TEXAS STATE SOIL & WATER CONSERVATION BOARD

AREA 4

AGRICULTURAL & SILVICULTURAL NONPOINT SOURCE WATER QUALITY UPDATE & SURVEY

PREPARED FOR
THE

HARRIS COUNTY
SOIL AND WATER CONSERVATION DISTRICT

FOR THE
FISCAL YEAR 2014

WATER QUALITY MANAGEMENT PLAN PROGRAM

TEXAS STATE SOIL & WATER CONSERVATION BOARD

MEMORANDUM

DATE: May 24, 2013

TO: Harris County Soil and Water Conservation District # 442

FROM: Lee Munz, TSSWCB S.B. 503 - Water Quality Management Plan Program Coordinator

SUBJECT: New Water Quality Update & Survey

This document is one of the outcomes of a process that has been underway for a number of years now with the goals of improving the Senate Bill 503 – Water Quality Management Plan Program and transforming it into a "statewide" program. Much more insight regarding the motivations and decisions that were made leading up to this point is included in the following document, but there are a few key items we want to pass along up front.

The new program for Fiscal Year 2014, which begins September 1, 2013, will include a number of important changes. First, the State Board plans to allocate cost-share dollars equally to each State Area. This means districts will not be receiving a direct allocation as in years past. Also, this means all 216 districts are now a part of this program, as opposed to the 70 or so that have been included. Additionally, administrative payments to districts will now be based on 5% of *dispersed* dollars rather than *obligated* dollars. In other words, administrative payments will be based on dollars actually paid to participants rather than dollars simply obligated to them *(and potentially never used)*. Another change, as a result of the program becoming truly statewide in nature, is that the coverage areas of the TSSWCB's Regional Offices have been modified to accommodate all of the new areas of the state within the program. A new Regional Office will be opened in San Angelo to service Area 2.

The new program will also include a stakeholder process (*via this update and survey)*, which was a recommendation by the Sunset Advisory Commission during their most recent review of the agency. This document contains two sections: (1) An update on the water quality conditions within Area 4; and (2) a survey customized especially for the Harris County SWCD. We are asking each SWCD to review the information in the update and complete the survey and return it to the TSSWCB by July 1. We will use the information we receive to prepare recommendations for the State Board to consider at the July 2013 meeting, where they will establish the final priorities and ranking processes for the upcoming fiscal year.

It is critically important that each SWCD provide *(at a minimum)* the desired cost-share rate, maximum cost-share amount, and eligible practices for the upcoming year. Also, we are very interested in any local concerns that exist within the Harris County SWCD that we may not be aware of. Each section of the document contains further explanation and instructions for completing the survey. Again, we are extremely interested in any information you can offer regarding potential priority areas for this program, and we know we cannot administer this program without your assistance.

As with any new program, there are sure to be many questions that we've not yet provided the answers to, so please don't hesitate to ask. Your TSSWCB Field Representative and Regional Office Staff, as well as our staff in Temple are prepared to field your questions. Again, thank you for your participation in this important natural resource program, and thank you for your patience as we work through these changes.

Field Representative: Joel Clark, (409) 790-4805
Regional Office: Wharton, (979) 532-9496
Temple Staff: Lee Munz, (254)773-2250, ext. 241

BACKGROUND

With the enactment of Senate Bill 503 in 1993, the Texas Legislature amended the Texas Agriculture Code and Water Code to authorize the Texas State Soil and Water Conservation Board (TSSWCB) to administer a water quality management plan (WQMP) certification program. The program was intended to be available in areas of the state where water quality problems exist or have the potential to exist and are associated with agricultural and silvicultural activities. The Program was also required by statute to be available in the Coastal Management Zone.

The purpose of the Program was to encourage Texas' agricultural producers and landowners to conserve natural resources, with a heavy emphasis on water quality, through the development and implementation of site-specific water quality management plans. Once certified by the TSSWCB, obtaining and following one of these plans meant that the participant was authorized by the State of Texas to discharge certain types of waste into or adjacent to waters in the State.

The TSSWCB was designated as the entity responsible for determining the threshold of conservation planning that would be required to qualify for certification. The TSSWCB chose the USDA-Natural Resources Conservation Service's Field Office Technical Guide, when planned to the resource management system level for water quality criteria, as the technical standard for a water quality management plan, but reserved the right for special deviations when deemed necessary.

The Legislature also appropriated funding to be used as an incentive to encourage producers and landowners to participate. The funding, administered through a cost-share program, was intended to provide up to 75% of the cost to install soil and water land improvement measures associated with the water quality management plan.

For the first 20 years of the Program's existence, the TSSWCB's approach was to allocate cost-share funding directly to districts that were located completely or partially within a priority area established by the TSSWCB. Priority areas were characterized in broad categories such as return flows from irrigation, or contaminated runoff from confined animal feeding operations. Priority area boundaries were drawn as a block of districts overlaying water quality impairments from Texas' Clean Water Act, Section 303(d) List of Impaired Waters.

Since the initial establishment of the Program's priority areas, the State Board has not made significant changes to where the cost-share funding is allocated, however, the process by which the State assesses water quality has undergone extensive expansion. Today, there are now many areas of the state with documented water quality concerns which are not being addressed by the Program.

A NEW DIRECTION FOR THE PROGRAM

The Program was a focus of the State Board's recent review by the Texas Sunset Advisory Commission because it provides cost-share funding to private individuals. These cost-share awards are viewed as grants by the State, and as such, they are scrutinized to ensure they provide the greatest potential benefit to the State while still serving their intended purpose,

which is an incentive to enhance participation in the Program. As a result of this review, the Texas Legislature enacted House Bill 1808 which required that the State Board establish goals for the cost-share portion of the Program, as well as performance measures and processes for carrying out program improvements. Additionally, the Sunset Advisory Commission recommended that a stakeholder process be used to establish these new facets to the Program. The result of this review was a clear understanding that the focus of the cost-share funding, in the future, would have to be as a force driving the Program toward the most evident agricultural and silvicultural nonpoint source water quality challenges.

Starting September 1, 2013

For the program year beginning September 1, 2013 and ending August 31, 2014, the TSSWCB is implementing several new initiatives to expand the program to address all water quality priorities across the entire state.

First, the TSSWCB is preparing to initially allocate the cost-share incentive funding in equal amounts to all five state-districts (Areas 1-5); at some point during the fiscal year it may become necessary to shift unused funds among the Areas to prevent the funds from lapsing.

Second, the program is being expanded to address many new priorities represented by a statewide nonpoint source priority area list. The TSSWCB will *(at least)* annually approve this list of priorities, and it would be the basis for identifying the highest priority areas within each State District (Areas 1-5). Meeting the criteria for one of these priorities would mean that an applicant would receive more points in a ranking process that will be conducted each year, than an applicant that did not meet the criteria. The point values for various priorities, sign-up windows, frequency of ranking applications, and other factors associated with the ranking process will be determined after a careful review of the information the TSSWCB receives from this district survey. After the results of this survey are reviewed, the TSSWCB staff will prepare a formal recommendation to the State Board for their approval at their July 2013 Meeting.

Once approved, the TSSWCB staff, including all field representatives and regional office employees, will begin the process of communicating how the new program will be administered starting September 1, 2013.

Program Year Activities

There are however a few basic elements of the new program that are already known. First, we know the State Board *(as of the date of this document)* plans to allocate the cost-share incentive funding equally to each Area.

Second, there will be priority areas within each Area that will be worth some yet-to-be-established *point value*.

Third, in addition to the request for planning assistance and cost-share application, a third document will be used to establish the amount of points an applicant will be awarded based on how many of the priority area's criteria are met. This new document, a cost-share request and ranking tool, will be made available to districts after the State Board's meeting in July 2013.

Once the cost-share request and ranking document is approved by the local district and forwarded to the appropriate TSSWCB Regional Office, the TSSWCB will verify whether or not any approved priorities are met, apply the ranking process approved by the State Board in July 2013, and then set aside the maximum amount of cost-share allowable for that operating unit within that district *(through this survey, each district will be able to notify the TSSWCB what their maximum cost-share rate and amount will be for the upcoming fiscal year).*

At this point, technical assistance will need to be arranged for the development of the water quality management plan. As in the past, this may be done either by the district employee, NRCS, or the TSSWCB Regional Office, depending on the circumstances in the local area.

From this point forward, the process will be very much the same as in years past. A cost-share application will need to be completed and approved by the district. Once approved by the district, it should be forwarded to the appropriate regional office, where the initial amount of cost-share incentive funding that was reserved for this application will be adjusted as necessary. If the entire amount reserved is required, then no adjustment will be made. If it is under the amount reserved, the dollars not needed will be returned to the Area allocation and made available to next highest ranking request.

As with the current program, there will come a time in the fiscal year when the dollars obligated to participants in each district will need to be formally obligated to the district through a Grant Notification. This is a formal contract that legally binds the funds obligated to a participant, but not yet spent, to the district. By doing this, those dollars belong to the district, should the participant decide not to use them, meaning the district could move them to another program participant. The State Board will likely require that those "freed up" dollars be used on another priority request if one exists. How those dollars are to be utilized if one does not exist will be a component of the State Board's decision in July 2013.

THE HARRIS COUNTY DISTRICT #442 SURVEY

The survey section of this document is the section where the district is requested to provide input to the TSSWCB about the known nonpoint source water quality impairments and concerns the State of Texas has identified as being attributed to agricultural or silvicultural sources to some extent.

It consists of seven sections:

I. District Cost-Share Rate for FY2014

This section should be used to notify the TSSWCB of the cost-share rate that will be used for the district during the 2014 Fiscal Year (Sept. 1, 2013 – Aug. 31, 2014). The Texas Legislature has enacted state law capping the rate at 75%. Please choose one rate for the entire fiscal year.

II. Maximum Amount of Cost-Share per Operating Unit for FY2014

This section should be used to notify the TSSWCB of the maximum amount of cost-share that can be applied to a single cost-share application for an operating unit during the 2014 Fiscal

Year (Sept. 1, 2013 – Aug. 31, 2014) for the district. The State Board has adopted rule requiring that the amount be no more than $15,000 (December 23, 2008), and has adopted policy that the amount be no less than $5,000 (July 21, 2005). Please choose a maximum amount for the entire fiscal year.

III. Practices Eligible for Cost-Share Incentive Funding for FY2014

This section should be used to notify the TSSWCB of the practices that are eligible for cost-share funding through the district for the 2014 Fiscal Year (Sept. 1, 2013 – Aug. 31, 2014). The State Board has adopted a statewide list of practices that are all eligible (provided in the survey section). The district may choose to use the entire list or select a subset of the statewide list.

IV. Local Input and Characterization of Area Water Quality Priorities

This section should be used to notify the TSSWCB of any information the district would like to convey regarding the identified priorities. The district is being asked to provide input on each priority known to exist within the Area. There is a space where the district can make recommendations on whether or not to limit the type of agricultural operation that should qualify for each specific priority. This recommendation may be implemented on a district-by-district case, or an across-the-board case, depending on how the State Board chooses to approve the ranking process at the July 2013 Meeting. There is also a space where the district can provide any other information about each priority it desires. Each one of these surveys will be reviewed carefully, so please provide as much information as possible.

The information on each proposed priority area is contained within a table. The table has two major sections: (1) Priority Description, and (2) District Input and Comments.

The priority description section contains five sub-columns that include: (1) Proposed Cost-Share Priority, (2) State Area, (3) Priority Type, (4) WQ Parameters, and (5) Existing Activity. The district input section contains two sub-columns requesting the information described above.

The **Proposed Cost-Share Priority** is the name of the geographic area that is proposed. In many cases it is the name of the impaired stream or reservoir, and the scope is the watershed that drains to it. In other cases it may the recharge zone for a major aquifer (obtained from the Texas Water Development Board). Also, 15 districts are included in their entirety due to their presence in the Coastal Management Zone (Areas 3 & 4 only). The Coastal Zone is required by statute to be a priority area of the program.

Priority Type refers to one of five primary categories of potential priority areas that are included in the overall list. A **TSSWCB Priority Watershed** is the watershed of a stream or other waterbody that the State Board has included on their Nonpoint Source Priority Area List. **TSSWCB Priority Aquifers** are also on this list, which is an account of the agency's top priorities for addressing nonpoint source pollution. There are currently only two major aquifers on this list (Ogallala and Seymour). This list is simply the highest priorities, not all the areas of the state that the agency may be working on problems.

Impaired with Agricultural Sources are other watersheds that have not been added to the TSSWCB's Nonpoint Source Priority Area List, but nevertheless are listed as impaired by the Texas Commission on Environmental Quality, and have also been listed as having been partially caused due to agricultural sources.

Major Aquifer refers to the recharge zone of any one of nine major aquifers in Texas. Note that the Ogallala and Seymour are TSSWCB Priority Aquifers because they are on the agency's priority area list, therefore they are listed as such.

Statutorily Required Priority refers to the Coastal Management Zone. This area is required by state law to be included as a priority area for the program.

The **WQ (Water Quality) Parameters of Concern** column includes a number of parameters that are the reason the proposed priority area was listed on the Texas 303(d) List of Impaired Waters.

Excessive Bacteria – This parameter describes a condition where the indicator organism, Escherichia coli (freshwater) or Enterococci (marine), has been determined through water quality monitoring to be present in amounts that exceed the established water quality standard for contact recreation.

Excessive Salinity – This parameter describes a condition where it has been determined through water quality monitoring that the amount of total dissolved solids present exceeds the established water quality standard for public water supply and/or one or more general water-quality related uses.

Nitrate Concerns – This parameter describes a condition where it has been determined through water quality monitoring that nitrates are present in amounts that exceed the established water quality standard for public water supply.

Depressed Dissolved Oxygen – This parameter describes a condition where it has been determined through water quality monitoring that the level of dissolved oxygen is lower than the established water quality standard for aquatic life use.

Impaired Macrobenthic Community – This describes a condition where it has been determined through a biological assessment that the composition of the community of larger invertebrate organisms does not meet the designated aquatic life use that is part of the applicable water quality standards.

Excessive Chloride – This parameter describes a condition where chloride has been determined through water quality monitoring to be present in amounts that exceed the established water quality standard for one or more general water-quality related uses.

Excessive Sulfate – This parameter describes a condition where it has been determined through water quality monitoring that sulfate is present in amounts that exceed the established water quality standard for one or more general water-quality related uses.

Excessive Total Dissolved Solids – This parameter describes a condition where it has been determined through water quality monitoring that total dissolved solids are present in amounts that exceed the established water quality standard for one or more general water-quality related uses.

Excessive Zinc – This parameter describes a condition where it has been determined through water quality monitoring that Zinc is present in amounts that exceed the established water quality standard for public water supply and/or for aquatic life use.

pH – This parameter describes a condition where it has been determined through water quality monitoring that the pH either does not meet or exceeds the established water quality standard for aquatic life use.

Restored Watershed – This is a watershed for a formerly impaired stream or waterbody that has been modified and now meets water quality standards.

Healthy Watershed Initiative – This is a designation for watersheds that the TSSWCB has included as a priority area because of the United States Environmental Protection Agency's effort to protect certain watersheds from becoming impaired.

Existing Activity refers to the on-going efforts and the method that have been chosen to enact restoration of impaired waters. **WPP** refers to a Watershed Protection Plan, or watershed-based plan, as referenced in the federal guidance for the Clean Water Act, Section 319(h) Nonpoint Source Grant Program. **TMDL** refers to a Total Maximum Daily Load as defined by the Federal Clean Water Act. **RUAA** refers to a Recreational Use Attainability Analysis, which is a study to determine the appropriateness of the water standard for contact recreation for a specific waterbody. **None Known** simply means the TSSWCB isn't aware of any organized activity toward restoration, and
NA means not applicable.

As stated previously, the **District Input and Comments** section contains places for the district to specify how flexible, with respect to agricultural enterprises, a specific priority area should be. The ***Most Important Operation Types*** column includes check-boxes for various different types of agricultural operations. Animal Feeding Operations (AFOs) have been split into two categories – **Poultry Operations** and **Non-Poultry AFOs**. The remaining options include **Grazing Operations, Cultivated Operations, Nutrients Applied, and Irrigated Lands**. If one or more of these activities is selected, it means the district would like ONLY THESE TYPES of operations to qualify for cost-share in this particular priority area. Multiple selections are acceptable, and if any part of the prospective operation is representative of the activity, it should qualify (unless this is unacceptable to the district). Obviously these a generalizations and some may not be applicable in all areas. If there is no preference, then simply select the no preference box.

The **Additional SWCD Comments on this Cost-Share Priority** column is a place for the district to expound on whatever other information or feedback is desired. Examples could range from

comments to the effect that the priority should not even be included, up to very specific instructions that go beyond limiting the applicability by operation type.

V. Submittal of Additional Local Concerns

This section should be used to notify the TSSWCB of any other serious natural resource concerns that exist within the district. The statutory requirements for cost-share funds are that they must be used to cost-share soil and water land improvement measures that address water quality, soil erosion, or water conservation. Submission of local priorities does not mean a special priority or direct allocation of funds will be approved. However, each submittal will be reviewed by the TSSWCB's Statewide Resource Management Department for consideration of an external federal or state funded grant through the agency's Nonpoint Source Grant Program. Approval for a grant will depend on the severity of the natural resource concern, the presence or lack of other financial resources to address the concern, the anticipated cost of the project, local contribution of technical assistance, and its compatibility with the short and long term goals of the Texas Nonpoint Source Management Program and any applicable state or federal guidelines. Consideration is ultimately dependent upon the availability of funds, therefore external grants may not available during every program year. The TSSWCB staff will seriously consider all submittals and will directly contact the district for additional information upon receipt.

VI. Submittal of Non-Geographic Priorities

This section should be used to notify the TSSWCB of **additional priorities** for the Fiscal Year 2014 Water Quality Management Plan Program for the Area cost-share allocation **that are not based on watersheds, aquifer recharge zones, or political boundaries**. These would be any specific types of agricultural operations that the district believes should be considered priorities regardless of where they are geographically located within Area.

VII. Certification

This is the section where the authorized representative of the district, usually the Chairman unless otherwise designated, should sign the survey before it is returned to the TSSWCB for review.

AREA 4

AGRICULTURAL & SILVICULTURAL NONPOINT SOURCE WATER QUALITY

UPDATE

BASIC INFORMATION

Area 4 covers 38,517 square miles (24,650,882 square acres) and includes 51 counties and 37 individual soil and water conservation districts.

- Nacogdoches SWCD
- Davy Crockett-Trinity SWCD
- Bowie County SWCD
- Harrison County SWCD
- Lamar SWCD
- Upshur-Gregg SWCD
- Sulphur-Cypress SWCD
- Anderson-Houston SWCD
- Trinity-Neches SWCD
- Red River County SWCD
- Freestone County SWCD
- Smith County SWCD
- Cherokee County SWCD
- Bedias Creek SWCD
- Piney Woods SWCD
- Coastal SWCD
- Marion-Cass SWCD
- Trinity Bay SWCD
- Lower Trinity SWCD
- Polk-San Jacinto SWCD
- Lower Neches SWCD
- Upper Neches SWCD
- Long Leaf SWCD
- Navasota SWCD
- Jasper-Newton SWCD
- Harris County SWCD
- Delta SWCD
- Wood SWCD
- Hopkins-Rains SWCD
- Lower Sabine-Neches SWCD
- Rusk SWCD
- Panola SWCD
- Shelby SWCD
- Brazos County SWCD
- Robertson County SWCD
- Montgomery County SWCD
- Walker County SWCD

WATER QUALITY INFORMATION

There are **17 watersheds, major aquifers, or SWCDs** listed as Priority Areas for the TSSWCB's overall Nonpoint Source (NPS) Program. These include watersheds where either a Total Maximum Daily Load (TMDL), a Watershed Protection Plan (WPP), or Recreational Use Attainability Analysis (RUAA) is being developed or implemented. More information regarding the impairment is available in Section IV of the survey document. Additionally, SWCDs in the Coastal Zone are included in the entirety.

- Adams & Cow Bayous
- Attoyac Bayou
- Big Cypress Creek
- Buffalo & Whiteoak Bayous
- Caddo Lake
- Carters & Burton Creeks
- Cedar Bayou
- Cedar Creek Reservoir
- Clear Creek
- Double Bayou
- Lake Houston
- Lake O' the Pines
- Little Brazos River Tributaries
- Coastal SWCD
- Trinity Bay SWCD
- Harris County SWCD
- Lower Sabine-Neches SWCD

There are **an additional 15 watersheds** within the Area that have bodies of water **listed as impaired** by the Texas Commission on Environmental Quality as a result of **agricultural sources**. More information regarding the impairment is available in Section IV of the survey document.

- Big Sandy Creek
- Elm Creek
- Harris Creek
- Little Pine Island Bayou
- Mud Creek
- Neches River Above Lake Palestine
- Running Creek
- Sandy Creek in Jasper County
- Smith Creek
- Thompsons Creek
- Turkey Creek
- Wards Creek
- White Oak Creek 01
- White Oak Creek 04
- Wolf Creek Tyler County

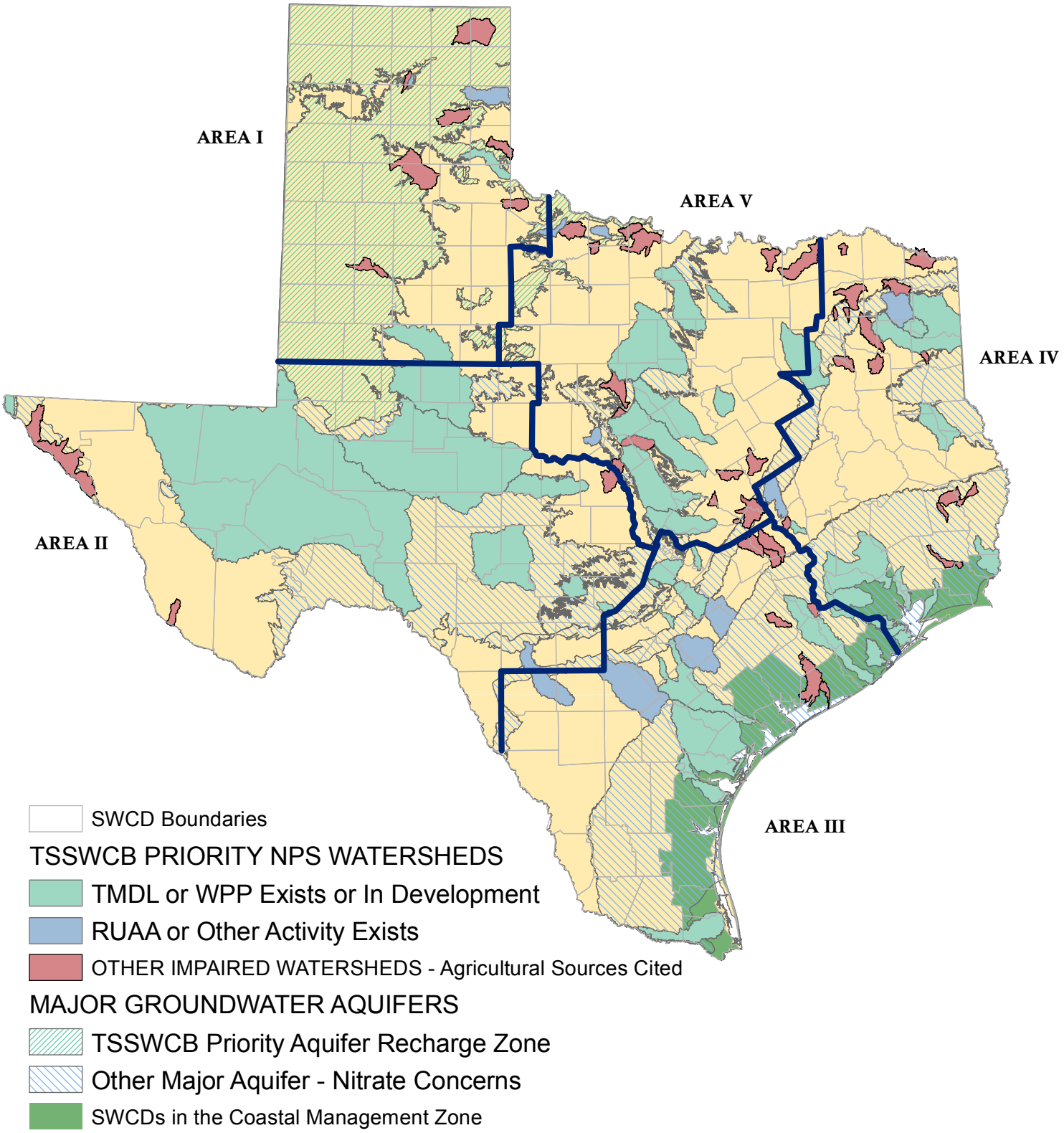
These priorities include 4 SWCDs in the Coastal Zone, 24 waterbodies impaired due to excessive bacteria, 11 impaired due to depressed dissolved oxygen, and two major aquifers listed as having nitrate concerns. Additionally, there are 6 TMDLs, 5 WPPs, and 2 RUAAs currently in progress or completed.

Harris County SWCD~Specific Information

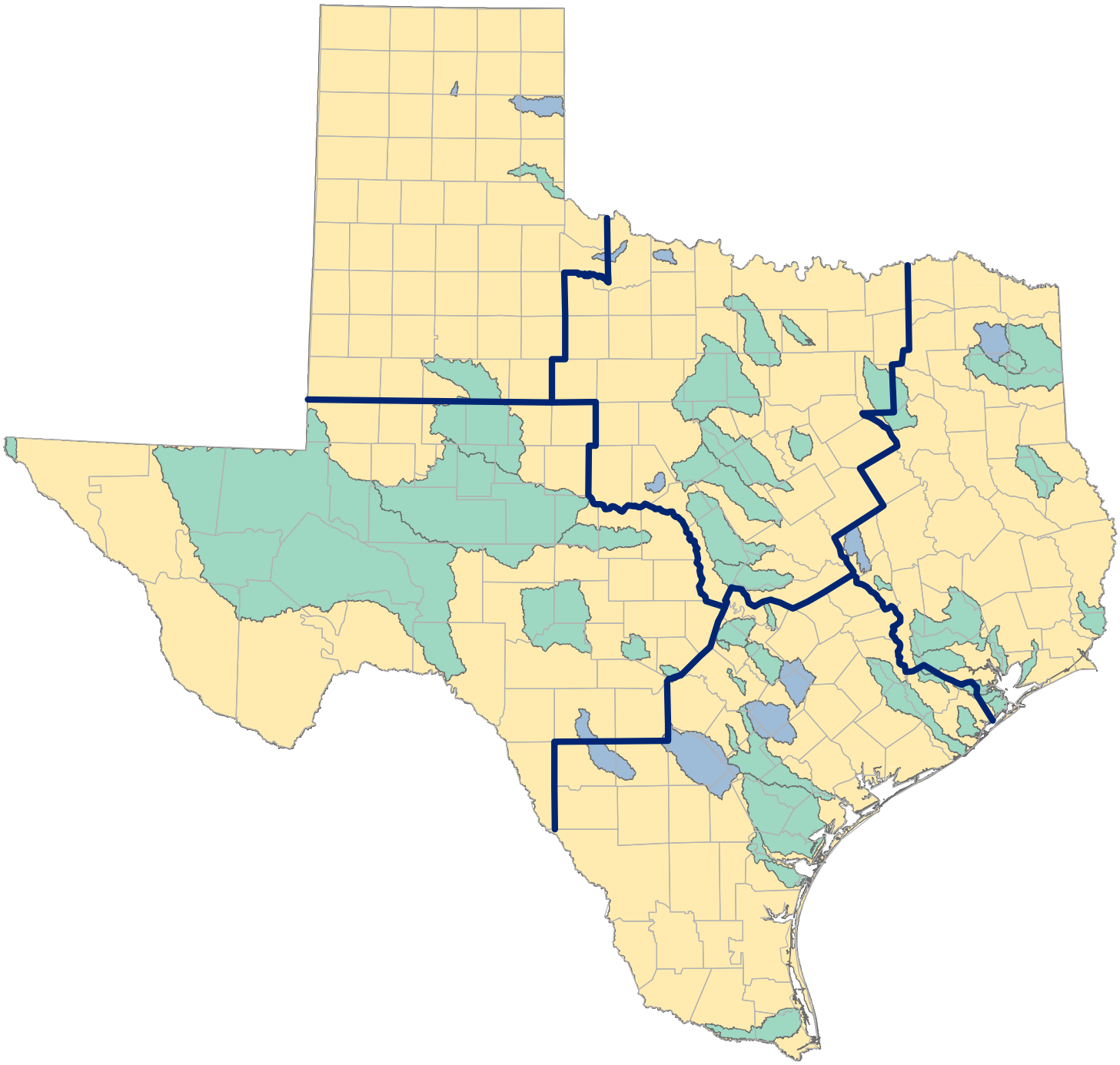
Landowners in the Harris County SWCD may qualify for the following priority areas:

- Buffalo & Whiteoak Bayous TMDL
- Cedar Bayou WPP
- Clear Creek TMDL
- Lake Houston TMDL
- Gulf Coast Aquifer
- Coastal Zone

Statewide Water Quality Overview



TSSWCB Priority Watersheds



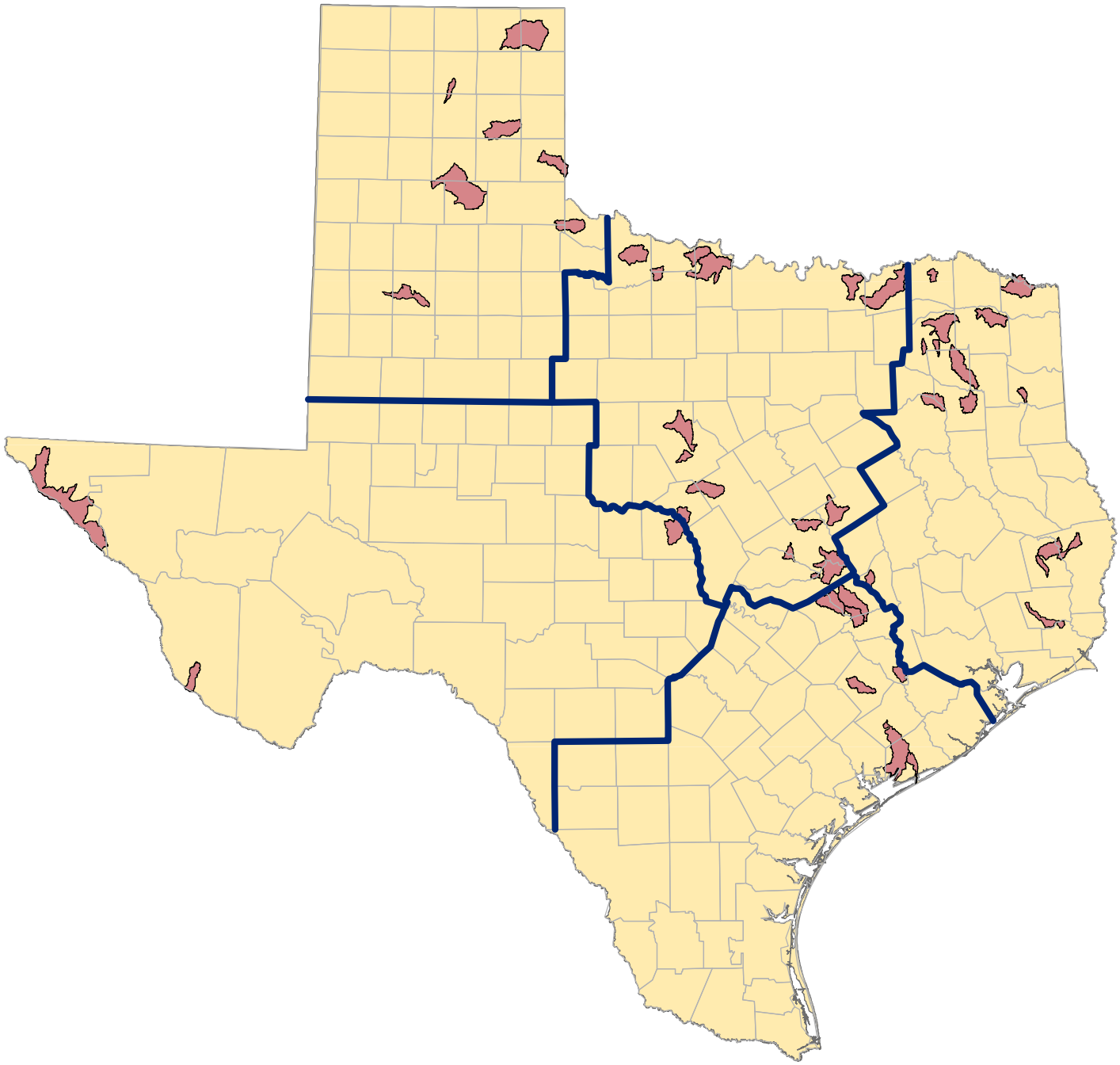
SWCD Boundaries

TSSWCB PRIORITY NPS WATERSHEDS

TMDL or WPP Exists or In Development

RUAA or Other Activity Exists

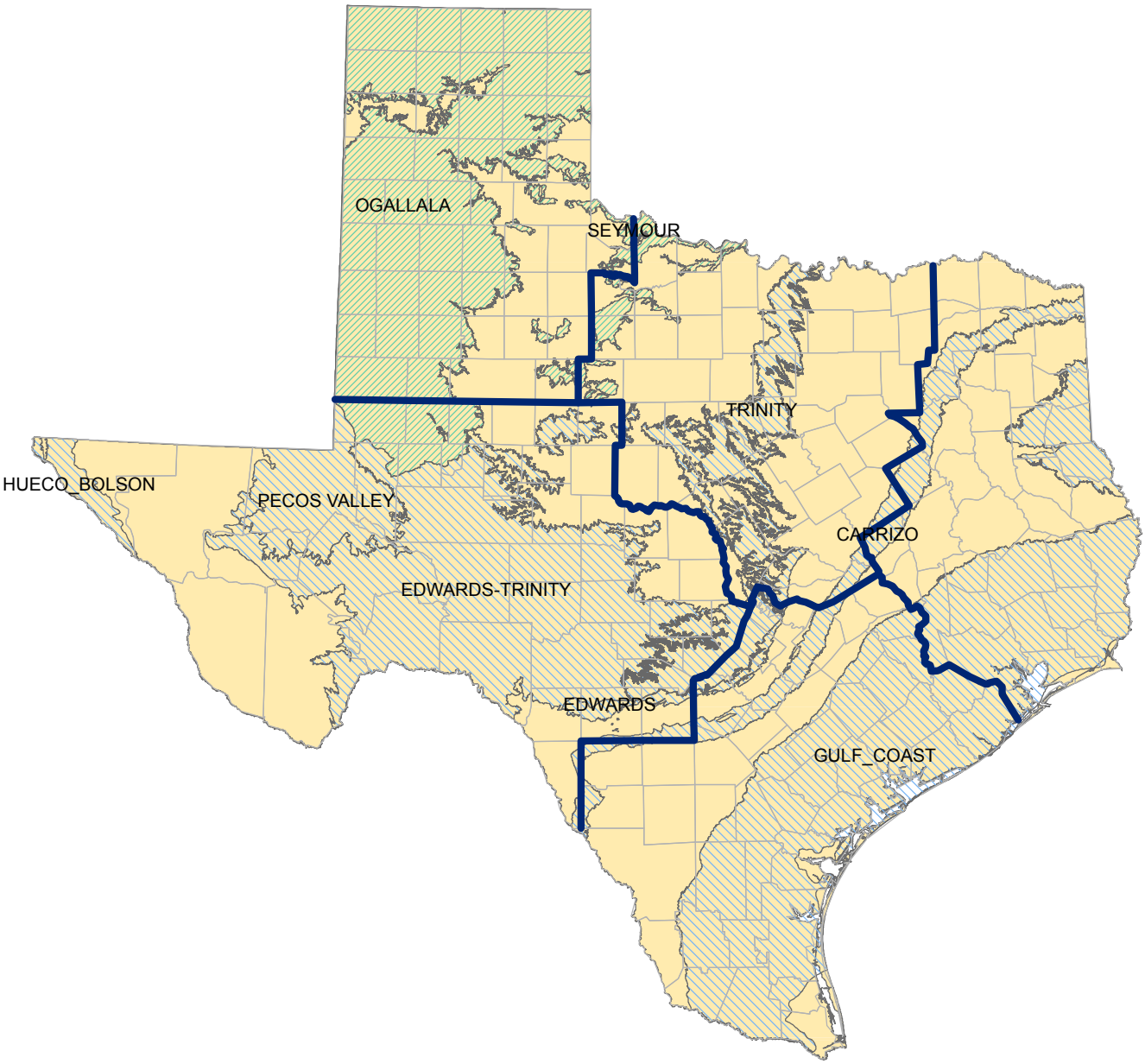
Other Impaired Watersheds Agricultural Sources



SWCD Boundaries

OTHER IMPAIRED WATERSHEDS - Agricultural Sources Cited

Major Groundwater Aquifers



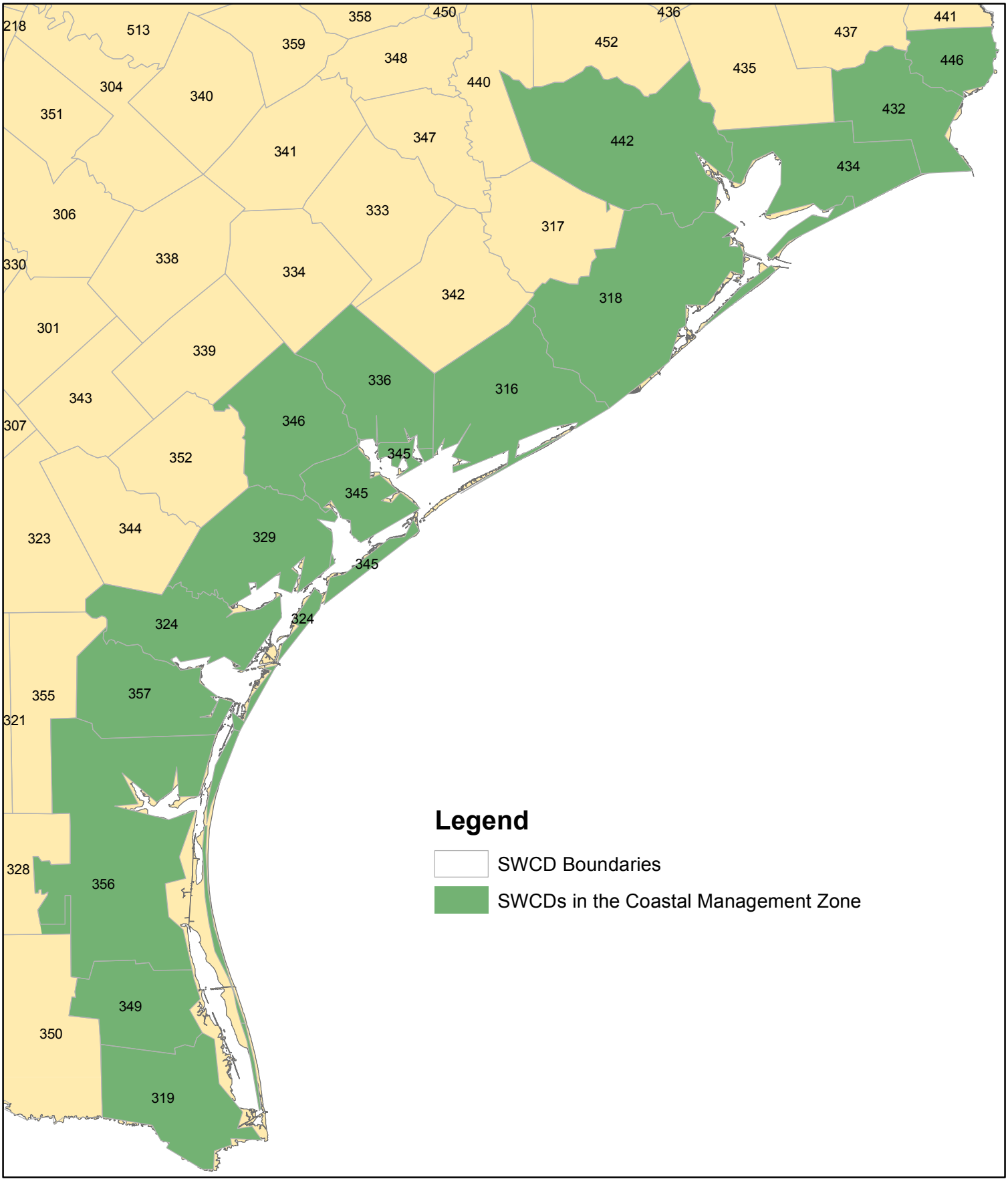
SWCD Boundaries

MAJOR GROUNDWATER AQUIFERS

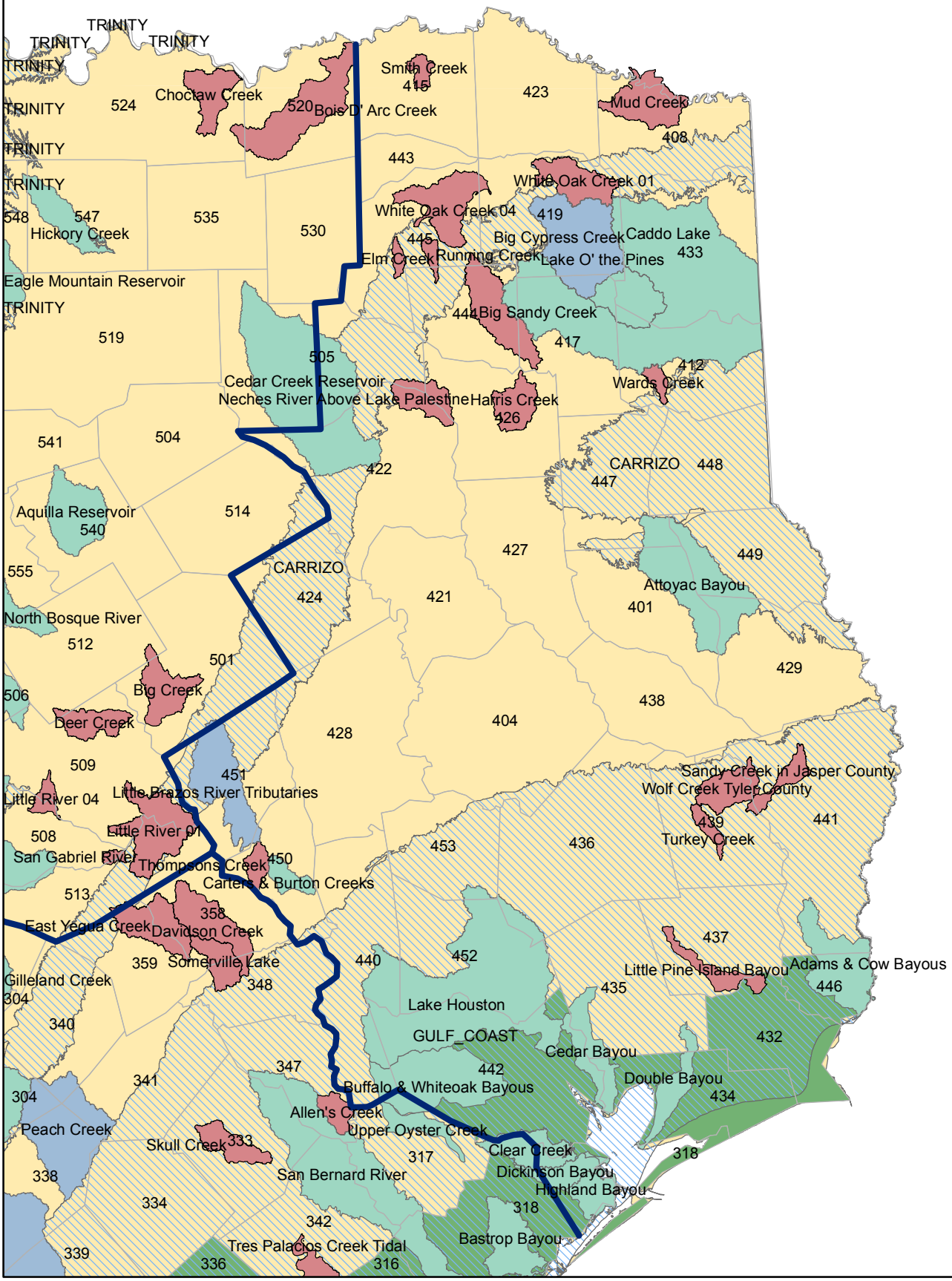
TSSWCB Priority Aquifer Recharge Zone

Other Major Aquifer - Nitrate Concerns

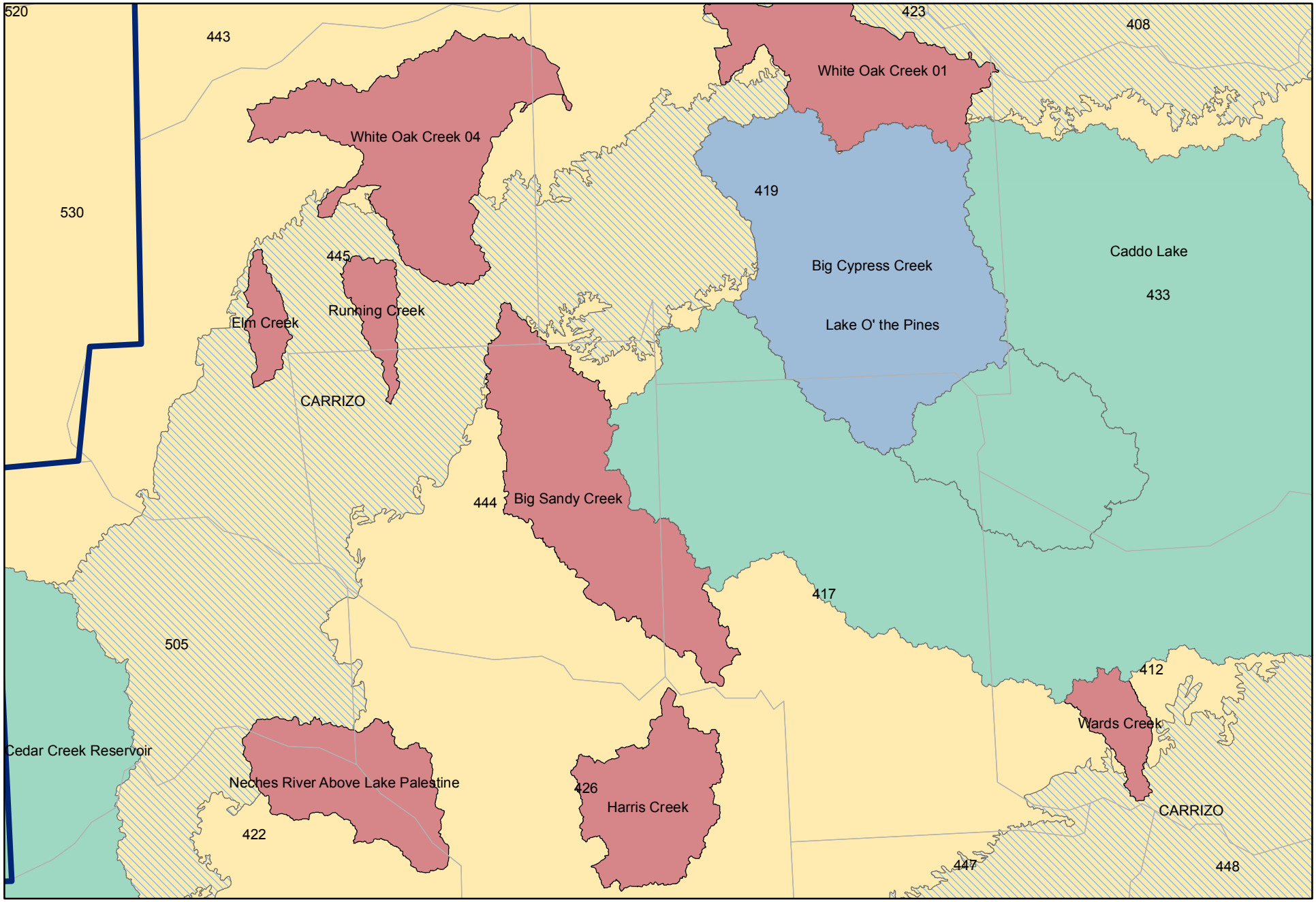
Coastal Management Zone



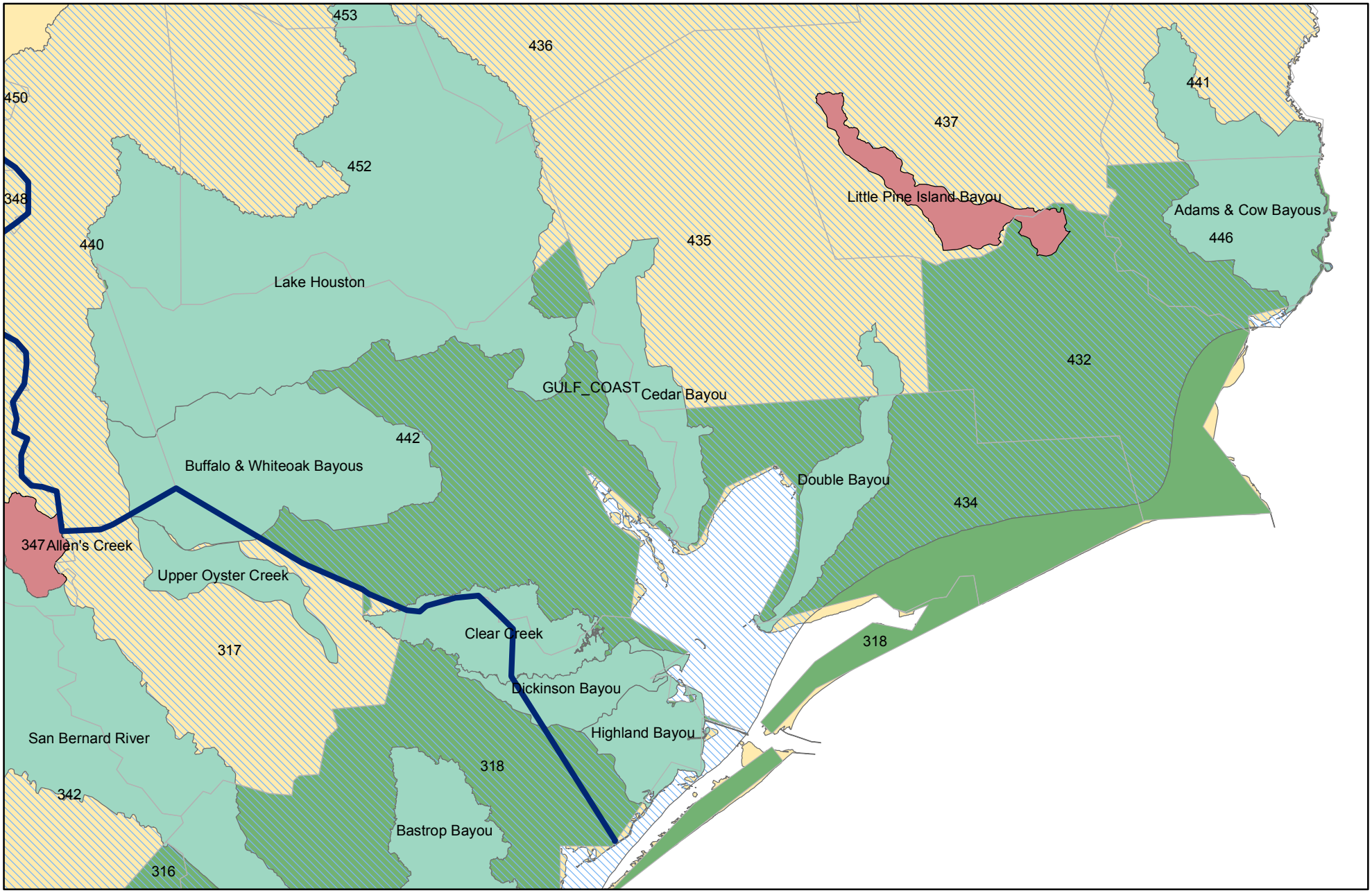
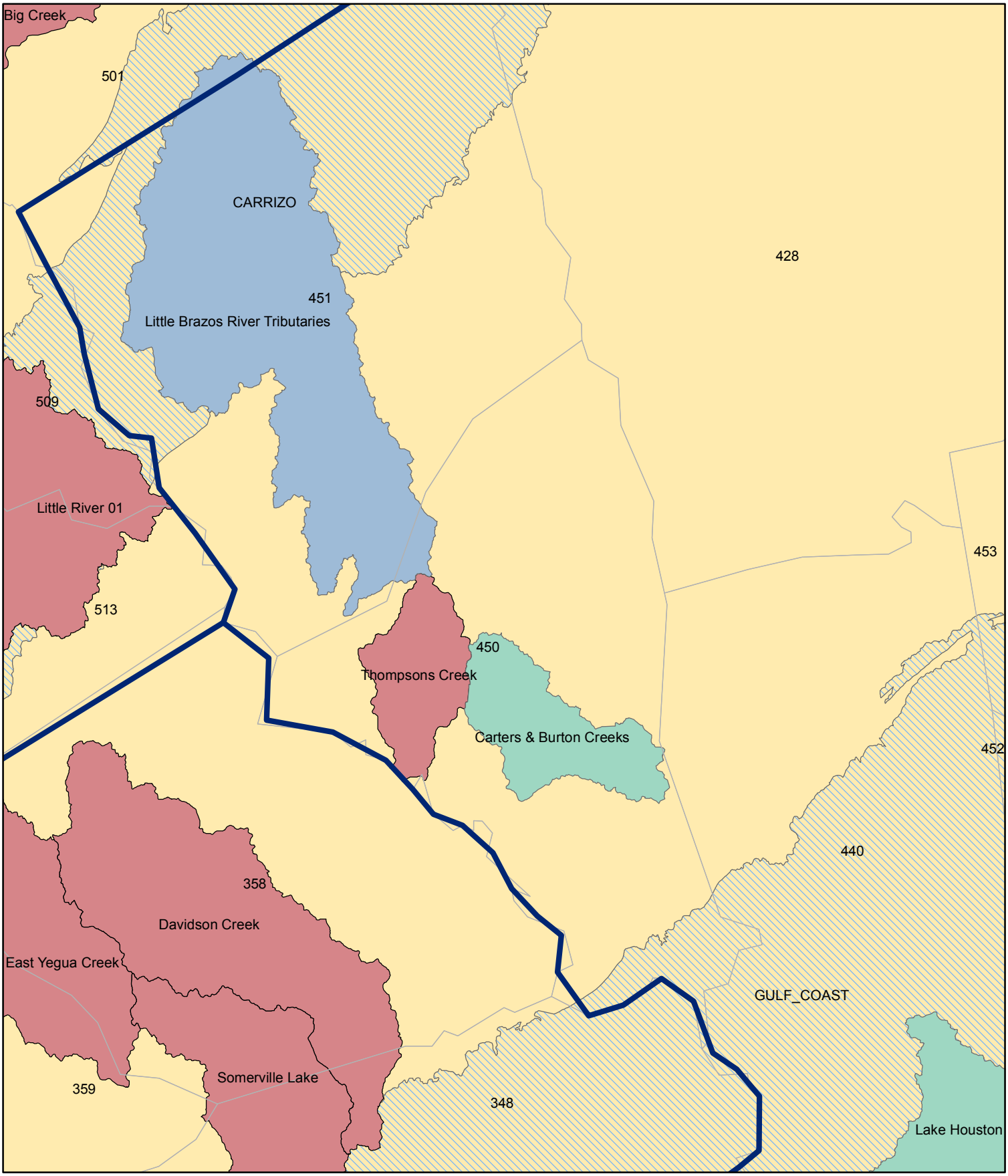
Area IV Water Quality Overview



Area IV North Detail



Area IV South Detail



Area IV Southwest Detail