANT or any of its subcontractors, subconsultants, or suppliers which excuses any insurer from liability for any loss or claim which would, but for such action or inaction, be covered by insurance; or

(d) any failure of CONSULTANT to pay any subcontractor, subconsultant, or supplier of CONSULTANT the correct, undisputed, and contractually obligated amount for acceptable services received and for acceptable supplies received. CONSULTANT will not include in its billings to SJRA any amount in a subcontractor or supplier invoice which it has not paid or does not intend to pay within the terms and conditions of the applicable subcontract agreement or supplier purchase order.

Any failure by SJRA to exercise its right to withhold all or any part of payment requested in any invoice as provided in this Paragraph 3.3 shall not be and shall not be construed as (i) a waiver of SJRA's right to do so in the future, or (ii) evidence that any of the circumstances identified in Subparagraphs 3.3(a) through (d) above have not occurred.

3.4 CONSULTANT agrees to pay in full (less any applicable retainage) as soon as reasonably practicable, but in no event later than thirty (30) days following payment from SJRA, all subcontractors, subconsultants, and any other persons or entities supplying labor, supplies, materials, or equipment in connection with Services that are owed payment by CONSULTANT out of such payment made to CONSULTANT by SJRA. Further, provided that SJRA has paid CONSULTANT in accordance with the terms of this Agreement and any particular Work Order, CONSULTANT shall defend and indemnify SJRA from and against any claims for payment asserted or filed by any such person or entity against SJRA, its project or property or CONSULTANT.

ARTICLE 4 – STANDARD OF CARE; COORDINATION OF SERVICES; SAFETY; COST ESTIMATES; LEGAL COMPLIANCE; THIRD PARTY REVIEW

4.1 **OPTION 1: FOR PSA WITH ENGINEER OR ARCHITECT --** CONSULTANT shall perform, supervise and direct the Services, and otherwise discharge its obligations under this Agreement and any Work Order: (a) with the professional skill and care ordinarily provided by competent **[engineers][architects]** practicing under the same or similar circumstances and professional license; and (b) as expeditiously as is prudent considering the ordinary professional skill and care of a competent **[engineer][architect]** (collectively, the CONSULTANT's "Standard of Care"). **OPTION 2: FOR PSA NOT WITH AN ENGINEER OR ARCHITECT --** CONSULTANT shall: (a) perform, supervise and direct the Services, using reasonable skill and attention, in a good, workmanlike and timely manner and in a reasonable and expeditious and economical manner consistent with the interests of SJRA; (b) exercise the degree of care, skill, and diligence in the performance of the Services in accordance with and consistent with the professional skill, care and diligence ordinarily provided by professional consultants of the same discipline practicing in major metropolitan areas under the same or similar circumstances; and (c) utilize reasonable skill, efforts, and judgment in furthering the interests of SJRA (collectively, the CONSULTANT's "Standard of Care").

4.2 Consistent with its Standard of Care, CONSULTANT shall (a) perform its Services in accordance with all applicable laws, codes, ordinances and regulations; (b) perform its Services in an efficient manner; and (c) keep SJRA apprised of the status of Services, coordinate its activities with SJRA, and accommodate other activities of SJRA at sites that Services impact. CONSULTANT shall designate an authorized representative to be available for consultation, assistance, and coordination of activities.

4.3 CONSULTANT shall be responsible for its own activities at sites including the safety of its employees, and that of its subconsultants, subcontractors and suppliers but shall not assume control of or responsibility for the site. Construction contractors of SJRA shall have sole responsibility for providing materials, means, and methods of construction, for controlling their individual work areas and safety of said areas for all persons, and for taking all appropriate steps to ensure the quality of their work and the safety of their employees and of the public in connection with their performance of work or services provided under contracts with SJRA. Without assuming any control over, responsibility for or liability whatsoever with respect to the construction contractor obligations of the foregoing sentence, CONSULTANT shall notify SJRA if it observes violations of safety regulations or ordinances or quality of work deficiencies by SJRA's construction contractors. CONSULTANT shall comply with the site safety program and rules established by the construction contractors.

4.4 To the extent that CONSULTANT provides to SJRA any estimate of costs associated with construction, any such estimate shall be developed in accordance with CONSULTANT's Standard of Care, but it is recognized by the Parties that neither CONSULTANT nor SJRA has control over the cost of the labor, materials, or equipment, over a construction contractor's methods of determining bid prices, or over competitive bidding, market, or negotiating conditions. Accordingly, CONSULTANT cannot and does not warrant or represent that bids or negotiated prices will not vary from SJRA's budget for the project or from any estimate of the cost of work or evaluation prepared or agreed to by CONSULTANT.

4.5 CONSULTANT hereby agrees that the following terms, conditions, verifications, certifications, and representations apply to and are incorporated into this Agreement for all purposes:

(a) With respect to providing Services hereunder, CONSULTANT shall comply with any applicable Equal Employment Opportunity and/or Affirmative Action ordinances, rules, or regulations during the term of this Agreement.

(b) Pursuant to Texas Local Government Code Chapter 176, CONSULTANT shall submit a signed Texas Ethics Commission ("TEC") Conflict of Interest Questionnaire ("CIQ") at the time CONSULTANT submits this signed Agreement to SJRA. TEC Form CIQ and information related to same may be obtained from TEC website by visiting <https://www.ethics.state.tx.us/forms/conflict/>. If CONSULTANT certifies that there are no Conflicts of Interest, CONSULTANT shall indicate so by writing name of CONSULTANT's firm and "No Conflicts" on the TEC Form CIQ.

(c) If CONSULTANT is a privately held entity, then pursuant to Texas Government Code Section 2252.908 and the rules promulgated thereunder by the TEC, CONSULTANT shall submit a completed and signed TEC Form 1295 with a certificate number assigned by the TEC to SJRA at the time CONSULTANT submits this signed Agreement to SJRA. TEC Form 1295 and information related to same may be obtained from TEC website by visiting <https://www.ethics.state.tx.us/filinginfo/1295/>. CONSULTANT agrees and acknowledges that this Agreement shall be of no force and effect unless and until CONSULTANT has submitted said form to SJRA, if and to the extent such form is required under Government Code § 2252.908 and the rules promulgated thereunder by the TEC.

(d) As required by Chapter 2271, Texas Government Code, CONSULTANT hereby verifies that CONSULTANT, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the same, does not boycott Israel and will not boycott Israel through the term of this Agreement. The term "boycott Israel" in this paragraph has the meaning assigned to such term in Section 808.001 of the Texas Government Code, as amended.

(e) Pursuant to Chapter 2252, Texas Government Code, CONSULTANT represents and certifies that, at the time of execution of this Agreement, neither CONSULTANT, nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the same, is engaged in business with Iran, Sudan, or any terrorist organization, and is a company listed by the Texas Comptroller of Public Accounts under Sections 2270.0201 or 2252.153 of the Texas Government Code.

4.6 CONSULTANT acknowledges and agrees that projects of SJRA may be subject to review and approval by other third parties. Accordingly, as and when requested by SJRA, CONSULTANT shall submit such information and cooperate with the other third parties to the extent necessary to undergo any such review or obtain any such approval.

4.7 CONSULTANT does not represent Work Product to be suitable for reuse on any other project or for any other purpose(s). If SJRA reuses any Work Product without CONSULTANT's specific written verification or adaptation, such reuse will be at the risk of SJRA, without liability to CONSULTANT.

ARTICLE 5 – COST RECORDS

5.1 CONSULTANT shall maintain records and books in accordance with generally accepted accounting principles and practices. For Services provided by CONSULTANT under cost reimbursable, time and material or unit price Work Orders, during the period of this Agreement and for five (5) years thereafter, CONSULTANT shall maintain records of direct costs for which SJRA is charged. SJRA shall at all reasonable times have access to such records for the purpose of inspecting, auditing, verifying, or copying the same, or making extracts therefrom. SJRA's audit rights for fixed unit rate or time and materials Work Orders shall extend to review of records for the purpose of substantiating man-hours worked, units employed, and third party charges only. Except to the extent audit rights are granted to SJRA by applicable law, SJRA shall have no audit rights with respect to the portion of Work Orders or Services compensated on a lump sum basis.

ARTICLE 6 – OWNERSHIP OF WORK PRODUCT AND TECHNOLOGY

6.1 All studies, plans, reports, drawings, specifications, cost estimates, software, computations, and other information and documents prepared by CONSULTANT, its subconsultants, subcontractors, and/or suppliers, in connection with Services or any project of SJRA are and shall remain SJRA's property upon creation (collectively, "Work Product"); provided, however, that Work Product shall not include pre-existing proprietary information of CONSULTANT, its subconsultants, subcontractors, and/or suppliers ("CONSULTANT Proprietary Information"). To this end, CONSULTANT agrees to and does hereby assign, grant, transfer, and convey to SJRA, its successors and assigns, CONSULTANT's entire right, title, interest and ownership in and to such Work Product, including, without limitation, the right to secure copyright registration. CONSULTANT confirms that SJRA and its successors and assigns shall own CONSULTANT's right, title and interest in and to, including without limitation the right to use, reproduce, distribute (whether by sale, rental, lease or lending, or by other transfer of ownership), to perform publicly, and to display, all such Work Product, whether or not such Work Product constitutes a "work made for hire" as defined in 17 U.S.C. Section 201(b). In addition, CONSULTANT hereby grants SJRA a fully paid-up, royalty free, perpetual, assignable, non-exclusive license to use, copy, modify, create derivative works from and distribute to third parties CONSULTANT Proprietary Information in connection with SJRA's exercise of its rights in the Work Product, operation, maintenance, repair, renovation, expansion, replacement, and modification of projects of SJRA or otherwise in connection with property or projects in which SJRA has an interest (whether by SJRA or a third party). CONSULTANT shall obtain other assignments, confirmations, and licenses substantially similar to the provisions of this paragraph from all of its subconsultants, subcontractors, and suppliers. Work Product is

to be used by CONSULTANT only with respect to the project in connection with which such Work Product was created and is not to be used on any other project. CONSULTANT and its subconsultants, subcontractors, and suppliers are granted a limited, nonexclusive, non-transferable, revocable license during the term of their respective agreements under which each is obligated to perform Services to use and reproduce applicable portions of the Work Product appropriate to and for use in the execution of Services. Submission or distribution to comply with official regulatory requirements for other purposes in connection with Services is not to be construed as publication in derogation of SJRA's copyright or other reserved rights. CONSULTANT agrees that all Work Product will be maintained according to the provisions of the Public Information Act, Chapter 552, Texas Government Code, and the Local Government Records Act, Chapters 201 through 205, Texas Local Government Code, each as amended. CONSULTANT shall deliver all copies of the Work Product to SJRA upon the earliest to occur of SJRA's request, completion of Services in connection with which Work Product was created, or termination of this Agreement. CONSULTANT is entitled to retain copies of Work Product for its permanent project records.

6.2 CONSULTANT agrees that all information provided by SJRA in connection with Services shall be considered and kept confidential ("Confidential Information"), and shall not be reproduced, transmitted, used, or disclosed by CONSULTANT without the prior written consent of SJRA, except as may be necessary for CONSULTANT to fulfill its obligations hereunder; provided, however, that such obligation to keep confidential such Confidential Information shall not apply to any information, or portion thereof, that:

- (a) was at the time of receipt by CONSULTANT otherwise known by CONSULTANT by proper means;
- (b) has been published or is otherwise within the public domain, or is generally known to the public at the time of its disclosure to CONSULTANT;
- (c) subsequently is developed independently by CONSULTANT, by a person having nothing to do with the performance of this Agreement and who did not learn about any such information as a result of CONSULTANT's being a Party to this Agreement;
- (d) becomes known or available to CONSULTANT from a source other than SJRA and without breach of this Agreement by CONSULTANT or any other impropriety of CONSULTANT;
- (e) enters the public domain without breach of the Agreement by or other impropriety of CONSULTANT;
- (f) becomes available to CONSULTANT by inspection or analysis of products available in the market;
- (g) is disclosed with the prior written approval of SJRA;
- (h) was exchanged between SJRA and CONSULTANT and ten (10) years have subsequently elapsed since such exchange; or
- (i) is disclosed to comply with the Texas Open Records Act or in response to a court order to comply with the requirement of a government agency.

6.3 CONSULTANT shall not be liable for the inadvertent or accidental disclosure of Confidential Information, if such disclosure occurs despite the exercise of at least the same degree of care as CONSULTANT normally takes to preserve and safeguard its own proprietary or confidential information.

6.4 CONSULTANT will advise SJRA of any patents or proprietary rights and any royalties, licenses, or other charges which CONSULTANT knows or should know in the exercise of its Standard of Care impacts any design provided by CONSULTANT in connection with any Services, and obtain SJRA's prior written approval before proceeding with such Services. CONSULTANT shall not perform patent searches or evaluation of claims, but will assist SJRA in this regard if requested, pursuant to a written change order in accordance with Paragraph 12.1, below. There will be no charge for CONSULTANT's existing patents.

ARTICLE 7 – INDEPENDENT CONTRACTOR RELATIONSHIP

7.1 In the performance of Services hereunder, CONSULTANT shall be an independent contractor with the authority to control and direct the performance of the details of Services and its own means and methods. CONSULTANT shall not be considered a partner, affiliate, agent, or employee of SJRA and shall in no way have any authority to bind SJRA to any obligation.

ARTICLE 8 – WARRANTY PERIOD; GUARANTEES

8.1 If within a period of one (1) year following completion of Services under a Work Order, it is discovered that such Services were not performed in accordance with CONSULTANT's Standard of Care, SJRA, in its sole discretion, may: (1) direct CONSULTANT to re-perform and CONSULTANT shall re-perform such Services at its own expense, and as expediently or in the manner required for SJRA's needs; or (2) retain such other consultant or consultants as necessary to perform such corrective services, and CONSULTANT agrees to pay SJRA's costs associated with having such other consultant or consultants perform such corrective services, and any other damages incurred by SJRA as a result of such default. The obligations of CONSULTANT under this Paragraph 8.1 are in addition to other rights and remedies of SJRA available to it pursuant to this Agreement or applicable law.

8.2 CONSULTANT agrees to assign SJRA the warranty or guarantee of any subconsultant, subcontractor, supplier or manufacturer of items of services, supplies, machinery, equipment, materials, or products provided by CONSULTANT hereunder and cooperate and assist SJRA in SJRA's enforcement thereof. CONSULTANT's responsibility with respect thereto is limited to such assignment, cooperation, and assistance. The representations and warranties of CONSULTANT under this Agreement and Work Orders are made in lieu of any other warranties or guarantees and CONSULTANT makes no other warranties whether expressed or implied, including any warranty of merchantability or fitness for a particular purpose, and CONSULTANT shall have no liability to SJRA based upon any theory of liability that any such other warranty was made or breached.

ARTICLE 9 – INDEMNIFICATION

9.1 TO THE FULLEST EXTENT PERMITTED BY LAW, CONSULTANT SHALL INDEMNIFY AND HOLD HARMLESS SJRA AND ITS BOARD, DIRECTORS, OFFICERS, AGENTS, REPRESENTATIVES AND EMPLOYEES (EACH AN "INDEMNITEE" AND COLLECTIVELY, THE "INDEMNITEES"), FROM AND AGAINST CLAIMS, LOSSES, DAMAGES, DEMANDS, SUITS, CAUSES OF ACTION, SETTLEMENTS, LIABILITIES, COSTS, FINES, JUDGMENTS AND EXPENSES (INCLUDING, WITHOUT LIMITATION, REASONABLE AND NECESSARY COURT COSTS, EXPERTS' FEES AND ATTORNEYS' FEES) (COLLECTIVELY, "LOSSES"), INCLUDING WITHOUT LIMITATION THOSE

BROUGHT AGAINST OR INCURRED OR SUFFERED BY ANY ONE OR MORE OF THE INDEMNITEES AND THOSE ARISING IN FAVOR OF OR BROUGHT BY ANY THIRD PARTY, TO THE EXTENT CAUSED BY OR RESULTING FROM AN ACT OF NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER, COMMITTED BY CONSULTANT, ITS AGENT, ITS CONSULTANT UNDER CONTRACT, OR ANOTHER ENTITY OVER WHICH CONSULTANT EXERCISES CONTROL, UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ANY WORK ORDER, EVEN IF SUCH LOSSES ARE CAUSED IN PART BY THE NEGLIGENCE OR FAULT, BREACH OR VIOLATION OF A STATUTE, ORDINANCE, GOVERNMENTAL REGULATION, STANDARD OR RULE OR BREACH OF CONTRACT OF AN INDEMNITEE OR ANY THIRD PARTY UNDER THE CONTROL OR SUPERVISION OF AN INDEMNITEE; PROVIDED, HOWEVER, THAT CONSULTANT'S OBLIGATION TO INDEMNIFY AND HOLD HARMLESS SHALL NOT EXTEND TO THE PORTION (IF ANY) OF SUCH LOSSES THAT ARE CAUSED BY THE NEGLIGENCE OR FAULT, BREACH OR VIOLATION OF A STATUTE, ORDINANCE, GOVERNMENTAL REGULATION, STANDARD OR RULE OR BREACH OF CONTRACT OF AN INDEMNITEE OR ANY THIRD PARTY UNDER THE CONTROL OR SUPERVISION OF AN INDEMNITEE OTHER THAN CONSULTANT OR ITS AGENT OR EMPLOYEE OR SUBCONTRACTORS OF ANY TIER.

9.2 TO THE FULLEST EXTENT PERMITTED BY LAW, AND TO THE EXTENT A DEFENSE IS NOT PROVIDED FOR THE INDEMNITEES UNDER AN INSURANCE POLICY AS REQUIRED UNDER SECTION 11.1(f) HEREOF OR THE INDEMNITEES' ATTORNEYS' FEES ARE NOT OTHERWISE RECOVERED UNDER THE INDEMNITY PROVISION SET FORTH IN SECTION 9.1 HEREOF, CONSULTANT SHALL, UPON FINAL ADJUDICATION OF THE LOSSES AS DEFINED IN SECTION 9.1 HEREOF AND WITHIN THIRTY (30) DAYS FOLLOWING THE DATE OF A WRITTEN DEMAND, REIMBURSE THE INDEMNITEES FOR ALL REASONABLE ATTORNEYS' FEES INCURRED TO DEFEND AGAINST THE LOSSES IN PROPORTION TO CONSULTANT'S LIABILITY TO ANY THIRD PARTY FOR SUCH LOSSES.

ARTICLE 10 – LIMITATION OF LIABILITY

10.1 NEITHER PARTY HERETO SHALL BE LIABLE TO THE OTHER PARTY OR ITS AFFILIATES FOR ANY LOSS OF PROFIT, LOSS OF REVENUE, LOSS OF USE OR ANY OTHER INDIRECT, CONSEQUENTIAL OR SPECIAL DAMAGES (EXCLUDING FINES AND PENALTIES LEVIED BY A REGULATORY AGENCY), EVEN IF CAUSED BY THE SOLE OR CONCURRENT NEGLIGENCE OF A PARTY, WHETHER ACTIVE OR PASSIVE, AND EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

10.2 NOTHING HEREIN SHALL BE CONSTRUED AS CREATING ANY PERSONAL LIABILITY ON THE PART OF ANY BOARD MEMBER, OFFICER, EMPLOYEE, OR AGENT OF SJRA.

ARTICLE 11 – INSURANCE

11.1 General Requirements. CONSULTANT shall, at all times during the performance of Services pursuant to Work Orders issued under this Agreement and for not less than two years after the completion of any Services, provide and require all subconsultants and subcontractors to provide insurance coverage with companies lawfully authorized to do business in Texas and acceptable to SJRA and with forms of policies acceptable to SJRA, which coverage will protect CONSULTANT from claims set forth below which may arise out of or result from CONSULTANT's Services and operations under this Agreement

and any Work Order for which CONSULTANT may be legally liable, whether such Services or operations are by CONSULTANT or a subconsultant or subcontractor of CONSULTANT or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and meeting not less than the minimum requirements set forth in this Article 11. Such insurance is to be provided at the sole cost of CONSULTANT and all subconsultants and subcontractors. The terms “subconsultant” and “subcontractor” for the purposes of this Article 11 shall include subconsultants and subcontractors of any tier.

(a) **Kinds of Claims**

- (1) claims under workers’ compensation, disability benefit and other similar employee benefit acts which are applicable to CONSULTANT’s Services to be performed;
- (2) claims for damages because of bodily injury, occupational sickness or disease, or death of CONSULTANT’s employees;
- (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than CONSULTANT’s employees;
- (4) claims for damages insured by usual personal injury liability coverage which are sustained (i) by a person as a result of an offense directly or indirectly related to employment of such person by CONSULTANT, or (ii) by another person;
- (5) claims for damages other than to CONSULTANT’s work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- (6) claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- (7) claims involving contractual liability insurance applicable to CONSULTANT’s indemnification obligations under this Agreement; and
- (8) claims for errors and omissions in the provision of professional consulting services of the kind rendered by CONSULTANT pursuant to this Agreement.

(b) **Policies and Minimum Limits of Liability**

<u>Kinds of Insurance:</u>	<u>Limits of Liability*:</u>
A. Workers’ Compensation Texas Operations Employer’s Liability	Statutory Bodily Injury by Accident \$1,000,000 Each Accident Bodily Injury by Disease \$1,000,000 Each Employee Bodily Injury by Disease \$1,000,000 Policy Limit
B. Commercial General Liability Including but not limited to: 1. premises/operations 2. independent contractor 3. products and completed operations	\$2,000,000 General Aggregate \$2,000,000 Products/Completed Operations Aggregate \$1,000,000 Each Occurrence \$2,000,000 Personal and Advertising Injury

4. personal injury liability with employment exclusion deleted 5. contractual	\$300,000 Fire Damage Liability
C. Professional Liability	\$1,000,000 per claim \$2,000,000 Aggregate
D. Business Automobile Liability Including all Owned, Hired, and Non-owned Automobiles	\$1,000,000 Combined Single Limit Per Occurrence
E. Umbrella Liability	\$1,000,000 Per Occurrence \$1,000,000 Aggregate Bodily Injury and Property Damage

* Aggregate limits are per 12-month policy period unless otherwise indicated; defense costs shall be excluded from limits of liability of each policy other than Professional Liability Insurance; Commercial General Liability Insurance coverage limits shall be on a per-project basis.

(c) All required insurance shall be maintained with responsible insurance carriers acceptable to SJRA and lawfully authorized to issue insurance of the types and amounts set forth in this Article 11. Carriers should have a Best’s Financial Strength Rating of at least “A-” and a Best’s Financial Size Category of Class VIII or better, according to the most current edition of *Best’s Key Rating Guide, Property-Casualty United States* or be of sufficient size and financial strength as adjudged by SJRA to meet the financial obligations evidenced in the certificate of insurance.

(d) All certificates shall be in a form reasonably acceptable to SJRA and each certificate must state to the extent permitted by Texas Insurance Code Chapter 1811 that the policy may not expire or be cancelled, materially modified, or nonrenewed unless the carrier and/or CONSULTANT gives SJRA thirty (30) days advance written notice. When any required insurance, due to the attainment of a normal expiration date or renewal date, shall expire, CONSULTANT shall, prior to such expiration, supply SJRA with certificates of insurance and amendatory riders or endorsements that clearly evidence the continuation of all coverage in the same manner, limits of protection, and scope of coverage as is required by this Agreement. Any renewal or replacement policies shall be in form and substance satisfactory to SJRA and written by carriers acceptable to SJRA and meeting the requirements of this Article 11. CONSULTANT shall or shall cause the applicable carrier or carriers to give written notice to SJRA within thirty (30) days of the date on which total claims by any Party against insurance provided pursuant to this Article 11 reduce the aggregate amount of coverage below the amounts required by this Article 11. In addition, CONSULTANT shall or shall cause the applicable carrier or carriers to provide SJRA with amendatory riders or endorsements to the Commercial General Liability Insurance policy that specify that the coverage limits apply on a per-project basis.

(e) With respect to all policies required in this Article 11, as soon as practicable prior to execution of this Agreement, CONSULTANT shall deposit with SJRA true and correct original certificates thereof, bearing notations or accompanied by other evidence satisfactory to SJRA that the requirements of this Article 11 are being met. If requested to do so by SJRA, CONSULTANT shall also furnish the originals or certified copies of the insurance policies for inspection including but not limited to copies of endorsements.

(f) All policies of insurance and certificates, with the exception of Professional Liability and Workers’ Compensation Insurance, shall name the INDEMNITEES as additional insureds. Without limiting the foregoing, CONSULTANT’s Commercial General Liability Insurance policy shall name the INDEMNITEES as additional insureds pursuant to ISO Additional Insured

Endorsements CG 20-10-10-01 and CG 20-33-10-01 or their combined equivalents. Further, the CONSULTANT shall provide the INDEMNITEES any defense provided by its Commercial General Liability Insurance policy to the fullest extent allowed by law.

(g) CONSULTANT hereby waives all rights of recovery and damages against the INDEMNITEES to the extent such damages are covered or should have been covered by the insurance obtained or required to be obtained by CONSULTANT under this Agreement. All of CONSULTANT's policies of insurance, with the exception of Professional Liability Insurance, shall include a waiver of subrogation in favor of the INDEMNITEES.

(h) The Parties intend that the CONSULTANT'S insurance shall be primary and non-contributing with respect to any other insurance maintained by SJRA and all policies of insurance obtained by CONSULTANT shall be endorsed to be primary and non-contributing with respect to any other insurance maintained by SJRA.

(i) If any policy required to be purchased pursuant to this Article 11 is subject to a deductible, self-insured retention or similar self-insurance mechanism which limits or otherwise reduces coverage, the deductible, self-insured retention, or similar self-insurance mechanism shall be the sole responsibility of CONSULTANT in the event of any loss and CONSULTANT hereby waives any claim therefor against any INDEMNITEE.

(j) CONSULTANT shall require and cause its subconsultants and subcontractors to purchase and maintain the insurance policies set forth in Paragraph 11.1(b) above with limits of liability commensurate with the amount of each subconsulting or subcontract agreement, but in no case less than \$500,000 per occurrence. CONSULTANT shall provide copies of insurance certificates for all such insurance to SJRA prior to any subconsultant's or subcontractor's performance of any Services.

(k) If CONSULTANT fails to procure or to maintain in force the insurance required by this Article 11, SJRA may secure such insurance and the costs thereof shall be borne by CONSULTANT. CONSULTANT shall reimburse SJRA the cost of such insurance plus a ten percent (10%) administrative charge within ten (10) days after billing by SJRA. Any sum remaining unpaid fifteen (15) days after billing by SJRA shall bear interest at the rate of twelve percent (12%) per annum until paid by CONSULTANT. Except to the extent prohibited by Subchapter C of Chapter 151 of the Texas Insurance Code, CONSULTANT shall defend, indemnify, and hold harmless the INDEMNITEES from and against any and all losses, claims, damages, and expenses (including, without limitations, court costs, costs of defense, and attorneys' fees), that any INDEMNITEE may incur as a result of CONSULTANT's failure to obtain or cause to be obtained the specific endorsements or insurance required pursuant to this Agreement. Failure of any INDEMNITEE to identify any deficiency in the insurance forms provided shall not be construed as a waiver of CONSULTANT's obligation to maintain such insurance and to cause such insurance to be maintained.

(l) CONSULTANT's compliance with the provisions of this Article 11 shall not be deemed to constitute a limitation of CONSULTANT's liability with respect to claims covered by insurance provided or required pursuant to this Article 11 or in any way limit, modify, or otherwise affect CONSULTANT's obligation under this Agreement or otherwise. CONSULTANT's obligations under this Agreement to defend, indemnify and/or hold harmless INDEMNITEES shall not be limited in any way by any insurance required of CONSULTANT by this Agreement or otherwise provided or maintained by CONSULTANT. Any insurance obligations of CONSULTANT under this Agreement are independent from CONSULTANT's

obligations under this Agreement to defend, indemnify and/or hold harmless INDEMNITEES. The insolvency, bankruptcy, or failure of any insurance company carrying insurance for CONSULTANT or any subcontractor, or the failure of any insurance company to pay claims accruing shall not be held to waive any of the provisions of this Agreement.

(m) If requested by SJRA, CONSULTANT shall furnish or shall cause to be furnished any such other insurance or limits as SJRA may reasonably deem necessary for any Work Order or Orders and the cost thereof shall be charged to SJRA by appropriate modification of any such Order(s).

ARTICLE 12 – CHANGES; TERMINATION FOR CONVENIENCE; TERMINATION FOR CAUSE

12.1 SJRA may, at any time and from time to time, make written changes to Work Orders in the form of modifications, additions, or omissions. In the event that any such change, through no fault of CONSULTANT, shall impact CONSULTANT's compensation or schedule, then (a) such changes shall be authorized by written change order issued by SJRA and accepted by CONSULTANT, and (b) an equitable adjustment shall be made to the Work Order in writing duly executed by both Parties, to reflect the change in compensation and schedule.

12.2 SJRA may for convenience terminate this Agreement, any Work Order issued under this Agreement, or CONSULTANT's right to perform Services under this Agreement or any Work Order by at any time giving seven (7) days written notice of such termination. In such event, SJRA shall have the right but not the obligation to assume all obligations and commitments that CONSULTANT may have in good faith undertaken or incurred in connection with the Services terminated, and SJRA shall pay CONSULTANT, as its sole and exclusive remedy, for Services properly performed to date of termination and for reasonable costs of closing out such Services provided SJRA has pre-approved such costs. CONSULTANT shall not be entitled to lost profit on unperformed Services or any consequential damages of any kind. Upon termination, CONSULTANT shall invoice SJRA for all services performed by CONSULTANT prior to the time of termination which have not previously been compensated. Payment of undisputed amounts in the final invoice shall be due and payable within thirty (30) days after receipt by SJRA and SJRA's receipt of all Work Product.

12.3 This Agreement or any Work Order may be terminated by either Party in the event that the other Party fails to perform in accordance with its requirements and such Party does not cure such failure within ten (10) days after receipt of written notice describing such failure. In the event that SJRA terminates this Agreement or any Work Order for cause, CONSULTANT shall not be entitled to any compensation until final completion of the then ongoing Services and any such entitlement shall be subject to SJRA's right to offset and/or recoup all damages and costs associated with finally completing such Services. If for any reason, CONSULTANT is declared in default and/or terminated by SJRA under any Work Order with SJRA, SJRA shall have the right to offset and apply any amounts which might be owed to SJRA by CONSULTANT against any earned but unpaid amounts owed to CONSULTANT by SJRA under any Work Order. In the event any Work Order is terminated by SJRA, CONSULTANT shall promptly deliver to SJRA all Work Product with respect to such terminated Work Order.

ARTICLE 13 – FORCE MAJEURE

13.1 Any delay in performance or non-performance of any obligation other than an obligation to make a payment as required under this Agreement or any Work Order, of CONSULTANT contained herein shall be excused to the extent such delay in performance or non-performance is caused by Force Majeure.

“Force Majeure” shall mean fire, flood, act of God, earthquakes, extreme weather conditions, epidemic, pandemic, war, riot, civil disturbance or unrest, imposition of martial law, restrictions imposed by civil authority, loss of control of civil authority, illegal activity, extreme unreliability or failure of the utility infrastructure, failure of the US banking system, loss of access to communication systems, sabotage, terrorism, or judicial restraint, but only to the extent that such event (i) is beyond the reasonable control of and cannot be reasonably anticipated by or the effects cannot be reasonably alleviated by CONSULTANT and (ii) prevents the performance of Services.

13.2 If CONSULTANT is affected by Force Majeure, CONSULTANT shall promptly provide notice to SJRA, explaining in detail the full particulars and the expected duration thereof. Notice will be considered prompt if delivered within five days after CONSULTANT first becomes aware that the event of Force Majeure will affect the performance of Services and the end of the restrictions, if any, on CONSULTANT’s ability to communicate with SJRA. CONSULTANT shall use its commercially reasonable efforts to mitigate the interruption or delay if it is reasonably capable of being mitigated.

ARTICLE 14 – SUCCESSORS, ASSIGNMENT AND SUBCONTRACTING

14.1 SJRA and CONSULTANT bind themselves and their successors, executors, administrators and permitted assigns to the other Party of this Agreement and to the successors, executors, administrators and permitted assigns of such other party, in respect to all covenants of this Agreement.

14.2 No right or interest in this Agreement or any Work Order shall be assigned by CONSULTANT or SJRA without the prior written consent of the other Party.

14.3 Prior to commencement of any part of the Services to be provided under any Work Order with respect to which CONSULTANT has elected to subcontract, CONSULTANT will notify SJRA in writing of the identity of the particular subcontractor, subconsultant or supplier CONSULTANT intends to employ for the performance of such part of the Services and the scope of Services it will perform. SJRA shall have the right within twenty-one (21) calendar days of such written notice to disallow CONSULTANT’s employment of any particular subcontractor, subconsultant or supplier, provided that any reasonable additional costs incurred by CONSULTANT as a result of such disallowance shall be borne by SJRA.

ARTICLE 15 – SEVERABILITY; NON-WAIVER

15.1 If any provision or portion thereof of this Agreement or any Work Order is deemed unenforceable or void, then such provision or portion thereof shall be deemed severed from the Agreement or such Work Order and the balance of the Agreement or Work Order shall remain in full force and effect.

15.2 Failure by SJRA in any instance to insist upon observance or performance by CONSULTANT of any term, condition or obligation of this Agreement shall not be deemed a waiver by SJRA of any such observance or performance. No waiver by SJRA of any term, condition, obligation or breach of this Agreement will be binding upon SJRA unless in writing, and then will be for the particular instance specified in such writing only. Payment of any sum by SJRA to CONSULTANT with knowledge of any breach will not be deemed a waiver of such breach or any other breach.

ARTICLE 16 – LICENSE REQUIREMENTS

16.1 The CONSULTANT and any subconsultant shall have and maintain any licenses, registrations and certifications required by the State of Texas or recognized professional organizations governing the Services performed under this Agreement and any Work Order.

ARTICLE 17 – ENTIRE AGREEMENT

17.1 This Agreement and all Work Orders issued under it contain the full and complete understanding of the Parties pertaining to their subject matter and supersede any and all prior and contemporaneous representations, negotiations, agreements or understandings between the Parties, whether written or oral. The Agreement and Work Orders may be modified only in writing, signed by both Parties.

ARTICLE 18 – GOVERNING LAW; VENUE

18.1 This Agreement and Work Orders, and its and their construction and any disputes arising out of, connected with, or relating to this Agreement or Work Orders shall be governed by the laws of the State of Texas, without regard to its conflicts of law principles. Venue of all dispute resolution proceedings arising out of, connected with or relating to this Agreement, shall be in Montgomery County, Texas.

ARTICLE 19 – DISPUTE RESOLUTION

19.1 In the event of any dispute arising out of or relating to this Agreement, any Work Order or any Services which SJRA and CONSULTANT have been unable to resolve within thirty (30) days after such dispute arises, a senior representative of CONSULTANT shall meet with the General Manager of SJRA at a mutually agreed upon time and place not later than forty-five (45) days after such dispute arises to attempt to resolve such dispute. In the event such representatives are unable to resolve any such dispute within fifteen (15) days after such meeting, either Party may, by written notice to the other, submit such dispute to non-binding mediation before a mutually agreeable mediator. If the Parties are unable to agree upon a mediator within twenty (20) days after such written notice of submission to mediation, the American Arbitration Association shall be empowered to appoint a qualified mediator pursuant to the American Arbitration Association Construction Industry Mediation Rules. If the dispute is technical in nature, the mediator appointed by the American Arbitration Association shall be qualified by at least ten (10) years' experience in construction, engineering, and/or public works operations. The mediation shall be conducted within thirty (30) days of the selection or appointment of the mediator, as applicable. The mediation shall be held at a mutually agreeable location in Montgomery County, Texas. If the Parties are unable to agree on a location, the mediation shall be held at the offices of the American Arbitration Association closest to Conroe, Texas.

19.2 Any dispute arising out of or relating to this Agreement or any Work Order or any Services not resolved pursuant to Article 19.1, shall be resolved, by litigation in a court of competent jurisdiction.

19.3 Notwithstanding the foregoing, in the event SJRA and any other consultant and/or any contractor are involved in a dispute in connection with a project for which CONSULTANT has provided Services, and SJRA, in its sole discretion, determines that CONSULTANT's participation in any dispute resolution meeting or mediation proceeding between SJRA and any such consultant and/or contractor is necessary to the resolution of such dispute, CONSULTANT agrees to attend and participate at its own cost in any such dispute resolution meeting or mediation proceeding.

19.4 If CONSULTANT brings any claim against SJRA and CONSULTANT does not prevail with respect to such claim, CONSULTANT shall be liable for all attorneys' fees and costs incurred by SJRA as a result of such claim.

ARTICLE 20 – ELECTRONIC SIGNATURES; COUNTERPARTS

20.1 This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, email, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement. Duplicate copies of duly executed and delivered counterparts of this Agreement shall be deemed to have the same full force and effect as originals and may be relied upon as such. Notwithstanding the foregoing, the Parties agree that this Agreement and any Work Order may be executed using electronic signatures at the option and in the discretion of SJRA, and, in such event, the provisions of the Uniform Electronic Transaction Act, Chapter 332, Texas Business and Commerce Code, as amended, and any applicable policies and procedures of SJRA regarding electronic signatures shall apply.

ARTICLE 21 – CONFIDENTIALITY

21.1 Neither CONSULTANT nor any of its subconsultants shall publish or release any publicity or public relations materials of any kind concerning or relating to this Agreement, the Services or the activities of SJRA, unless such materials have first been reviewed and approved in writing by SJRA. This provision shall not apply to mandatory reports which CONSULTANT or its subconsultants are required by law to file with governmental authorities.

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the day and year herein above first written.

CONSULTANT:

Name

By: _____

Name
Title

Date: _____

ATTEST:

SJRA:

San Jacinto River Authority

By: _____

Jace A. Houston
General Manager

Date: _____

ATTEST:

ATTACHMENT A

Compensation terms for cost reimbursable and lump sum Services:

A.1. COMPENSATION BASED ON COST WITH MULTIPLIER

For professional and non-professional staff, SJRA will compensate CONSULTANT on the basis of a multiplier added to the Raw Salary Cost as shown in the table below for the Scope of Work specified in the Work Order. Professional is defined as a manager, supervisor, engineer, scientist or other recognized profession. Typically, professional employees are salaried exempt employees. Typically, non-professional employees are hourly non-exempt employees. The Raw Salary Cost for salaried employees is defined as the annual base salary excluding bonuses, burdens, and benefits divided by 2080. For hourly personnel, the Raw Salary Cost is defined as the hourly wage paid to the employee exclusive of burdens and benefits. Any shift premiums or premiums paid for hours worked in excess of 40 per week will be added to the base hourly wage and will be considered a part of the Raw Salary Cost.

(a) RAW SALARY MULTIPLIERS

X.XX for professional and non-professional staff working at CONSULTANT or its subcontractor, subconsultant, or vendor offices

2.86 for professional and non-professional staff working in the field during construction or at SJRA offices for a minimum period of six (6) consecutive months

2.75 for construction inspectors working in the field

(b) EXPENSES

“Billable Expenses” include all costs and expenses directly attributable to performance of the services, which are in good accounting practice direct costs of the Services and not covered by the allowance for payroll burden and general office overhead and profit. Costs of outside services will be charged at actual invoice cost plus ten percent (10%). “Billable Expenses” include: subconsultants; travel expenses to and from locations outside Harris and Montgomery Counties; and copies of all deliverables submitted to SJRA. All local vehicle use outside Harris and Montgomery Counties will be reimbursed at the current IRS allowable rate with no markup. All other expenses are considered to be covered by the allowance for payroll burden and general office overhead and profit and are non-billable expenses.

A.2. LUMP SUM COMPENSATION

SJRA will compensate CONSULTANT on the basis of a mutually agreed upon lump sum price for the scope of work specified in the Work Order. SJRA may ask CONSULTANT for a cost estimate for the scope of work prior to issuing the Work Order. The cost estimate will include a summary breakdown showing the labor hours and cost, subconsultant costs, and other direct costs included in the estimate. Labor rates to be used in preparing the estimate will be the actual salary or wage of the employee times the appropriate multiplier specified in A.1 (a) above. CONSULTANT will submit and SJRA will pay monthly invoices based on the mutually agreed upon percentage of the project completed.

ATTACHMENT B

This Work Order is issued subject to, is governed by and incorporates by reference that certain **{MASTER}** Professional Services Agreement, Contract No. _____, between the SJRA and CONSULTANT effective _____, **2020**.

Work Order Date: _____

CONSULTANT: _____

Type of Compensation: _____

Compensation: _____

Location of Services: (County) _____

Description of Services: _____

Deliverables: See Attached.

Schedule Requirements:

Commence Services: _____

Completion of Services: _____

Submittal Dates for Each Deliverable: See Attached.

Agreed to by:

SJRA

By: _____

Name: Jace A. Houston

Title: General Manager

and

[CONSULTANT]

By: _____

Name: _____

ATTACHMENT F

RESOLUTION REQUESTING FINANCIAL ASSISTANCE TWDB-0201A, APPLICATION AFFIDAVIT TWDB-0201, CERTIFICATE OF SECRETARY TWDB-0201B

RESOLUTION NO. 2020-R-10

RESOLUTION AUTHORIZING APPLICATIONS TO THE TEXAS WATER DEVELOPMENT BOARD BY SAN JACINTO RIVER AUTHORITY FOR GRANTS FROM FLOOD INFRASTRUCTURE FUND.

WHEREAS, the San Jacinto River Authority (the "Authority"), is a conservation and reclamation district, body politic and corporate and a governmental agency of the State of Texas created and operating under the provisions of Chapter 426, Acts of the 45th Texas Legislature, Regular Session, 1937, as amended (the "Act"), enacted pursuant to the provisions of Section 59 of Article XVI of the Texas Constitution; and

WHEREAS, the Authority is authorized under the Act to store, control and conserve the storm and flood waters of the watershed of the San Jacinto River and its tributaries, and to prevent the escape of any such waters through every practical means so as to prevent the devastation of lands from recurrent overflows, and to protect life and property; and

WHEREAS, the Authority is further authorized under the Act to develop the water resources of the San Jacinto River Basin and, consistent with such authorization, the Authority operates the dam and reservoir commonly known as "Lake Conroe" for the benefit of the Authority and the City of Houston; and

WHEREAS, Section 86.0192 of the Texas Parks and Wildlife Code, as amended, makes certain provisions for the Authority and the Harris County Flood Control district to take sand, gravel, marl, shell, and mudshell from the San Jacinto River and its tributaries to restore, maintain, or expand the capacity of the river and its tributaries to convey storm flows; and

WHEREAS, the Authority and various other political subdivisions (the "Participating Entities") are considering multiple flood mitigation projects within Harris, Montgomery, Grimes, Walker, San Jacinto, Liberty, and Waller Counties, including (i) performing preliminary engineering design efforts for two potential sand traps within the Upper San Jacinto River Basin, (ii) performing a conceptual engineering feasibility study of two potential dams/reservoirs within the Spring Creek Watershed, (iii) performing a regional sedimentation study of the Upper San Jacinto River Basin, (iv) developing a joint reservoir operations strategy for Lake Conroe and Lake Houston for use after new tainter gates are installed on Lake Houston, and (v) installing rain and river or stream stage gauging equipment at three (3) locations selected by San Jacinto County (hereinafter collectively the "Projects"); and

WHEREAS, the Texas Water Development Board ("TWDB"), under the authority of Chapter 363 of the Texas Administrative Code, may provide funding for the Projects through the Flood Infrastructure Fund (the "FIF"); and

WHEREAS, the Authority intends to serve as the contracting agency on behalf of the Participating Entities and has submitted abridged applications for grants from the FIF from the TWDB to fund a portion of the Projects costs.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SAN JACINTO RIVER AUTHORITY THAT:

Section 1: The Board of Directors of the Authority hereby finds and declares that:

(a) the Projects are consistent with the Act and/or Section 86.0192 of the Texas Parks and Wildlife Code, as amended, and would be an enhancement to the San Jacinto River Basin

and/or Lake Conroe and useful, necessary and beneficial to the citizens of Harris, Montgomery, Grimes, Walker, San Jacinto, Liberty, and/or Waller Counties;

(b) the Authority is eligible to prepare and submit applications to the TWDB for funds from the FIF for the Projects; and

(c) the Authority and the Participating Entities will provide matching local resources in connection with the FIF as may be required by the TWDB, subject to the approval of funds from the FIF sufficient to undertake the Projects.

Section 2: The General Manager of the Authority is hereby appointed as the agent and representative of the Authority for purposes of requesting and securing reasonable, written assurances that the Participating Entities, as applicable, will provide such matching local resources, subject to the approval of funds from the FIF sufficient to undertake the Projects.

Section 3: To the extent the TWDB requests a full application from the Authority in connection with any of the Projects, the General Manager of the Authority (or his designated representative) is hereby appointed as the agent and representative of the Authority for purposes of making and pursuing full applications for funds from the FIF, including negotiating a written agreement or agreements among the Participating Entities and the Authority to participate in TWDB grant applications for the Projects. The General Manager of the Authority (or his designated representative) is hereby authorized and directed to prepare and file such full applications for the funds from the FIF on behalf of the Authority; provided, however, the General Manager (or his designated representative) shall, as deemed necessary and appropriate in connection with the Projects, secure the written assurances from the Participating Entities prior to filing such application.

Section 4: The Authority hereby affirms its intention and agreement to provide local matching funds in connection with the funds from the FIF, as described above, and to enter written agreements with the Participating Entities, consistent with the expectations set forth above, as deemed necessary and appropriate in connection with the Projects and the funds from the FIF. Such agreements shall be subject to review and approval by the Board of Directors of the Authority. Any expenditure of more than \$75,000.00 of Authority funds in connection with the funds of the FIF or the Projects shall also be subject to the review and approval by the Board of Directors of the Authority.

Section 5: The President of the Board of Directors of the Authority is hereby authorized to sign, and the Secretary of said Board is hereby authorized to attest, this Resolution on behalf of said Board and the Authority. This Resolution shall become effective upon its passage and adoption.

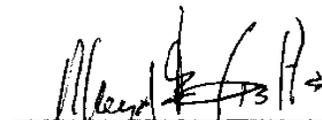
PASSED AND ADOPTED by the Board of Directors of the San Jacinto River Authority on this 27th day of August, 2020.

ATTEST:

BOARD OF DIRECTORS:



Kaaren Cambio
Secretary



Lloyd B. Tisdale
President



Application Filing and Authorized Representative Resolution

A RESOLUTION by the Board of Directors of the San Jacinto River Authority requesting financial assistance from the Texas Water Development Board; authorizing the filing of an application for assistance; and making certain findings in connection therewith.

BE IT RESOLVED BY THE Board of Directors OF THE San Jacinto River Authority:

SECTION 1: That an application is hereby approved and authorized to be filed with the Texas Water Development Board seeking financial assistance in an amount not to exceed \$ 500,000 to provide for the costs of Spring Creek Watershed Flood Control Dams Conceptual Engineering Feasibility Study.

SECTION 2: That Jace A. Houston be and is hereby designated the authorized representative of the San Jacinto River Authority Board of Directors for purposes of furnishing such information and executing such documents as may be required in connection with the preparation and filing of such application for financial assistance and the rules of the Texas Water Development Board.

SECTION 3: That the following firms and individuals are hereby authorized and directed to aid and assist in the preparation and submission of such application and appear on behalf of and represent the San Jacinto River Authority before any hearing held by the Texas Water Development Board on such application, to wit:

Financial Advisor: _____

Engineer: Freese and Nichols, Inc.

Bond Counsel: _____

PASSED AND APPROVED, this the 27th day of August, 20 20.

ATTEST:

Karen Camber

By:

Woyd J. Hill

(Seal)



Application Resolution - Certificate of Secretary

THE STATE OF TEXAS §
COUNTY OF Montgomery §
APPLICANT San Jacinto River Authority §

I, the undersigned, Secretary of the San Jacinto River Authority Board of Directors Texas, DO HEREBY CERTIFY as follows:

1. That on the 27th day of August, 2020, a regular/special meeting of the San Jacinto River Authority Board of Director was held; the duly constituted members of the San Jacinto River Authority Board of Directors being as follows:

Lloyd Tisdale, Ronnie Anderson, Mark Micheletti, Kaaren Cambio, Ed Boulware, Jim Alexander, and Brenda Cooper

all of whom were present at the meeting, except the following:

N/A

Among other business considered at the meeting, the attached resolution entitled:

"A RESOLUTION by the Board of Directors of the San Jacinto River Authority requesting financial participation from the Texas Water Development Board; authorizing the filing of an application for financial participation; and making certain findings in connection therewith."

was introduced and submitted to the Board of Directors for passage and adoption. After presentation and consideration of the resolution, and upon a motion made by Director Cambio and seconded by Director Alexander, the resolution was passed and adopted by the Board of Directors by the following vote:

7 voted "For" 0 voted "Against" 0 abstained

all as shown in the official minutes of the San Jacinto River Authority Board of Directors for this meeting.

2. That the attached resolution is a true and correct copy of the original on file in the official records of the San Jacinto River Authority; the qualified and acting members of the Board of Directors on the date of this meeting are those persons shown above and, according to the records of my office, advance notice of the time, place, and purpose of meeting was given to each member of the Board of Directors; and that the meeting, and the deliberations of the public business described above, was open to the public and written notice of the meeting, including the subject of the resolution described above, was posted and given in advance of the meeting in compliance with the provisions of Chapter 551 of the Texas Government Code.

IN WITNESS WHEREOF, I have signed my name and affixed the seal of the San Jacinto River Authority, this the 27th day of August, 2020.

(SEAL)



Kaaren Cambio
Secretary

Application Affidavit

THE STATE OF TEXAS §
COUNTY OF Montgomery §
APPLICANT San Jacinto River Authority §

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared Jace A. Houston as the Authorized Representative of the San Jacinto River Authority Board of Directors, who being by me duly sworn, upon oath says that:

1. The decision by the San Jacinto River Authority Board of Directors (authority, city, county, corporation, district) to request financial assistance from the Texas Water Development Board ("TWDB") was made in a public meeting held in accordance with the Open Meetings Act (Government Code, §551.001, et seq.) and after providing all such notice as required by such Act as is applicable to the San Jacinto River Authority Board of Directors (authority, city, county, corporation, district).

2. The information submitted in the application is true and correct according to my best knowledge and belief.

3. The San Jacinto River Authority (authority, city, county, corporation, district) has no pending, threatened, or outstanding judgments, orders, fines, penalties, taxes, assessment or other enforcement or compliance issue of any kind or nature by the Environmental Protection Agency, Texas Commission on Environmental Quality, Texas Comptroller, Texas Secretary of State, or any other federal, state or local government, except for the following (if no such outstanding compliance issues, write in "none").

None

4. The San Jacinto River Authority (authority, city, county, corporation, district) warrants compliance with the representations made in the application in the event that the TWDB provides the financial assistance; and

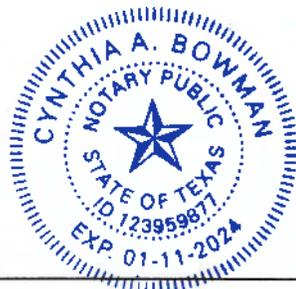
5. the San Jacinto River Authority (authority, city, county, corporation, district) will comply with all applicable federal laws, rules, and regulations as well as the laws of this state and the rules and regulations of the TWDB.

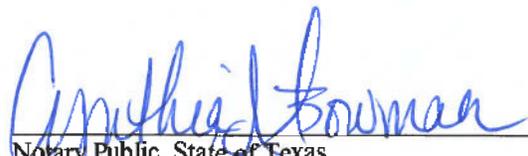


Official Representative
Title: General Manager

SWORN TO AND SUBSCRIBED BEFORE ME, by Jace A. Houston
on this 24th day of September, 2020.

(NOTARY'S SEAL)





Notary Public, State of Texas

ATTACHMENT G
IN-KIND SERVICES DOCUMENTATION

ATTACHMENT G
In-Kind Services

	Matt Barrett	Chuck Gilman	Briana Gallagher	Heather Cook	Amber Batson	E4/5 - TBD	Jamy Lewis	Melissa Lanclos	Total Hours	Total Labor Hours
	<i>Project Manager</i>	<i>Senior Manager</i>	<i>Project Coordinator</i>	<i>Communications Director</i>	<i>Department Manager</i>	<i>Project Engineer</i>	<i>Accounts Payable</i>	<i>GIS Manager</i>		
PHASE/TASK										
Project Management										
Progress Meetings	72	18	54	8	24	36			212	\$ 11,309.09
Project Controls	24	4	36		4	8			76	\$ 3,512.04
Document Controls	18		54		4	18	9		103	\$ 4,178.45
Invoicing	36		18				18		72	\$ 3,336.78
									0	\$ -
									0	\$ -
Technical Submittals										
Enviornmental Site Visits/ROE	16		80		4	80		4	184	\$ 7,239.24
Environmental Memorandum	12	4	16		2	24		2	60	\$ 2,778.08
Conceptual Design of Dams & Spillway	60	8			16	8			92	\$ 5,635.47
Review OPCC	16	4			8	16			44	\$ 2,519.80
Review Benefit/Cost Analysis	12	4	24		2	12		2	56	\$ 2,560.58
Conceptual Design Report	80	8	24		12	40			164	\$ 8,500.78
									0	\$ -
									0	\$ -
Public Engagement										
Public Meeting #1 in Mont. Co	12	8	16	12	4	12		4	68	\$ 3,792.44
Public Meeting #1 in Harris Co.	12	8	16	8	4	12			60	\$ 3,291.40
Public Meeting #2 in Mont. Co	12	8	16	12	4	12		4	68	\$ 3,792.44
Public Meeting #2 in Harris Co.	12	8	16	8	4	12			60	\$ 3,291.40
Public Meeting #3 in Mont. Co	12	8	16	12	4	12		4	68	\$ 3,792.44
Public Meeting #3 in Harris Co.	12	8	16	8	4	12			60	\$ 3,291.40
Total Hours	418	98	402	68	100	314	27	20	1447	
Total Effort	\$ 23,227.09	\$ 8,910.16	\$ 13,190.42	\$ 4,919.12	\$ 7,838.00	\$ 12,560.00	\$ 1,118.61	\$ 1,058.43		\$ 72,821.83
Fringe (42%)	\$ 9,755.38	\$ 3,742.27	\$ 5,539.98	\$ 2,066.03	\$ 3,291.96	\$ 5,275.20	\$ 469.82	\$ 444.54		\$ 30,585.17