



Cape's Dam, Mill Race, Thompson's Island & San Marcos River

Visioning Study

*City Council Work Session
October 15, 2019*

Presentation

Receive presentation from Hays County regarding Cape's Dam and seek Council direction on proposed project and possible partnership opportunities with Hays County and the Hays County Historical Commission.

Background

February 22, 2016: Capes Dam Workshop

- Presentation by Dr. Thomas Hardy
- Effects of changing height of Cape's Dam on recreation, Texas wild rice and fountain darter habitat (Hardy Report – 10/12/15)

August 15, 2016: Capes Dam Council Presentation

- Presentation by Mike Montagne, U.S. Fish and Wildlife Service
- Capes Dam Removal Analysis (Hydraulic Hardy Report – 3/27/2017)
- Supplement Cape's Dam and Mill Race Assessment (Supplemental Assessment-Hardy Report – 5/23/17)

January 11, 2019: Capes Dam Memo Staff Update

Background

January 15, 2019: City Council briefed in executive session to discuss possible partnership opportunities with Hays County and the Hays County Historical Commission.

January 29, 2019: City Council considered an item designating Cape's Dam as a historic landmark. This action was postponed for up to 6 months while staff gathered more information related to the project.

June 18, 2019: City Council briefed in Work Session on status of possible partnership opportunities with Hays County and the Hays County Historical Commission. Presentation from County on proposed project anticipated in fall 2019.

City Council Direction Needed

- Does Council want to proceed with an agreement with Hays County to partner on renovation/rehabilitation of Cape's Dam?
- Does Council want to explore the larger visioning/master plan concept with Hays County?



A note regarding this presentation:

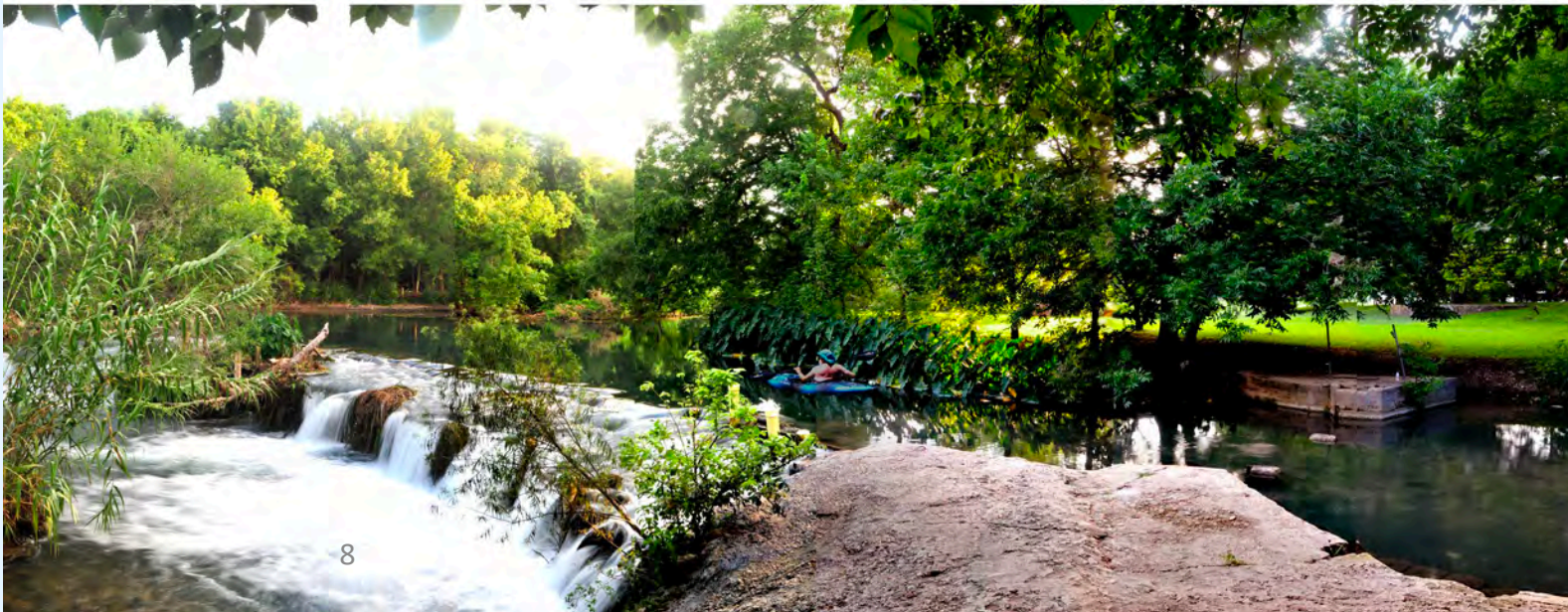
A master plan by its very nature and definition seeks a broad perspective from as many voices as possible to craft a plan and strategy that serves the most amount of residents in the best possible manner.

This presentation and the maps, comments, and strategies are conceptual only. The information contained in the work is only to explore the potential of a more comprehensive master plan.



The vision presented here;
Seeks to promote the rehabilitation and interpretation of the Thompson/Cape dam, mill race, Thompson/Cape mill site and turbine structure, as a special place;
the very beginning of San Marcos industry.





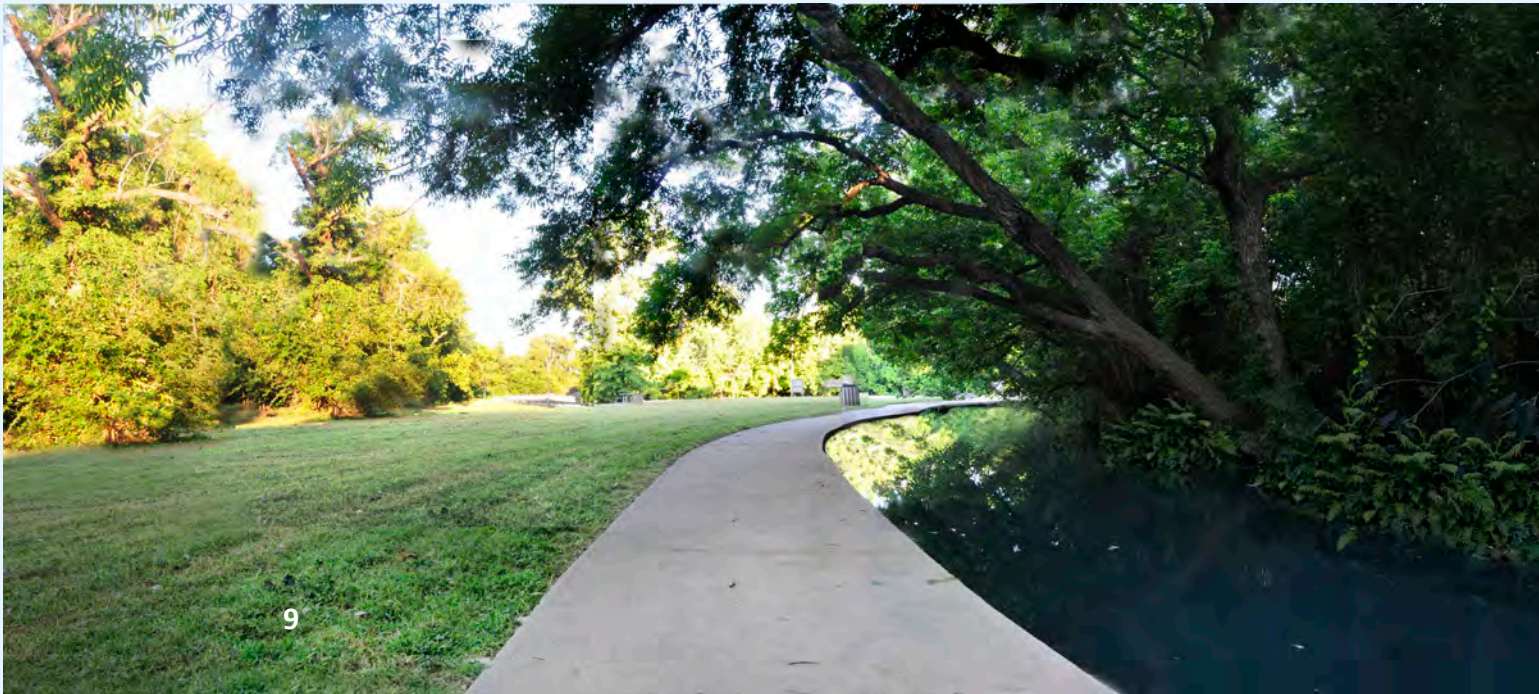
Thompson/Cape Dam & Mill Race Gate,

- Crib dam rehabilitation
- Limited River Access points
- Historic interpretation



Mill Race

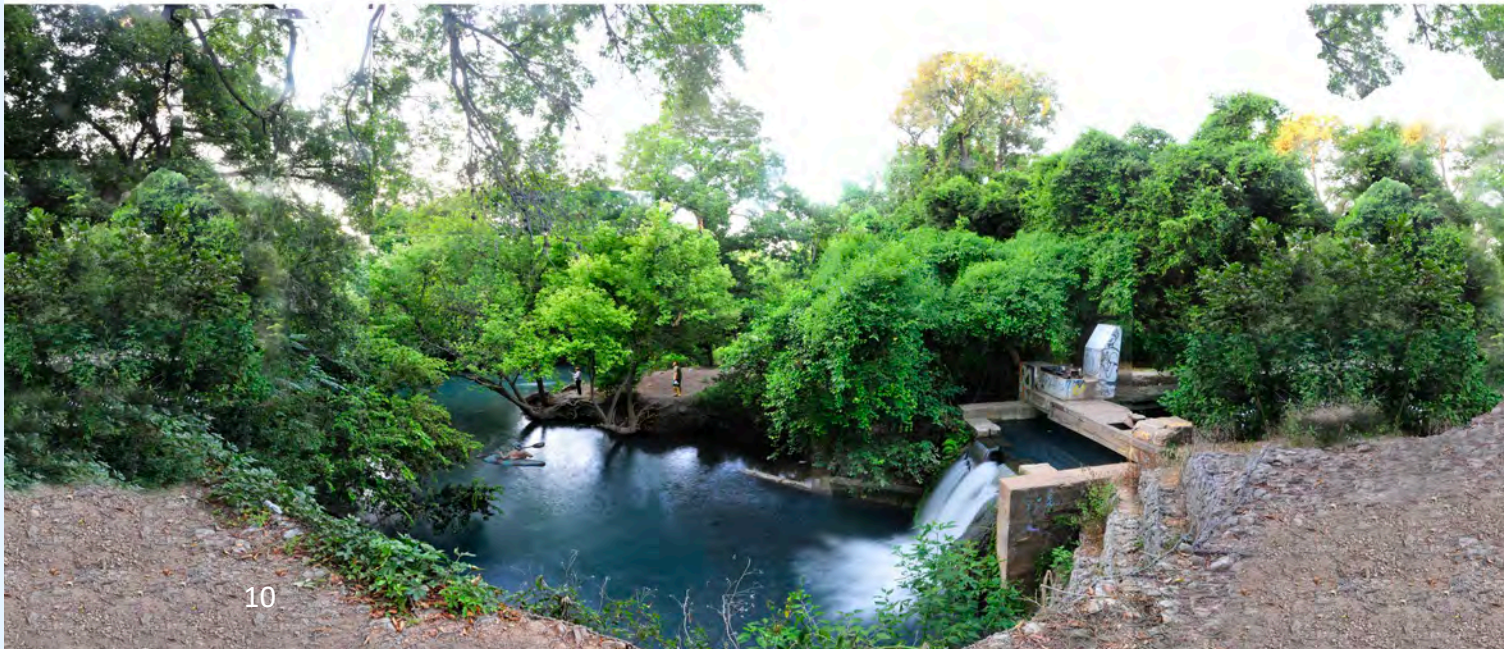
- Higher water level in the Mill Race
- Safety access
- Passive, low level development





Thompson Dam & Mill Pond

- Safety railing & Access
- Observation platform
- Kayak ingress/egress
- Bank Stabilization



Overall Goals:



Overall Goals:



Prioritize historic features & environmental beauty

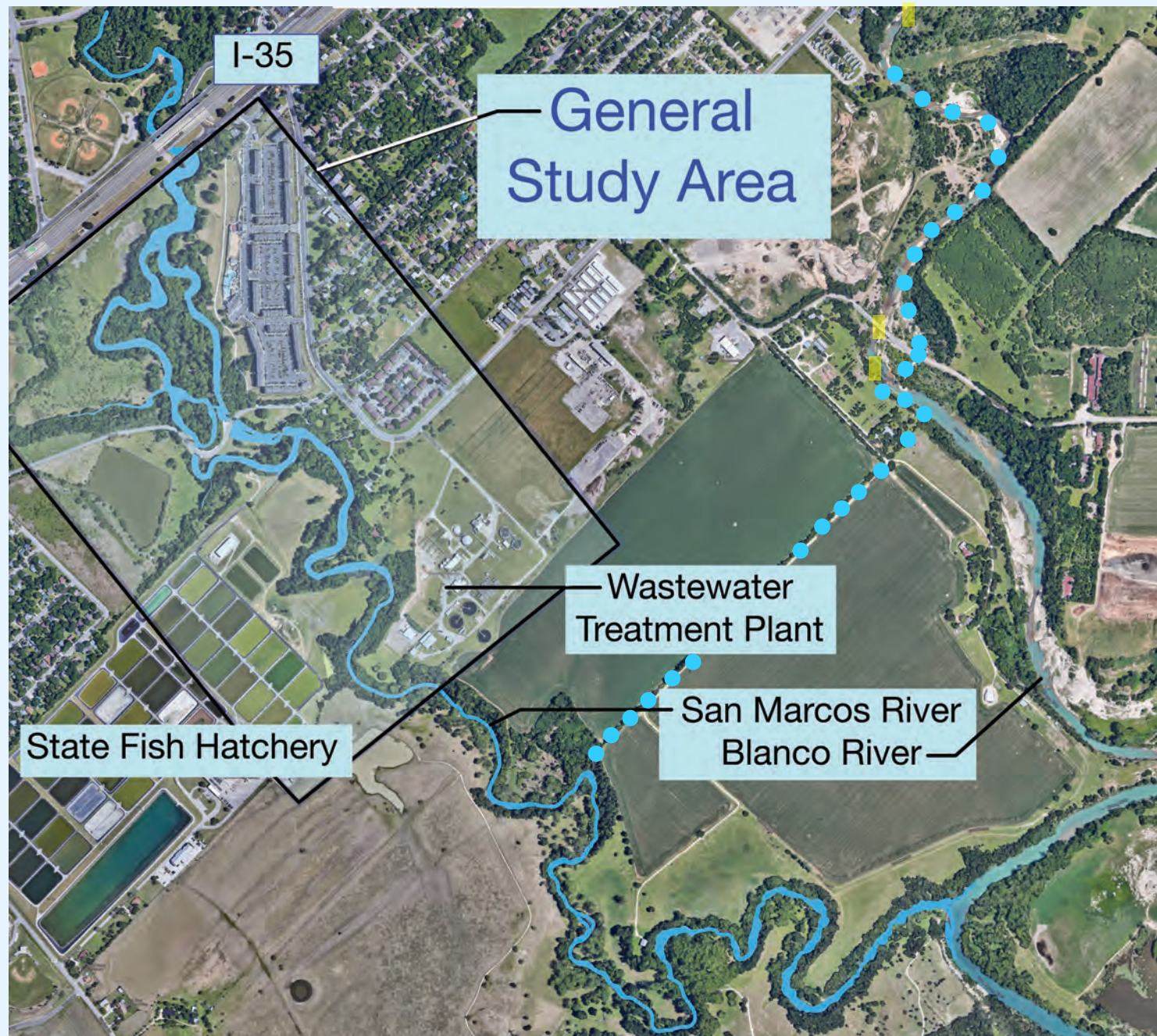


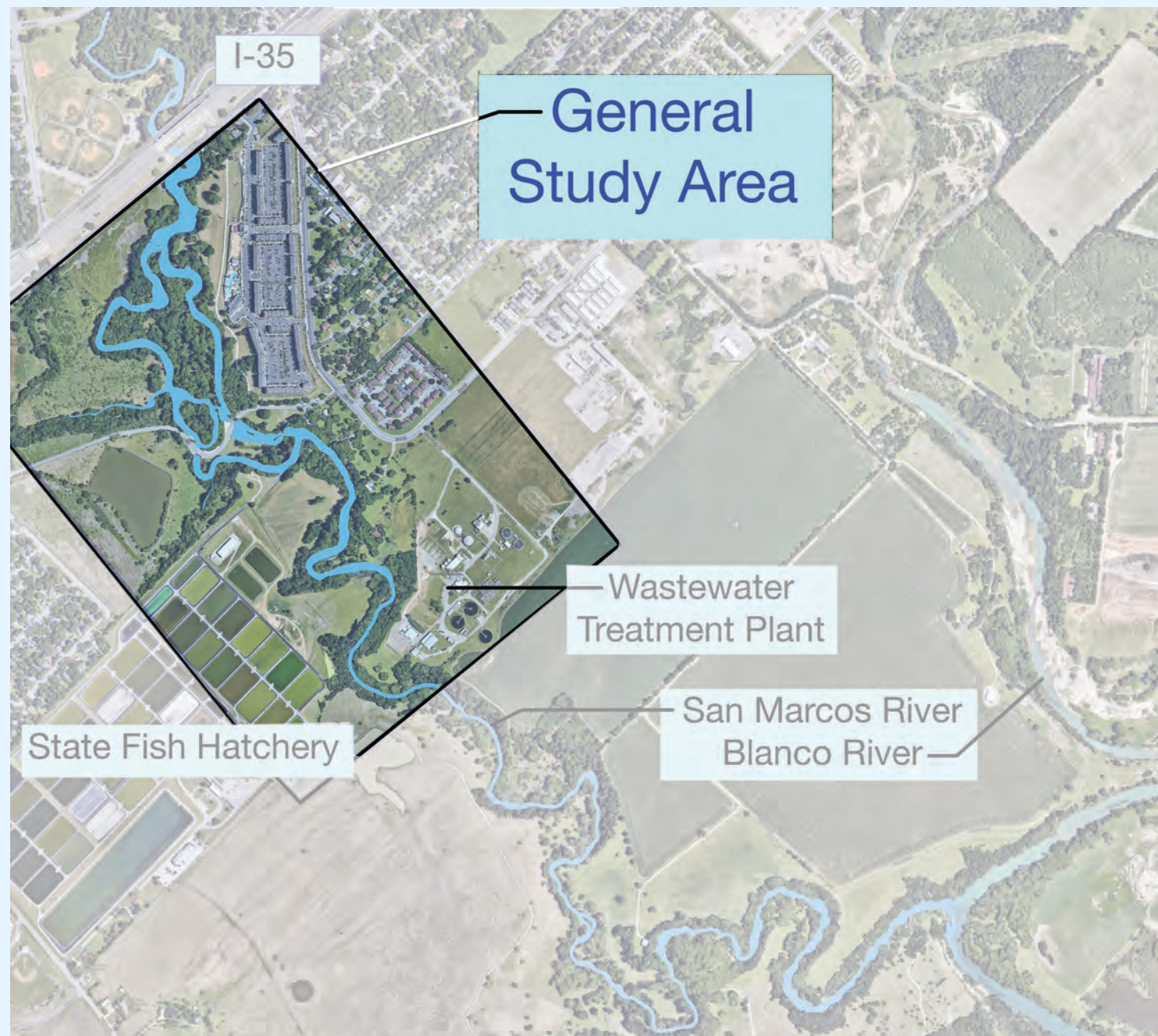
Overall Goals:

Achieving a balanced approach for historic structure rehabilitation, educational interpretation, and leisurely activities while preserving the ecological integrity of the San Marcos River through pragmatic conservation and restoration initiatives.

Providing a special & diverse asset to be enjoyed by San Marcos and Hays County residents, accessed by trails reaching out in all directions.

Providing comprehensive safety and access, focusing on ADA, EMS servicing, Trails, & Water Access.







#1 Achieving a Balanced Approach:

Vision Study Caters to Three Main Areas:

Environmental Integrity; A level of respect and action for the habitat and the sensitive species that exist there.

Historic Rehabilitation + Interpretation;
Understanding our history to learn and guide us forward.

Social and Leisure Access Equity;
New asset for an underserved area of San Marcos.

#1 Achieving a Balanced Approach:

Environmental Integrity; A level of respect and action for the habitat and the sensitive species that exist there.

Analysis & Strategies

- Coordination with all necessary City and County departments
- Existing conditions assessment
- Flow-through design modeling of a rehabilitated Cape's Dam as part of the assessment informing design
- Post assessment after first phase improvements completed
- Monitoring to include recreational activity seasonal levels
- Establishment for strategies including river access points
- Terrestrial survey conducted on sensitive landscapes.
- Invasive species removal

#1 Achieving a Balanced Approach:

Historic Rehabilitation + Interpretation;

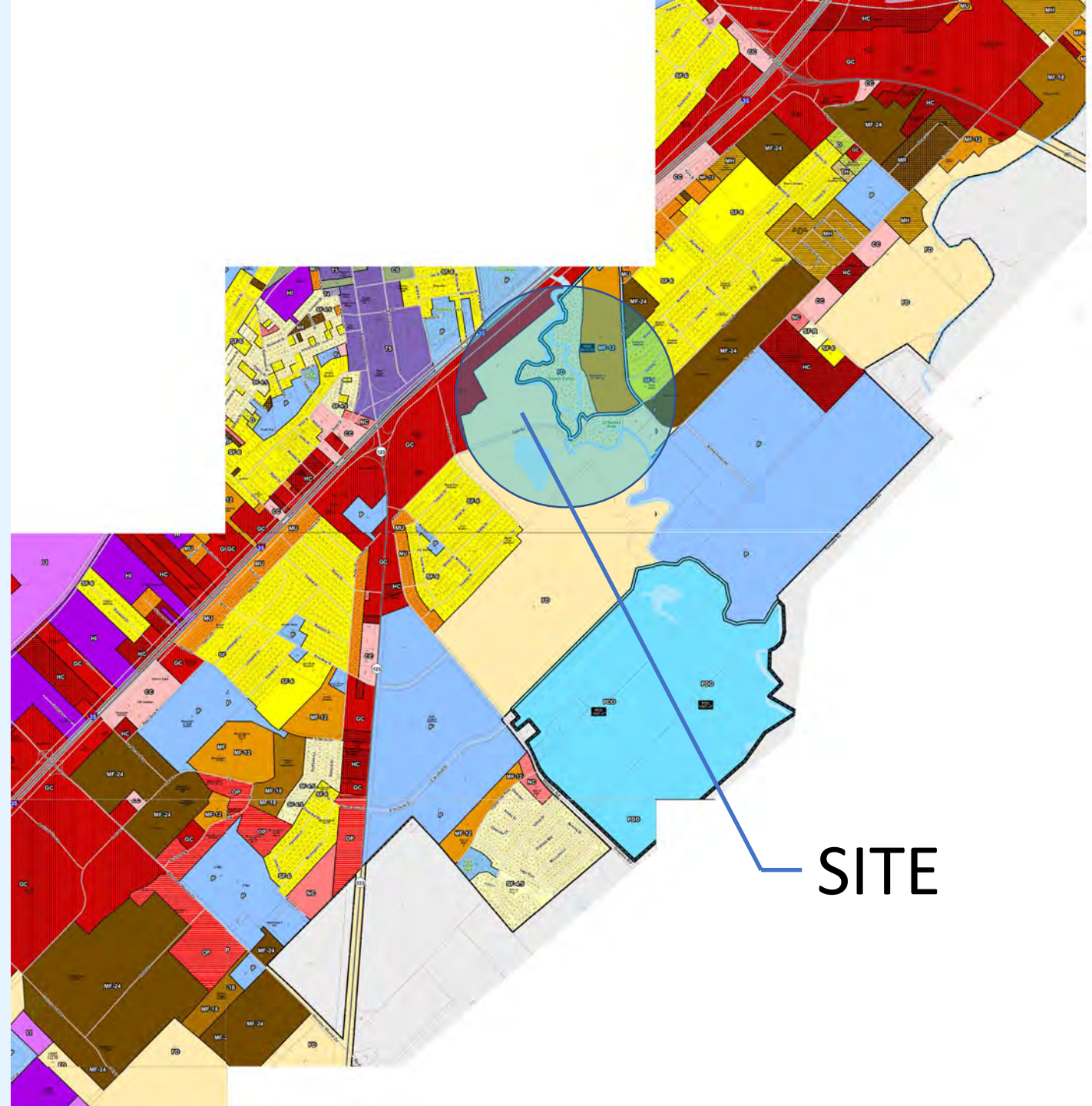
Understanding our history to learn and guide us forward.



#1 Achieving a Balanced Approach:

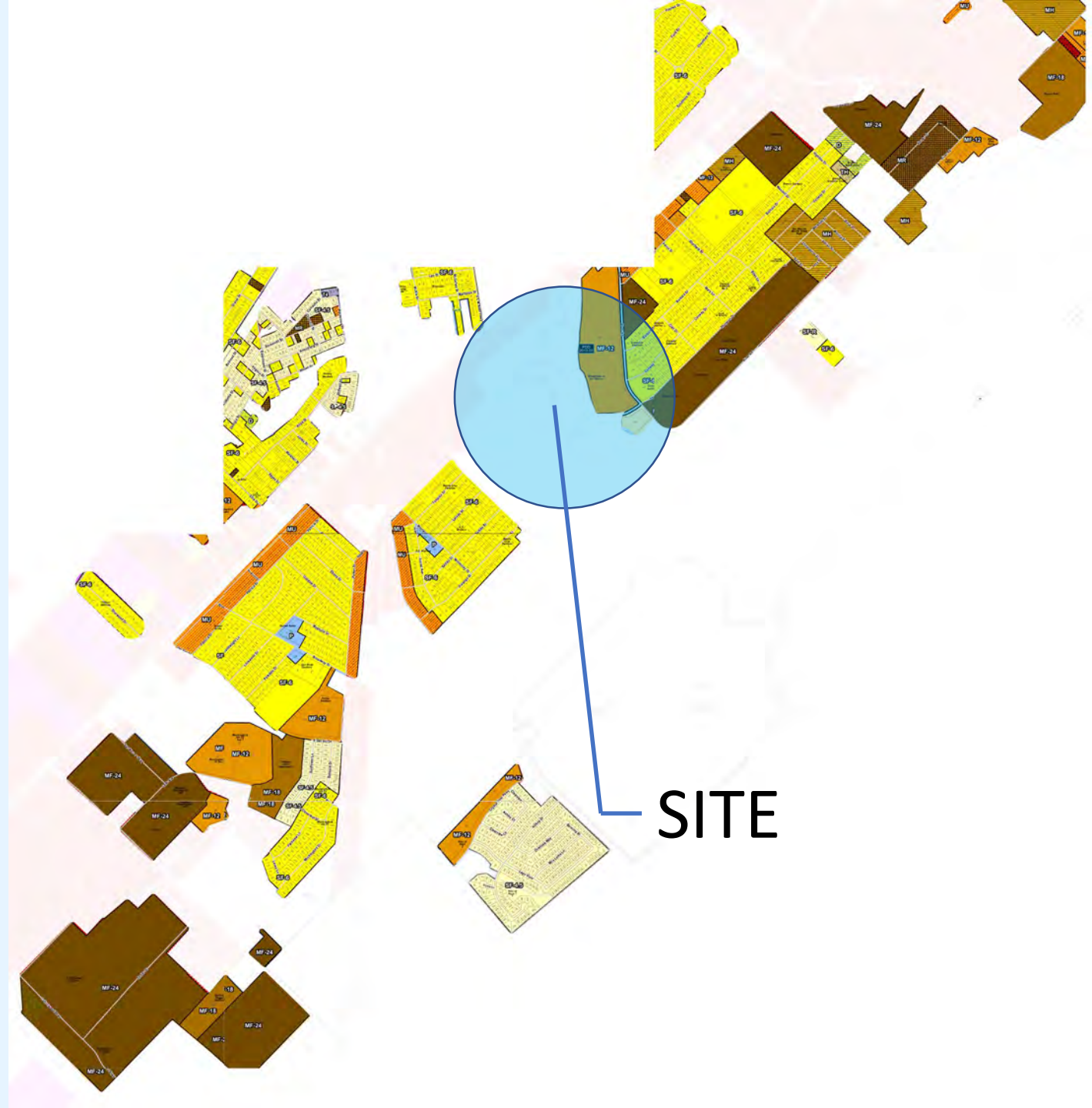
Social Equity;

New asset for an underserved areas of San Marcos.



Social Equity;

New asset for an underserved areas of San Marcos.

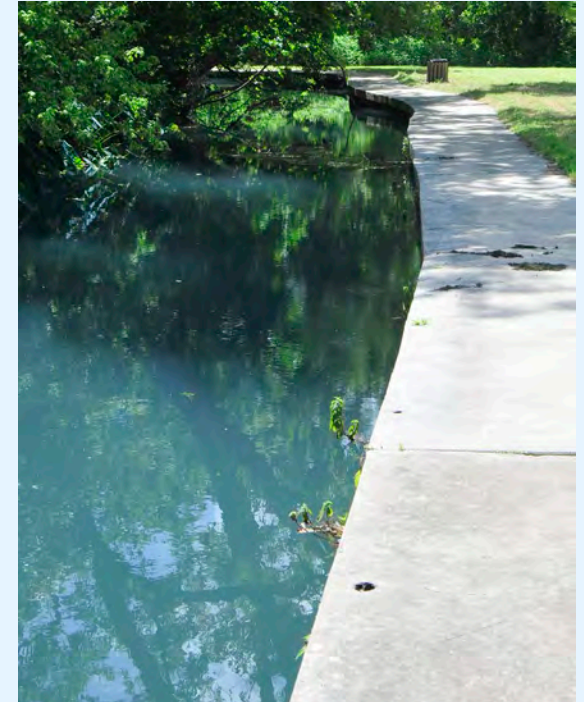


#2 Providing a Special and Diverse Asset:

- A place for historians to understand San Marcos History better
- A place for people interested in natural places for bird watching, hiking, relaxing, environmental study
- A place to learn about urban impacts on the environment
- A place to relax and enjoy being outdoors

#3 Access & Safety:

- Mill race water level to low; ingress/egress challenges
- Cape Road, sight distance, speed, dangerous edge.
- Waterfall; tragedy
- Cape's Dam; swimming and boating hazard
- ADA access upgrades on Cape's Road
- Comprehensive ADA review necessary



#3 Access & Safety:

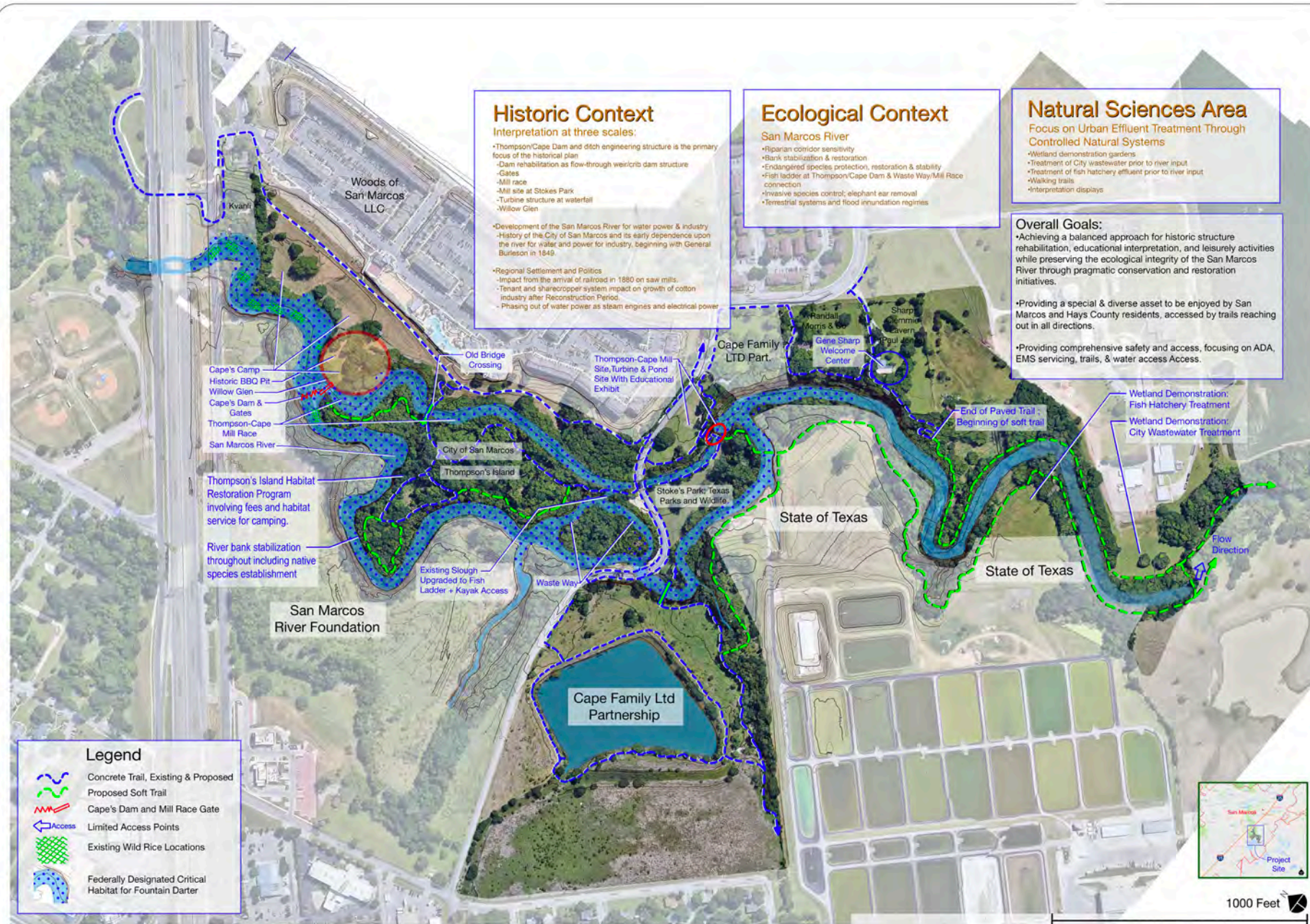
A master planning process includes the lens of emergency services and stakeholder discussions.

- Structural systems for natural grass EMS drives
- Emergency call boxes
- Safe ingress/egress places
- Traffic calming
- Addressing existing unsafe conditions
- Lighting as appropriate



First Map:

Historic & Ecological Framework



Historic Context

Interpretation at three scales:

- Thompson/Cape Dam and ditch engineering structure is the primary focus of the historical plan
- Dam rehabilitation as flow-through weir/crib dam structure
- Gates
- Mill race
- Mill site at Stokes Park
- Turbine structure at waterfall
- Willow Glen
- Development of the San Marcos River for water power & industry
- History of the City of San Marcos and its early dependence upon the river for water and power for industry, beginning with General Burleson in 1849.
- Regional Settlement and Politics
- Impact from the arrival of railroad in 1880 on saw mills.
- Tenant and sharecropper system impact on growth of cotton industry after Reconstruction Period.
- Phasing out of water power as steam engines and electrical power

Ecological Context

San Marcos River

- Riparian corridor sensitivity
- Bank stabilization & restoration
- Endangered species protection, restoration & stability
- Fish ladder at Thompson/Cape Dam & Waste Way/Mill Race connection
- Invasive species control; elephant ear removal
- Terrestrial systems and flood inundation regimes

Natural Sciences Area

Focus on Urban Effluent Treatment Through Controlled Natural Systems

- Wetland demonstration gardens
- Treatment of City wastewater prior to river input
- Treatment of fish hatchery effluent prior to river input
- Walking trails
- Interpretation displays

Overall Goals:

- Achieving a balanced approach for historic structure rehabilitation, educational interpretation, and leisurely activities while preserving the ecological integrity of the San Marcos River through pragmatic conservation and restoration initiatives.
- Providing a special & diverse asset to be enjoyed by San Marcos and Hays County residents, accessed by trails reaching out in all directions.
- Providing comprehensive safety and access, focusing on ADA, EMS servicing, trails, & water access Access.

Legend

- Concrete Trail, Existing & Proposed
- Proposed Soft Trail
- Cape's Dam and Mill Race Gate
- Limited Access Points
- Existing Wild Rice Locations
- Federally Designated Critical Habitat for Fountain Darter

vista
Planning
&
Design

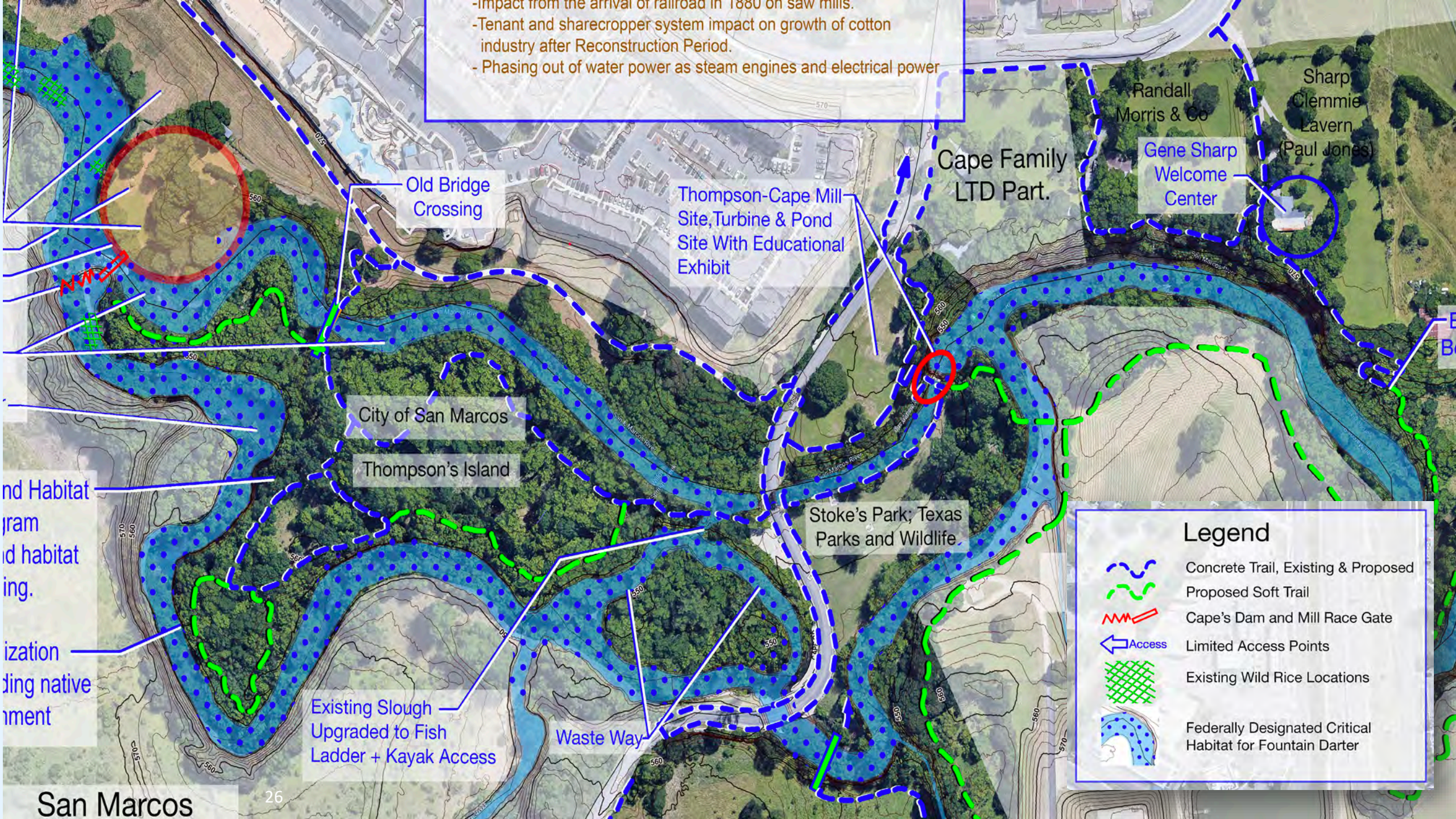
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San Marcos River Vision Study
San Marcos, Texas

9-30-19

Exhibit

- Impact from the arrival of railroad in 1880 on saw mills.
- Tenant and sharecropper system impact on growth of cotton industry after Reconstruction Period.
- Phasing out of water power as steam engines and electrical power



Old Bridge Crossing

Thompson-Cape Mill Site, Turbine & Pond Site With Educational Exhibit

Cape Family LTD Part.

Gene Sharp Welcome Center

Sharp Clemmie Lavern (Paul Jones)

Randall Morris & Co

City of San Marcos

Thompson's Island

Stoke's Park; Texas Parks and Wildlife

Existing Slough Upgraded to Fish Ladder + Kayak Access

Waste Way

Legend

- Concrete Trail, Existing & Proposed
- Proposed Soft Trail
- Cape's Dam and Mill Race Gate
- Access
- Limited Access Points
- Existing Wild Rice Locations
- Federally Designated Critical Habitat for Fountain Darter

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San Marcos



Ecological Context

- Riparian corridor sensitivity
- Bank stabilization & restoration
- Endangered species protection, restoration & stability
- Fish ladder at Thompson/Cape Dam & Waste Way/Mill Race connection
- Invasive species control
- Terrestrial systems
- Leave No Trace/ controlled access
- Regional Riparian Water Quality; Mitigation of City & State impacts
- Program of extensive assessment
- Program of conservation projects

Historic Context

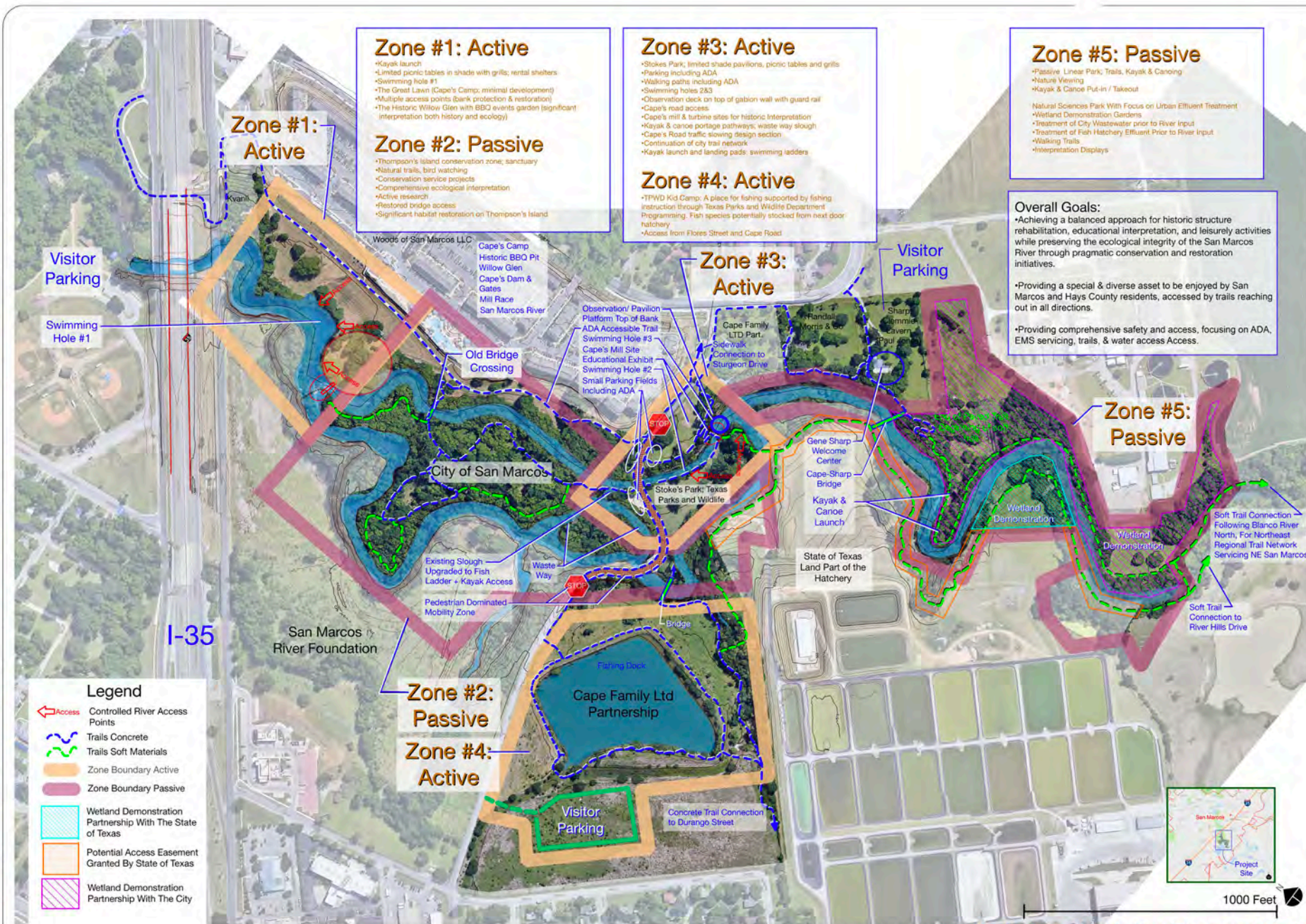
- Thompson/Cape Dam and ditch engineering structure is the primary focus of the historical plan
 - Dam rehabilitation as flow-through weir/crib dam structure
 - Mill site, gates, mill race, turbine structure/ waterfall, mill pond
- Development of the San Marcos River for water power & industry
- History of regional settlement and politics; The industrial beginnings of San Marcos
- Program of assessment and comprehensive interpretation

Natural Sciences Park

- Wetland demonstration gardens
 - Treatment of City wastewater
 - Treatment of fish hatchery effluent
- Walking trails
- Program of Education
 - Interpretation displays

Second Map:

Leisure Activity Framework



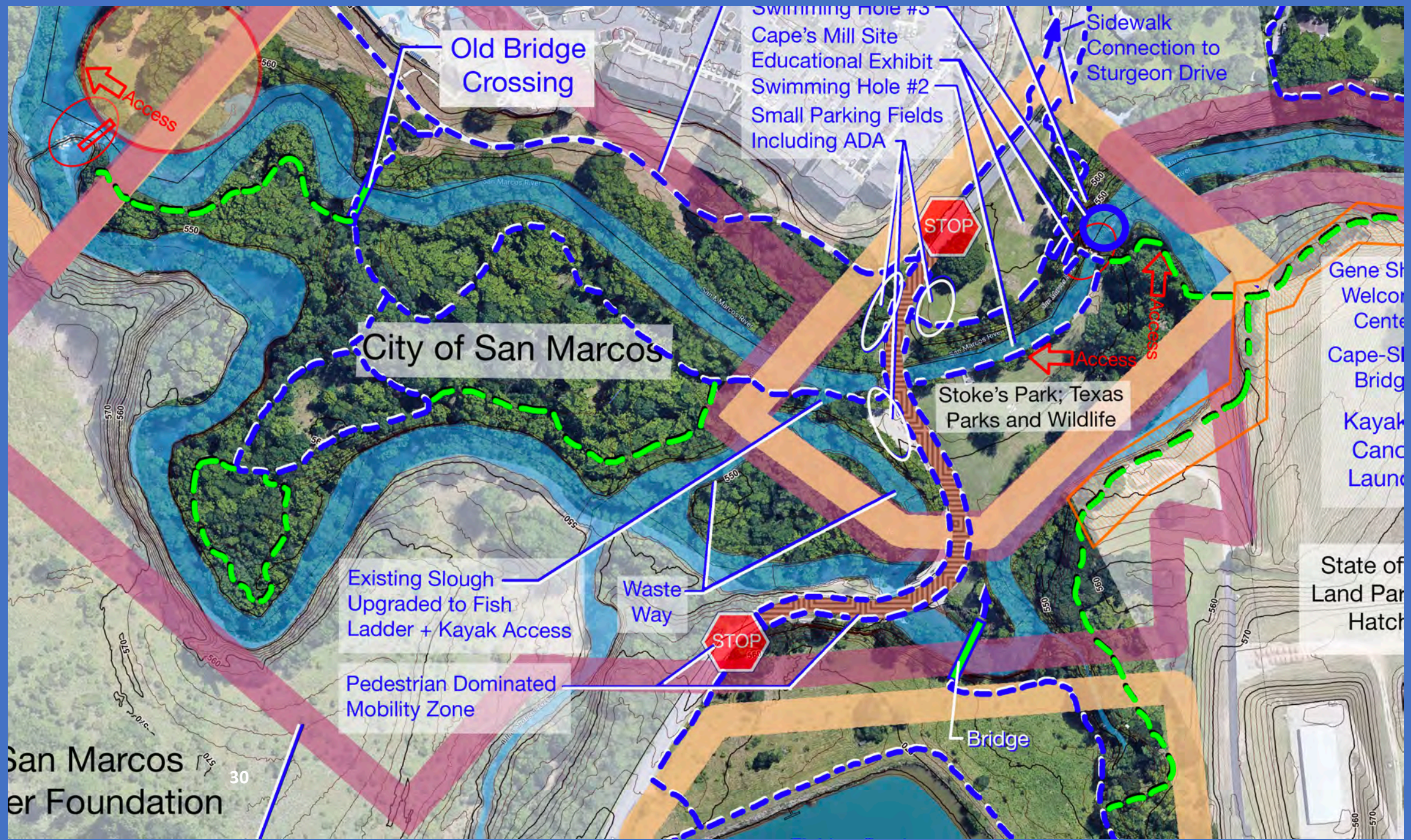
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San Marcos River Vision Study
San Marcos, Texas

8-30-19

EXHIBIT 2



Leisure Activity Goals:

Z1

Zone #1: Active

- Kayak launch
- Cape's Camp- The Great Lawn; minimal development)
- Multiple access points (bank protection & restoration)
- The historic Willow Glen with BBQ events garden (significant interpretation both history and ecology)

- Prioritize local residents by limited parking areas
- Prioritize safety
- Controlled river access
- Provide wide variety of experiences
- Low level improvements not detracting from natural beauty

Z3

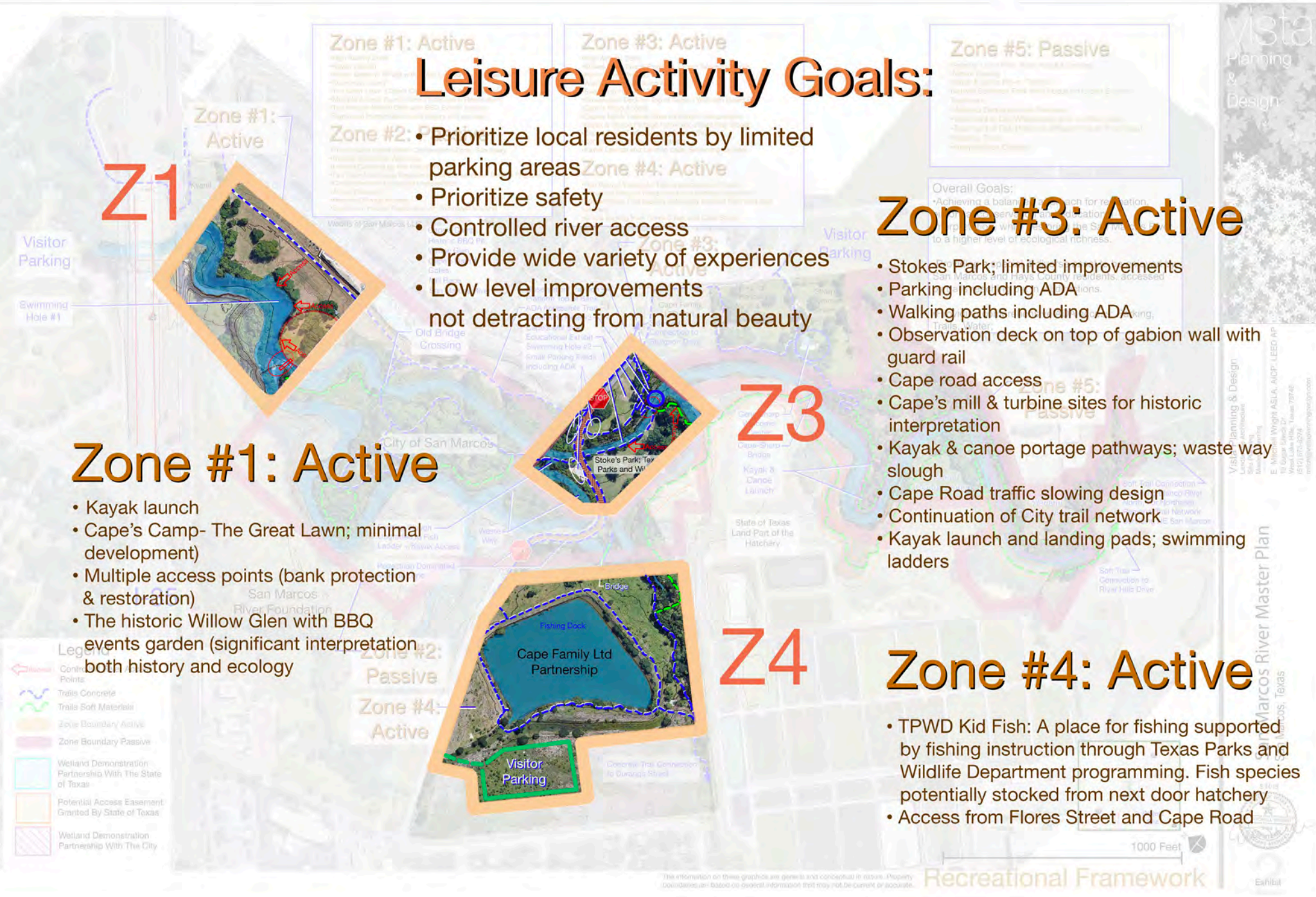
Zone #3: Active

- Stokes Park; limited improvements
- Parking including ADA
- Walking paths including ADA
- Observation deck on top of gabion wall with guard rail
- Cape road access
- Cape's mill & turbine sites for historic interpretation
- Kayak & canoe portage pathways; waste way slough
- Cape Road traffic slowing design
- Continuation of City trail network
- Kayak launch and landing pads; swimming ladders

Z4

Zone #4: Active

- TPWD Kid Fish: A place for fishing supported by fishing instruction through Texas Parks and Wildlife Department programming. Fish species potentially stocked from next door hatchery
- Access from Flores Street and Cape Road



Leisure Activity Goals:

- Prioritize local residents by limited parking areas
- Prioritize safety
- Controlled river access
- Provide wide variety of experiences
- Low level improvements not detracting from natural beauty

Zone #5: Passive

- Passive linear park; trails, kayak & canoing
- Nature viewing
- Kayak & canoe put-in / takeout
- Natural sciences park with focus on effluent treatment with wetland demonstration gardens
- Interpretation displays

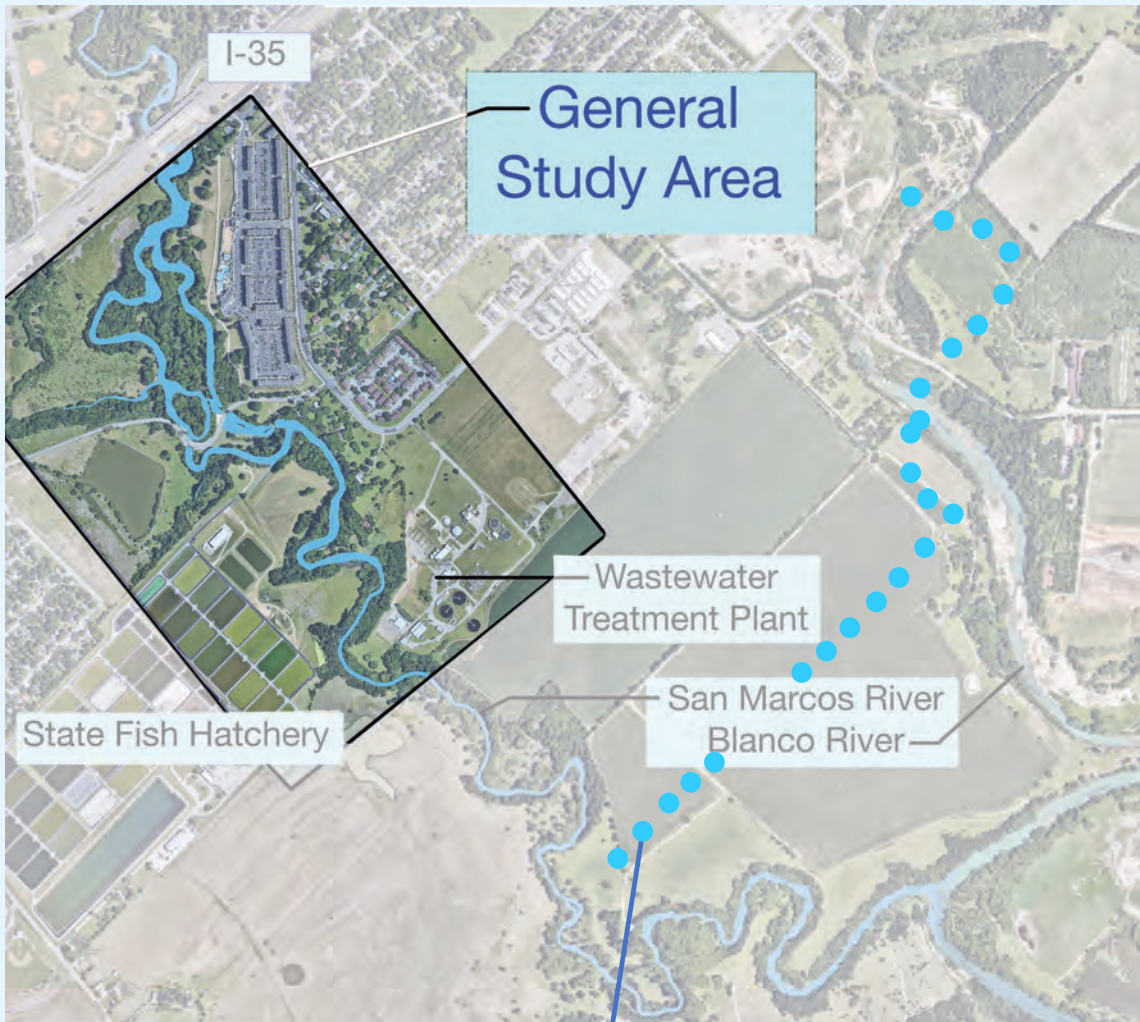


A scenic river flows through a lush, green forest. In the foreground, a small waterfall cascades over rocks, creating white foam. The river continues into the distance, where a person in a blue kayak is visible. The banks are lined with dense trees and foliage, with sunlight filtering through the leaves. A large, flat rock sits in the lower right foreground.

Opportunities!

Unique Leisure Opportunities

- Multiple Public Jurisdictions working together.
- Providing a beautiful asset to an underserved area of San Marcos
- Creating potential trail linkages, including the Emerald Crown Trail.
- An area for educational aspects of natural and cultural interpretation, demonstration, and restoration to a high value environmental quality, and leisure activities.



Emerald Crown Trail



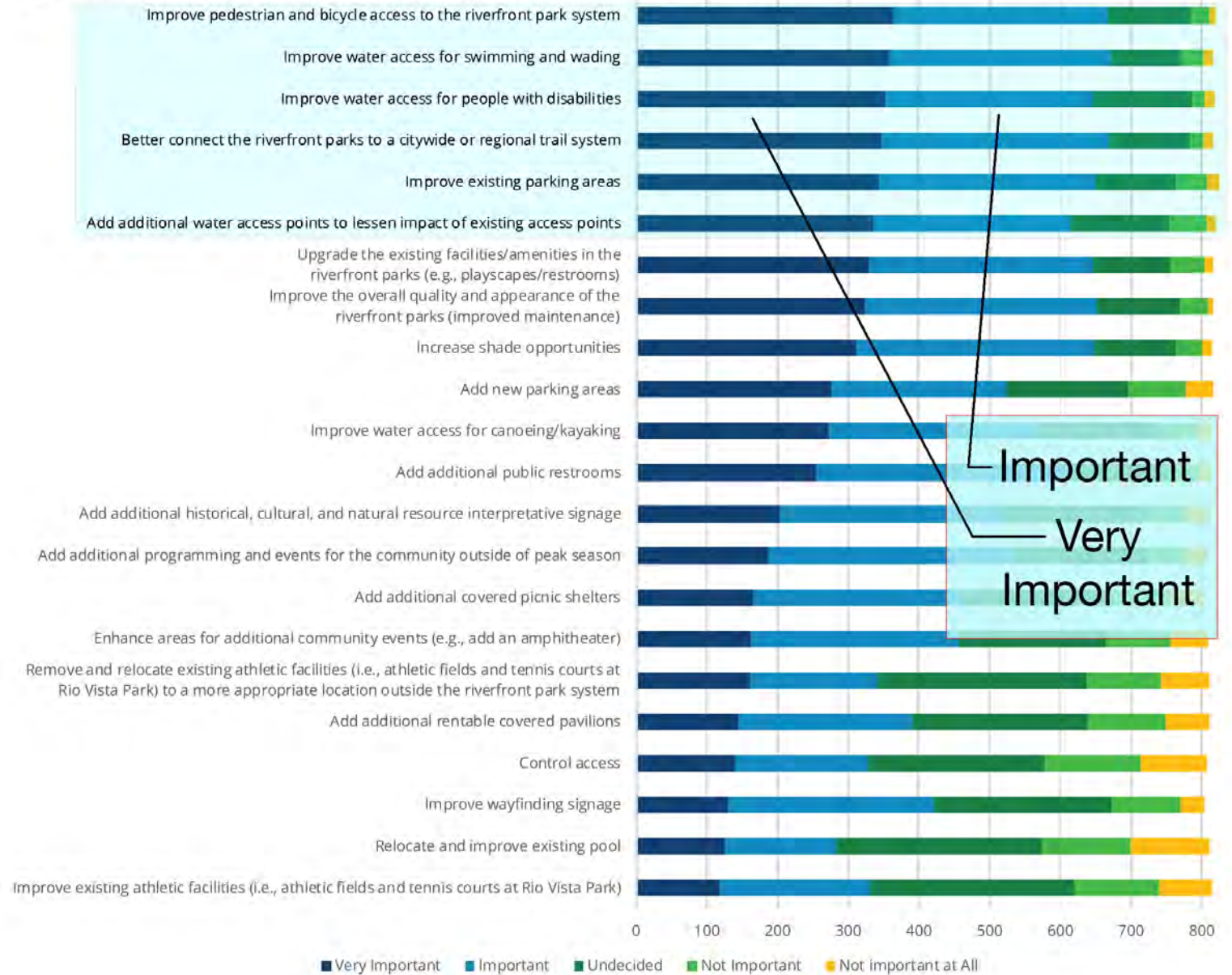
THE EMERALD CROWN TRAIL MASTER PLAN

March 2019

San Marcos

Parks, Recreation, and Open Space Master Plan

Figure 3.18, How Important Is It For the City to Address the Following Parks, Recreation, and Trail Issues?



How Important Is it For the City to Address the Following Parks, Recreation, and Trail Issues?

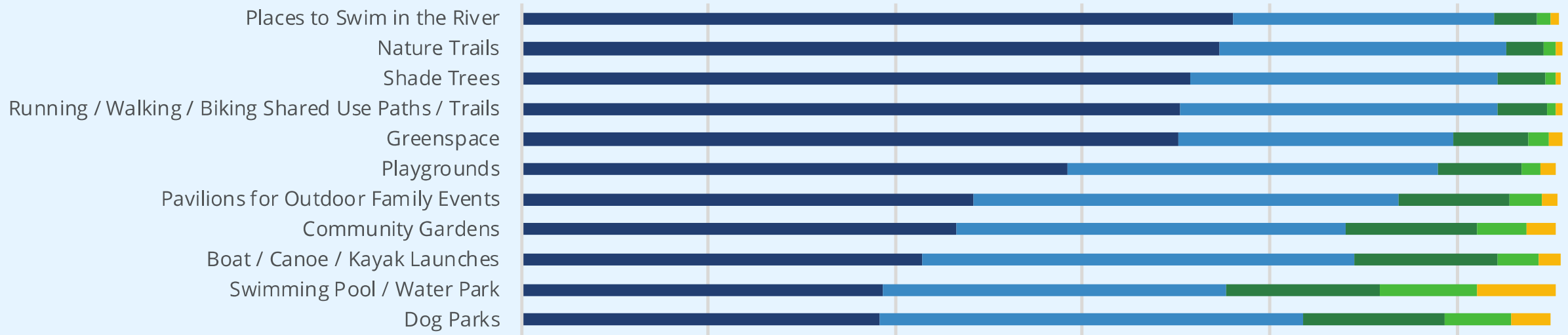
- 1) Improve pedestrian and bicycle access to the riverfront park system
- 2) Improve water access for swimming and wading
- 3) Improve water access for people with disabilities
- 4) Better connect the riverfront parks to a citywide or regional trail system
- 5) Improve existing parking areas
- 6) Add additional Water access points to lessen impact of existing access points

On a separate survey...again...

- 1) Places to swim in the river
- 2) Nature trails
- 3) Shade trees
- 4) Running/walking/biking shared use paths/trails

to be provided or added in San Marcos.

Figure 3.16, Importance of Park Facilities to be Provided or Added in San Marcos



City Council Direction Needed

- Does Council want to proceed with an agreement with Hays County to partner on renovation/rehabilitation of Cape's Dam?
- Does Council want to explore the larger visioning/master plan concept with Hays County?

Next Steps

- If Council provides direction on proposed project concept at a future council meeting, the City would negotiate an interlocal agreement designating the terms of the partnership covering items such as:
 - Financial participation of City
 - Design, permitting, and construction participation and responsibilities
 - Termination clause
 - Land acquisition and/or related leases
 - Compliance with HCP conservation measures
 - Operation and maintenance responsibilities
 - Safety of park users and emergency access
 - Park Rules and Enforcement
 - Neighboring developments and conflicts with access or alcohol
 - Public participation, outreach and engagement in master plan
- Any special considerations or concerns from Council?
- Future work session to review formal plan?

QUESTIONS?