

VOLUME 2
Appendix 1-A (Map 1)

REGION 5 NECHES 2023 REGIONAL FLOOD PLAN

JULY 2023

DRAFT

PREPARED FOR THE
REGION 5 NECHES FLOOD PLANNING GROUP

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LIST OF ACRONYMS AND DEFINITIONS

Acronym	Name	Definition
ASCE	American Society of Civil Engineers	Organization of professionals in civil engineering. ASCE releases state and national Report Cards for infrastructure examining current conditions and needs.
ACE	Annual Chance Exceedance	The estimated mean probability that a flood event will occur in any given year. For example, the 1% ACE has a 1 percent chance of occurring in any given year. A 1% ACE event is sometimes also referred to as a 100-year flood event while a 0.2% ACE event is sometimes referred to as a 500-year flood event.
ASDSO	Association of State Dam Safety Officials Atlas-14	National non-profit organization serving state dam safety programs and the broader dam safety community. Recently developed record of precipitation frequency estimates for the United States that is produced by the National Weather Service and the National Oceanic and Atmospheric Administration.
ARPA	American Rescue Plan Act	Act signed in 2021 that provided a substantial amount of funding to eligible state, local, territorial, and tribal communities to support their response to and recovery from the COVID-19 pandemic.
BCA	Benefit-Cost Analysis	An analysis that is used to ascertain the future risk reduction benefits of a project and compares those benefits to the project's costs. Yields the benefit-cost ratio, a value that represents the project's benefits over the project's costs.
BFE	Base Flood Elevation	Regulatory term meaning the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.
BLE	Base Level Engineering	BLE is a high-level process using best available data and automated techniques to produce approximate, regulatory-quality flood hazard extents.
BCR	Benefit Cost Ratio	Numerical expression of the "cost-effectiveness" of a project, calculated by a project's total benefits divided by its total costs.
BRIC	Building Resilient Infrastructure and Communities	Federal funding program run by FEMA. This program supports communities as they undertake hazard mitigation projects to reduce risk from natural hazards.

CAP	Continuing Authorities Program	Group of nine legislative authorities under which USACE can plan, design, and implement certain types of water resources projects without specific congressional authorization. The program is intended to plan and implement projects of limited size, cost, scope, and complexity.
CDBG-MIT	Community Development Block Grant - Mitigation	Funding program that provides funds for grantees to use in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.
CDBG-DR	Community Development Block Grant - Disaster Recovery	Funding program that provides funds for grantees to use in areas impacted by recent disasters to aid in recovery efforts; this assistance is not permanently authorized.
CDC	Centers for Disease Control and Prevention	Federal agency focused on protecting public health including emergency preparedness.
CDR	Community Development and Revitalization	Division of Texas GLO that is responsible for administering funding from CDBG-MIT and CDBG-DR following presidentially declared major disasters.
CFR	Code of Federal Regulations	Codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.
COG	Council of Government	Voluntary associations often comprised of various local governments with the intention of fostering coordination and cooperation between governments on issue of mutual concern that cross jurisdictional lines.
CRS	Community Rating System	FEMA program to provide incentives for those communities that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.
CSRMP	Sabine Pass to Galveston Bay Coastal Storm Risk Management Program	A comprehensive flood infrastructure project along the Texas coastline with three separate components near Freeport, near Port Arthur, and in Orange County. Region 5 includes part of the Orange County project and the entirety of the Port Arthur project.
CTP	Cooperating Technical Partners	Program intended to create partnerships between FEMA and NFIP-participating communities with the intent of incorporating in the future additional regional/state agencies, tribes, territories, and universities that can become more active participants in the FEMA flood hazard mapping program.

CWSRF	Clean Water State Revolving Fund	Federal-state partnership that provides communities low-cost financing for a wide range of water quality infrastructure projects.
-	Critical Facilities	A critical facility provides services and functions essential to a community, especially during and after a disaster. Typical critical facilities include hospitals, fire stations, police stations, storage of critical records, and similar facilities.
-	Dam Safety Program	The Dam Safety Program monitors and regulates both private and public dams in Texas. The program periodically inspects dams that pose a high or significant hazard.
DCM	Drainage Criteria Manual	A DCM establish the drainage design standards and methods for a community.
DD	Drainage Districts	Special purpose districts charged with maintaining existing drainage and flood control infrastructure to ensure they maintain their level of service.
DETCOG	Deep East Texas Council of Governments	Regional council of governments founded to facilitate planning, eliminate duplication, and promote economy and efficiency in the coordinated development of the region. Members include representatives from Angelina, Houston, Nacogdoches, Newton, Polk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, and Tyler Counties.
Dfund	Texas Water Development Fund	State loan program that provides financing for various types of infrastructure projects. This program enables the TWDB to fund projects with multiple purposes in one loan.
EAP	Emergency Action Plan	An EAP is a written document that identifies potential emergency conditions and specifies pre-planned actions to be followed to minimize property damage, potential loss of infrastructure, and potential loss of life.
EOC	Emergency Operation Centers	Centralized location of emergency response and recovery operations during and in the immediate aftermath of incidents.
EOP	Emergency Operations Plan	Plan used by entities to detail courses of action during disasters.
EPA	Environmental Protection Agency	Federal Agency that monitors environmental conditions including a number of topics related to water.
EWP	Emergency Watershed Protection	Federal emergency recovery program that offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods and other natural disasters that could adversely impact a watershed.

FEMA	Federal Emergency Management Agency	Federal Agency responsible for emergency management activities before, during, and after disasters. FEMA manages several flood related grant programs and is responsible for the NFIP and maintains FIRM maps.
FAFDS	First American Flood Data Services or Fathom	Flood risk data generated by a large, state-wide model and is based entirely on the expected rainfall in a given area. It is considered the least-accurate of the floodplains available to the Regional Flood Planning Group.
FCD	Flood Control District	Special districts that have authority and provide control over rivers, streams, tributaries, and related structures within their jurisdictions to protect people and property from negative flood impact.
FDPO	Flood Damage Prevention Ordinance	Ordinance enacted by local government entities with the purpose of minimizing public and private losses due to flood conditions; often involve floodplain protection and increased enforcement of new construction so as to not exacerbate flood conditions.
-	Flood Exposure	For the purposes of flood planning, flood exposure analyses will identify who and what might be harmed by flood including each structure located in flood hazard area.
-	Flood Hazard	For the purposes of flood planning, flood hazard analyses will determine the location, extent, magnitude, and frequency of flooding.
FHBM	Flood Hazard Boundary Maps	Maps that depict areas of flood hazard; used by communities that participate in the NFIP.
FIF	Flood Infrastructure Fund	Financial assistance program in the form of loans and grants for flood control, flood mitigation, and drainage projects and is administered by the TWDB.
FIRM	Flood Insurance Rate Map	Official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHAs), the BFEs, and the flood zones applicable to the community.
FIS	Flood Insurance Study	A compilation of flood risk data within a community. When a flood study is completed for the NFIP, the information and maps are assembled into an FIS.
FIUP	Flood Intended Use Plan	A document adopted by TWDB that identifies the uses of funds for flood projects.
FMA	Flood Mitigation Assistance Grant Program	Competitive grant program that provides funding to states, local communities, and federally recognized tribes and territories. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the NFIP.

FME	Flood Management Evaluation	A FME is a proposed flood study of a specific, flood-prone area that is needed in order to assess flood risk and/or determine whether there are potentially feasible FMSs or FMPs.
FMP	Flood Management Project	A FMP is a proposed project, either structural or non-structural, that has non-zero capital costs or other non-recurring cost and when implemented will reduce flood risk, mitigate flood hazards to life or property.
FMS	Flood Management Strategy	A FMS is a proposed plan to reduce flood risk or mitigate flood hazards to life or property. FMSs include any proposed action that the RFPG would like to identify, evaluate, and recommend that does not qualify as either a FME or FMP.
FPR	Flood Planning Region	
-	Flood Readiness and Resilience	Non-structural projects/programs aimed at improving flood preparedness and response to flood events including: plan activation, chain of command, emergency functions, evacuation procedures, flood early warning systems, and/or resilience measures to be implemented to reduce flood damage.
-	Flood Risk	For the purposes of regional flood planning, flood risk analyses will comprise a three-step process of flood hazard, flood exposure, and vulnerability analyses
FRMP	USACE Flood Risk Management Program	Program established by USACE to identify and assess flood hazards posed by all flood risk reduction infrastructures.
-	Flood Vulnerability	For the purposes of flood planning, vulnerability analyses will identify vulnerabilities of communities and critical facilities located within the region.
-	Freeboard	An additional amount of height above the BFE used as a factor of safety in determining a structures elevation.
GCPD	Gulf Coast Protection District	The non-federal sponsor of the Orange County component of the Sabine Pass to Galveston Bay CSR program; includes Harris, Chambers, Galveston, Jefferson, and Orange counties.
GIS	Graphic Information System	GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there).
GLO	General Land Office	State agency in Texas responsible for managing lands and mineral rights properties that are owned by the state.

HEC	Hydrologic Engineering Center	Developers of various modeling software for USACE that are often utilized for conducting hydrologic and hydraulic analysis.
HHPD	High Hazard Potential Dam Grant Program	Program that provides grants for technical, planning, design, and construction assistance regarding rehabilitation of eligible high hazard potential dams.
HGAC	Houston-Galveston Area Council	Regional organization through which local governments consider issues and cooperate in solving area wide problems. Local governments can initiate efforts in anticipating and preventing problems through this organization.
HMAP	Hazard Mitigation Action Plan	HMAP reduces loss of life and property by minimizing the impact of disasters. Communities identify natural disaster risks and vulnerabilities in the area.
HMGP	Hazard Mitigation Grant Program	Program established by FEMA to provide funding to state, local, tribal, and territorial governments to spur the development of hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities.
H&H	Hydrology and Hydraulic(s)	
HUC	Hydrologic Unit Code	A hierarchical sequence of numbers that defines a hydrologic unit. The sequence is divided into different classifications with two digits used to represent major geographic areas in the United States and twelve digits used to describe different subwatersheds included in a select geographic area.
HUD	Department of Housing and Urban Development	Executive department of the federal government that administers urban housing and urban development laws.
HWM	High Water Mark	The highest level a body of water reaches at a specific location.
ICS	Incident Command System	A standardized on-scene emergency management hierarchical construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.
IJA	Infrastructure Investment and Jobs Act	Act passed in 2021 intended to provide funding to modernize much of the existing infrastructure in the United States and address deficient water infrastructure and local water quality challenges.

LiDAR	Laser Imaging, Detection, and Ranging	Method for measuring distances and ranges utilizing lasers; often used in surveying to make three-dimensional representations of an area to aid in mapping.
LNVA	Lower Neches Valley Authority	River district charged with the oversight, use, and conservation of the water within the lower Neches River valley. LNVA is the planning group sponsor for Region 5.
LOS	Level of Service of Asset	A measure of the level of protection a flood infrastructure asset provides in terms of annual exceedance probability.
LWC	Low Water Crossing	A roadway creek crossing that is subject to frequent inundation during storm events or subject to inundation during a 50% ACE (2-year) storm event. During the first planning cycle, the RFPGs have the flexibility to utilize the community's discretion to identify a roadway creek crossing as LWC.
MSC	Map Service Center	Online public source for flood hazard information and maps produced by FEMA in support of the NFIP.
MS4	Municipal Separate Storm Sewer System	A conveyance or system of conveyances that is owned by a public entity that discharges to waters of the U.S., designed to collect or convey stormwater, is not a combined sewer, and not part of a sewage treatment plant.
MUD	Municipal Utility District	Districts that provide water, wastewater (sewage), drainage, and other services within the district's boundaries to include water conservation, irrigation, firefighting, solid waste collection and disposal, and recreational facilities.
NFHL	National Flood Hazard Layer	NFHL is a geospatial database that contains current effective flood hazard data. FEMA provides the flood hazard data to support the National Flood Insurance Program.
NFIP	National Flood Insurance Program	NFIP is managed by FEMA and provides insurance to help reduce the socio-economic impact of floods.
NHD	National Hydrologic Dataset	Comprehensive hydrography dataset that represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, dams, and stream gages.
NIMS	National Incident Management System	System that guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from incidents.

NOAA	National Oceanic and Atmospheric Administration	Federal Agency that monitors and forecasts weather and climate conditions.
NRC	National Research Council	Operating arm of the United States National Academies of Sciences, Engineering, and Medicine; produces reports that advance development in science, engineering, and medicine.
NRCS	National Resource Conservation Service	An agency under the United States Department of Agriculture that collaborates with farmers, ranchers, communities, and other individuals and groups to protect natural resources on private lands. Formerly known as the Soil Conservation Service (SCS).
NWS	National Weather Service	Federal agency responsible for providing weather forecasts, warnings of hazardous weather, and other weather-related products to organizations and the public for the purposes of protection, safety, and general information.
OEM	Office of Emergency Management	An agency often attached to a governing entity that is responsible for planning for and coordinating response to disasters that negatively impact their area.
O&M	Operations and Maintenance	
QAQC	Quality Assurance and Quality Control	
PA	Public Assistance	Program administered by FEMA that provides supplemental grants to state, tribal, territorial, and local governments so communities can swiftly respond to and recover from major disasters or emergencies.
PED	Pre-construction Engineering and Design	Phase of a project where the detailed engineering, technical studies, and design behind a project is completed to prepare for construction.
RAS	River Analysis System	Modeling software created by HEC that is used extensively for hydraulic analysis.
RFC	River Forecast Center	Centers operated by NWS that prepare daily river forecasts for the protection of lives and property.
RFP	Regional Flood Plan	
RFPG	Regional Flood Planning Group	The generic term for the planning groups that oversee the regional flood plan development in each region in the State of Texas.
Risk MAP	Risk Mapping, Assessment, and Planning Program	Program administered by FEMA that involves coordination with federal, state, tribal, and local partners across the nation to identify flood risk and promote informed planning and development practices to reduce that risk.

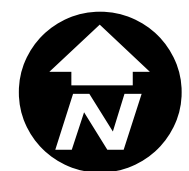
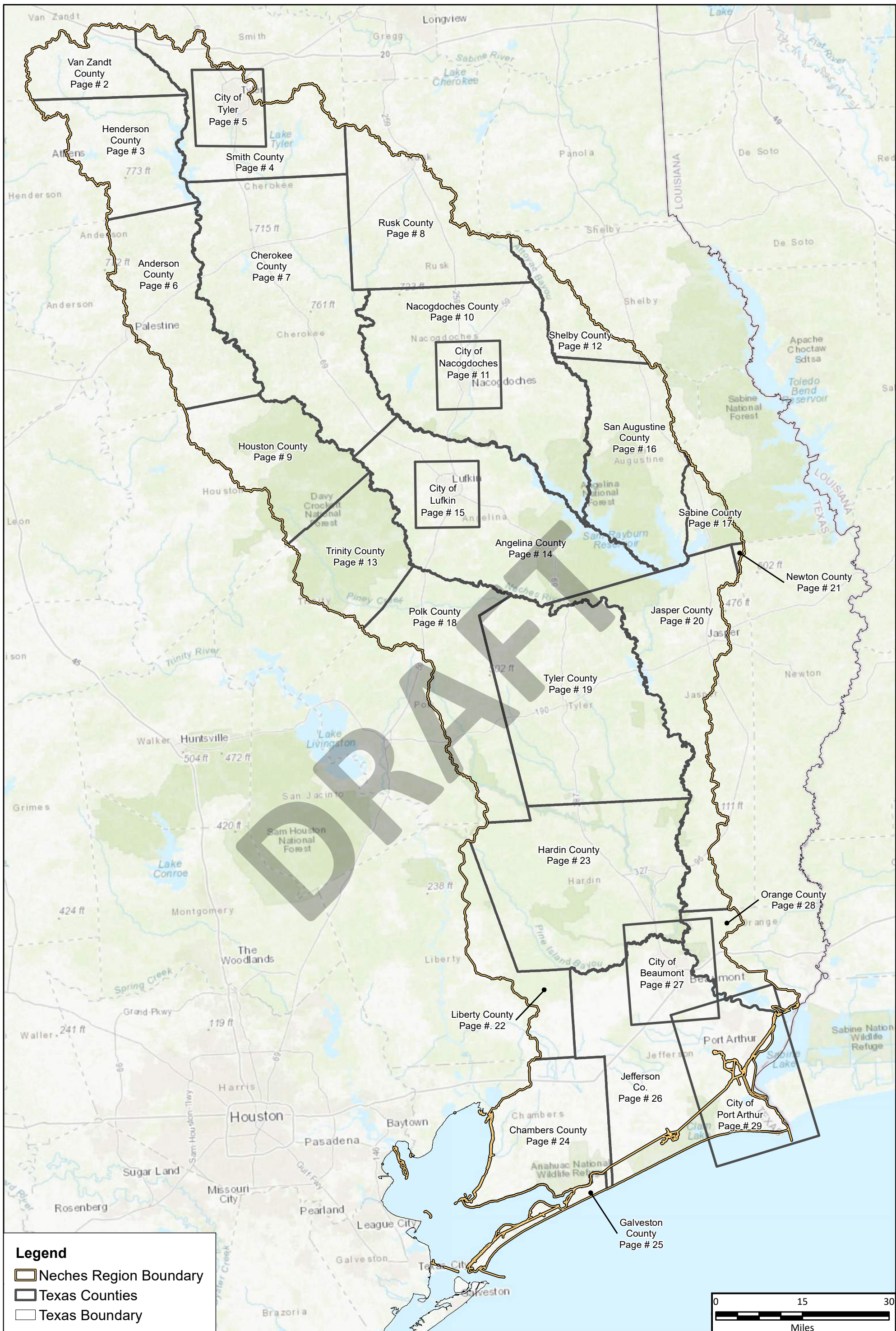
RSLC	Relative Sea Level Change	Change in sea level that is observed with respect to the land surface at a particular location.
SB	Senate Bill	
SETRPC	South East Texas Regional Planning Commission	Voluntary association of local governments in Hardin, Jasper, Jefferson, and Orange Counties; utilizes a 9-1-1 Emergency Network that addresses calls from residents within all four counties.
SE Texas R.A.I.N.	Southeast Texas Regional Alerting & Information Network	Web-based public informational resource which compiles and presents information necessary to make important decisions during threatening weather conditions; covers the southern portion of the Neches and Sabine watersheds.
STAN	Southeast Texas Alerting Network	Network used by local entities to send emergency and outreach messages to the public; serves residents in Jefferson, Orange, Hardin, and Jasper Counties.
STORM	Safeguarding Tomorrow through Ongoing Risk Mitigation	An Act signed into law on Jan 1, 2021 that authorizes FEMA to provide capitalization grants to states or eligible tribal governments to establish revolving loan funds to provide hazard mitigation assistance to local governments to reduce risks to disasters and natural hazards.
SLFRF	Coronavirus State and Local Fiscal Recovery Funds	Part of the American Rescue Plan, allocated \$350 billion to state, local, and tribal governments to support their response to and recovery from the COVID-19 pandemic. Can be used to invest in water, sewer, and broadband infrastructure.
SLR	Sea Level Rise	
SFHA	Special Flood Hazard Area	Regulatory term for an area having special flood, mudflow, or flood-related erosion hazards, and shown on an FHBM or FIRM.
SUD	Special Utility District	Districts created under Article XVI, Section 59 of the Texas Constitution that can provide water, wastewater, and firefighting services but cannot levy taxes.
SVI	Social Vulnerability Index	SVI ranks each Census tract on 15 social factors that influence a community’s ability to prepare for, respond to, and recover from a disaster. High SVI scores indicate a higher degree of vulnerability for a community.
SWCD	Soil and Water Conservation District	Districts that work with public and private organizations and agencies to mitigate soil and water erosion and enhance water quality and quantity in the state.
SWP	State Water Plan	Plan developed by TWDB that addresses the needs of all water user groups in the state during a repeat of the drought of record that the state suffered in the 1950s.

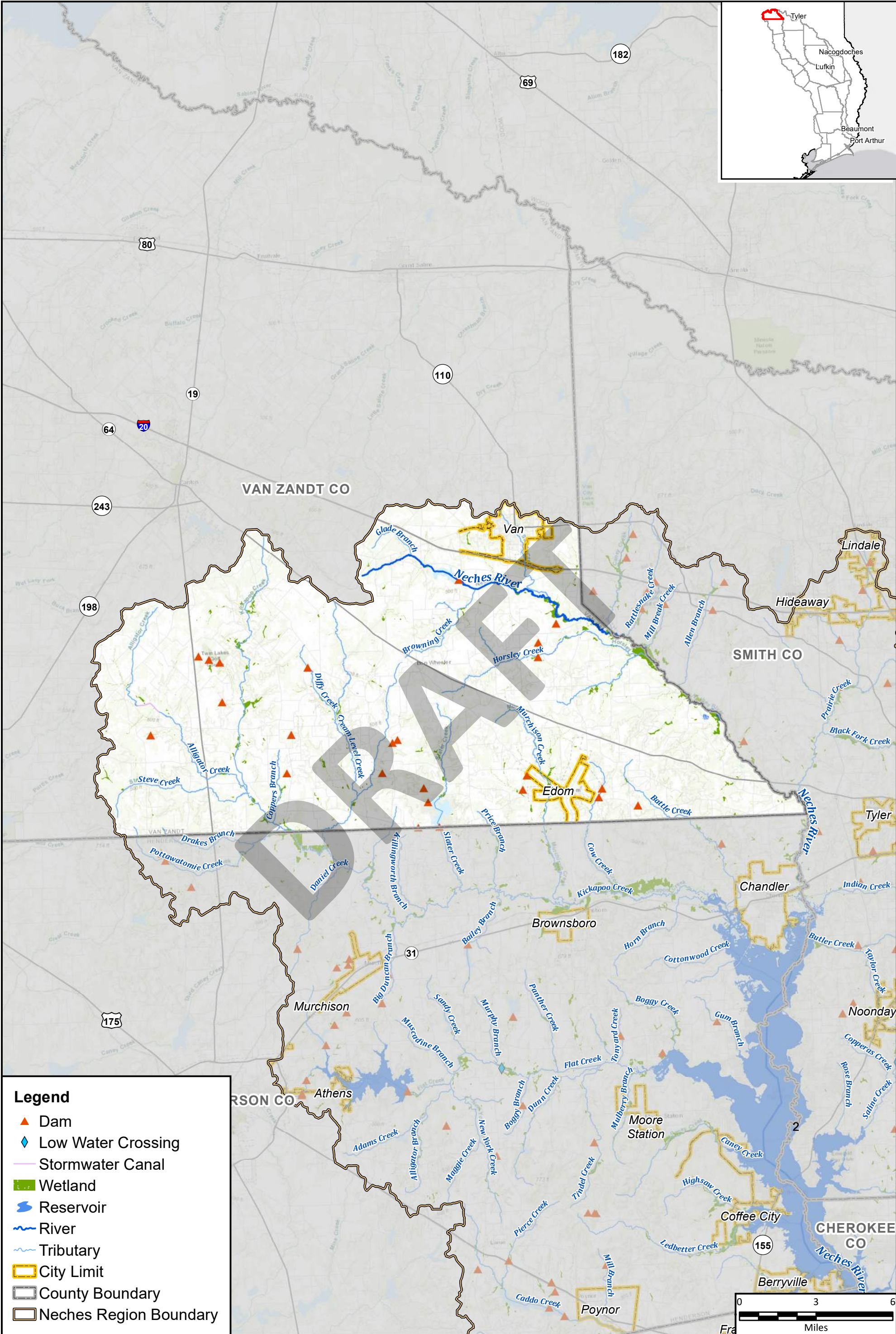
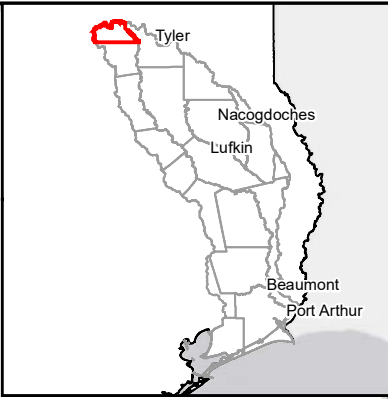
TAC	Texas Administrative Code	The development of the regional flood plan must follow specific criteria as outlined in the Texas Administrative Code (TAC). The flood plan requirements may be found at 31TAC, Chapter 361, Subchapter C, Regional Flood Plan Requirements and 31 TAC, Chapter 362, State Flood Planning Guideline Rules, Subchapter A, State Flood Plan Development. These rules contain procedures and guidelines for the development of the regional flood plan.
TC	Technical Consultant	
TCEQ	Texas Commission on Environmental Quality	Environmental agency for the state of Texas responsible for maintaining water quality and availability and the Texas Dam Safety Program.
TDA	Texas Department of Agriculture	State agency responsible for matters relating to agriculture, rural community affairs, and other related matters.
TDEM	Texas Division of Emergency Management	Division of TxDPS charged with coordinating state and local responses to natural disasters and other emergencies in Texas.
TFMA	Texas Floodplain Management Association	An organization of professionals involved in floodplain management, flood hazard mitigation, the NFIP, flood preparedness, warning and disaster recovery.
TNRIS	Texas Natural Resources Information System	TNRIS is a division of the TWDB that maintains historic and current geospatial data products.
TPDES	Texas Pollutant Discharge Elimination System	Regulatory program to control discharges of pollutants to surface waters; the statewide program is administered by TCEQ.
TP-40	Technical Paper Number 40	Technical document published in 1961 historically used as the rainfall frequency atlas of the United States.
TSSWCB	Texas State Soil & Water Conservation Board	State agency that administers Texas's soil and water conservation laws and coordinates conservation and nonpoint source water pollution abatement programs throughout the state.
TWDB	Texas Water Development Board	Texas Agency with oversight of regional flood plan development.
TXARNG	Texas Army National Guard	Component of the United States Army; often conduct duties relating to disaster relief and emergency preparedness.
TxDOT	Texas Department of Transportation	State agency in Texas charged with providing construction oversight and maintenance of road infrastructure within the state.
TxDPS	Texas Department of Public Safety	State agency responsible for statewide law enforcement and driver license administration.

USACE	US Army Corps of Engineers	Federal agency responsible with providing oversight for several water resource projects in the region to include administering operations at Sam Rayburn Reservoir and managing coastal flood infrastructure projects.
USDA	United States Department of Agriculture	Federal department charged with executing laws on food, agriculture, natural resources, and other related issues. Provides oversight for the Risk Management Agency, which supervises the Federal Crop Insurance Corporation.
USFS	United States Forest Service	Agency of the USDA that oversees the nation's national forests and grasslands.
USGS	United States Geological Survey	Scientific agency of the federal government that studies the landscape of the United States, its natural resources, and the natural hazards that threaten it.
WCID	Water Control and Improvement District	Districts that have authority to supply and store water for domestic, commercial, and industrial use. Some districts may operate sanitary wastewater systems and provide irrigation, drainage, and water-quality services.
WRDA	Water Resources Development Act	Legislation passed typically in two-year intervals to authorize USACE activities for flood control, navigation, and ecosystem restoration.
WSEL	Water Surface Elevation	
WUG	Water User Group	Accounting unit utilized by TWDB for Regional Water Planning processes; often defined as entities serving more than 100 acre-ft per year (ac-ft/yr) for municipal use.

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**APPENDIX 1-A
SUPPLEMENTARY MAPS FOR CHAPTER 1**



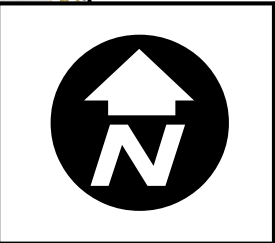


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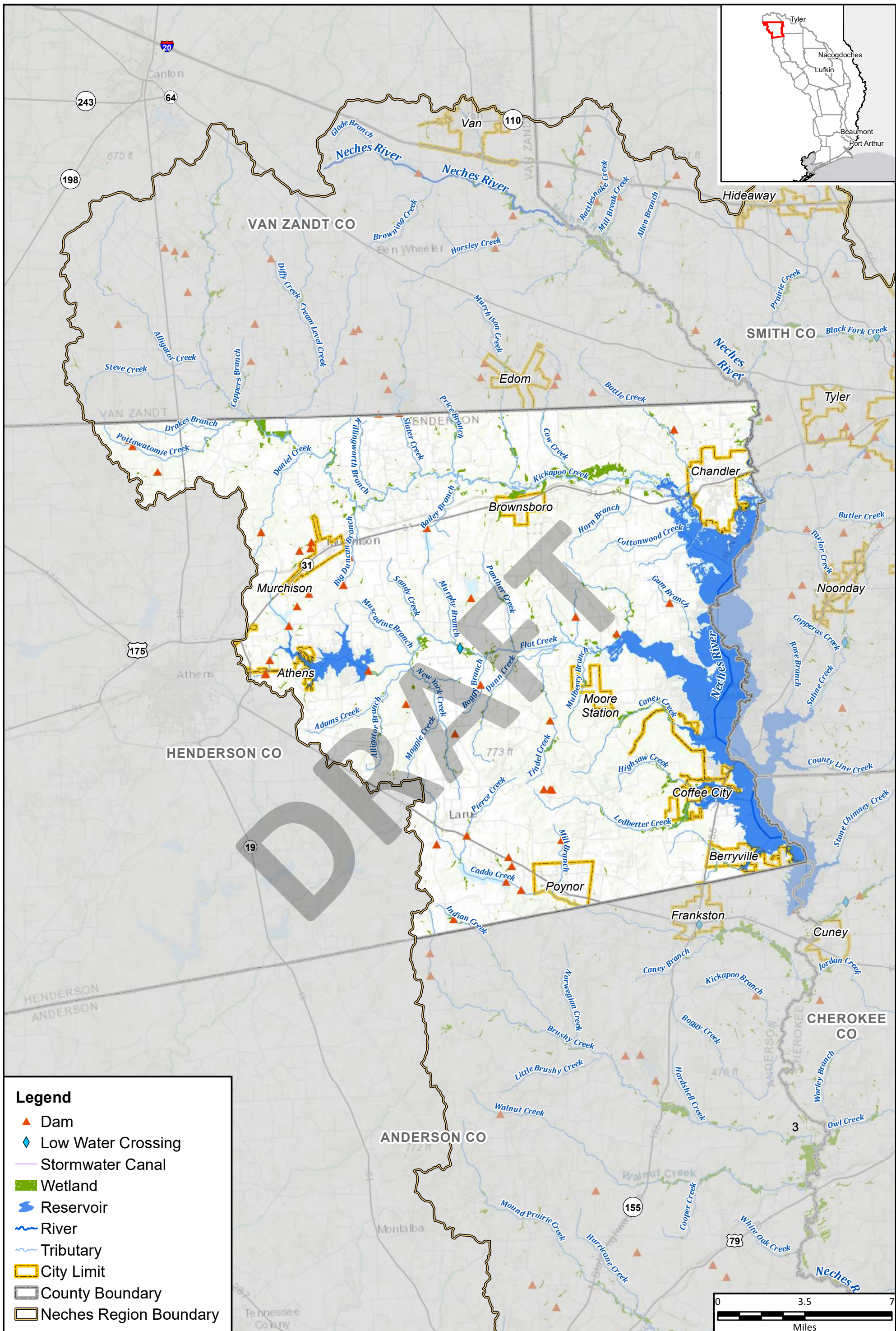
- ▲ Dam
- ◆ Low Water Crossing
- Stormwater Canal
- Wetland
- Reservoir
- River
- Tributary
- City Limit
- County Boundary
- Neches Region Boundary

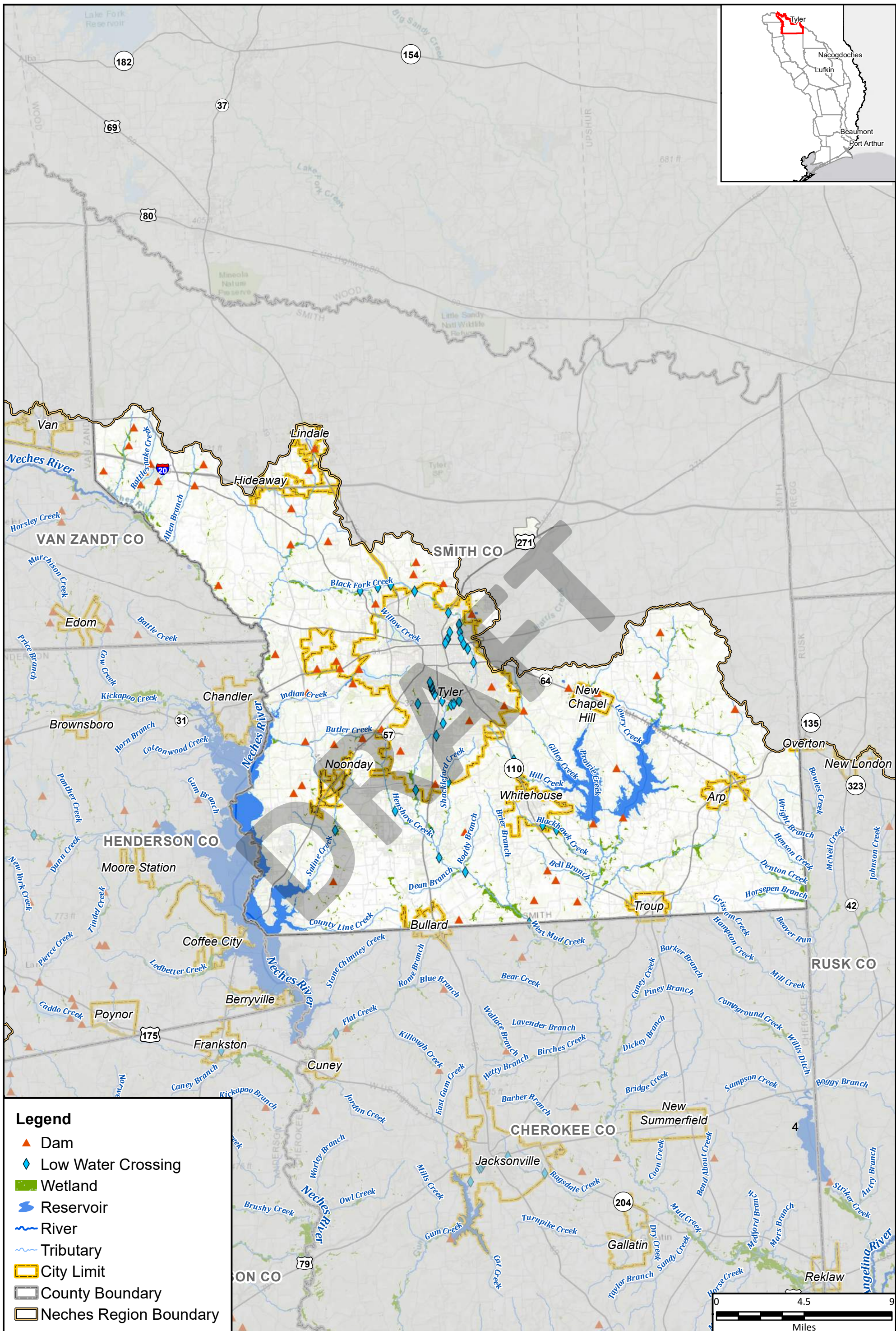


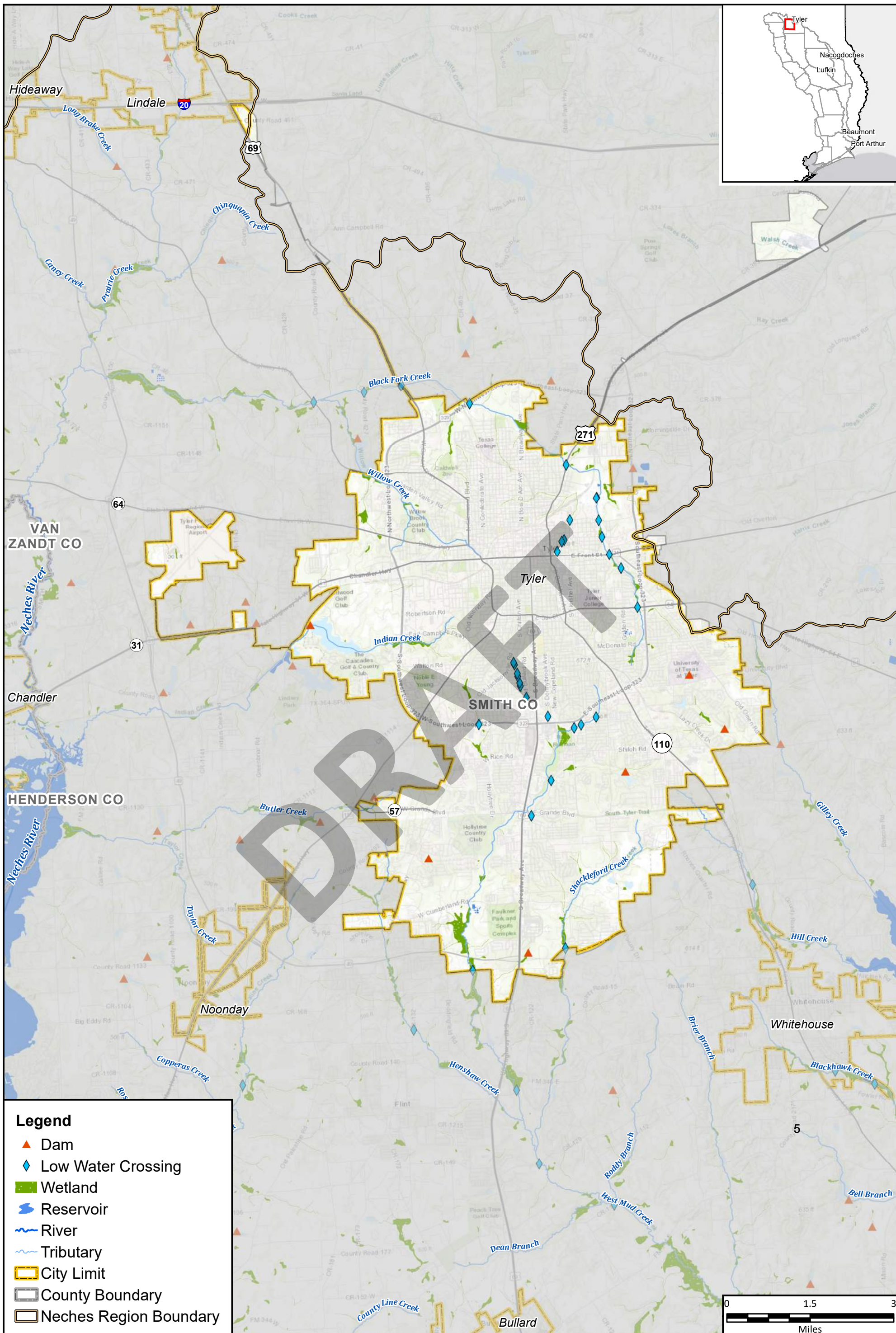
Region 5: Neches Regional Flood Plan
 Van Zandt County
Existing Flood Infrastructure

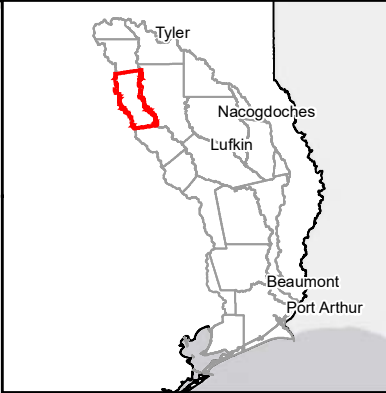
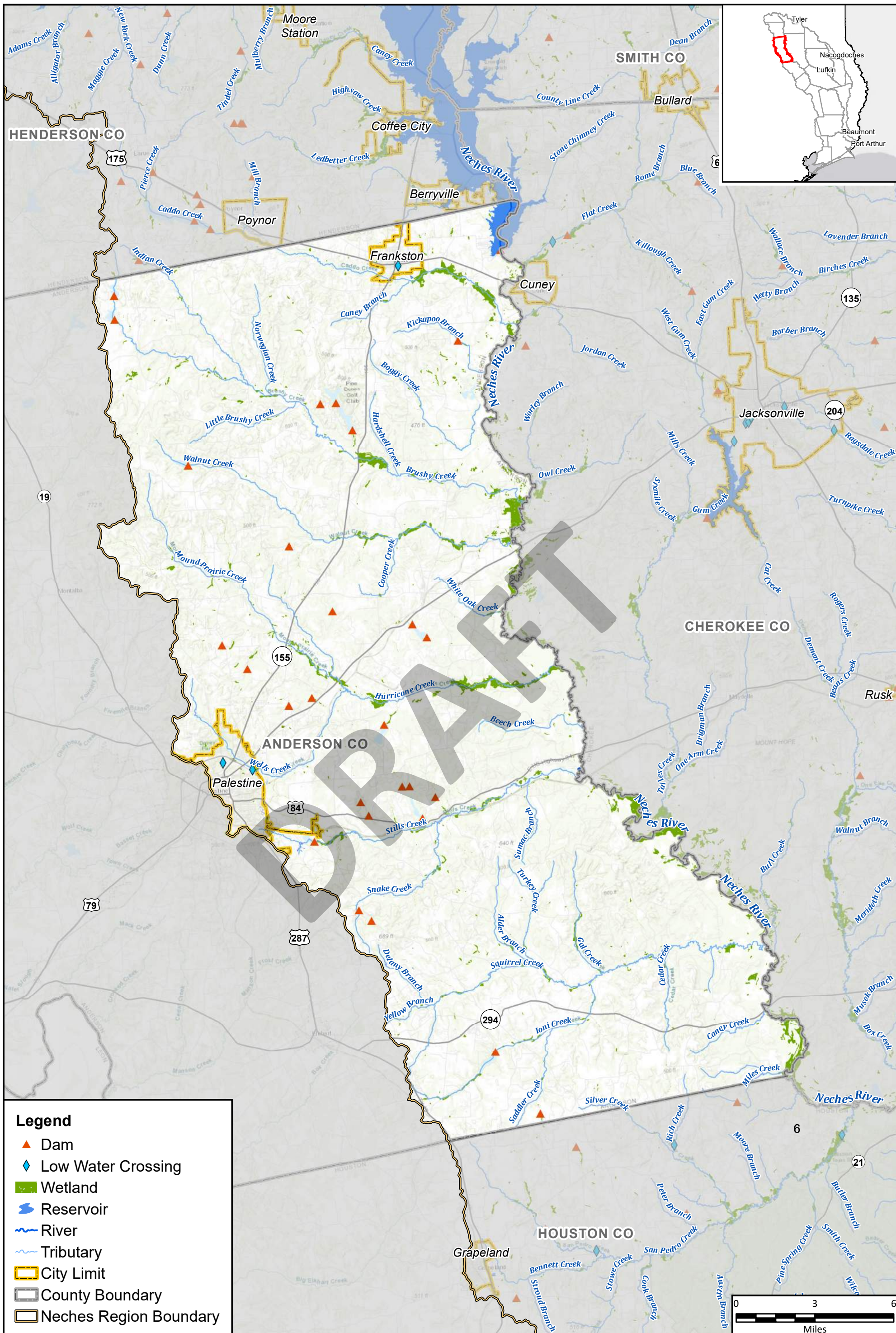


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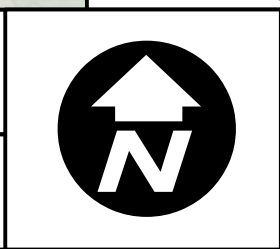
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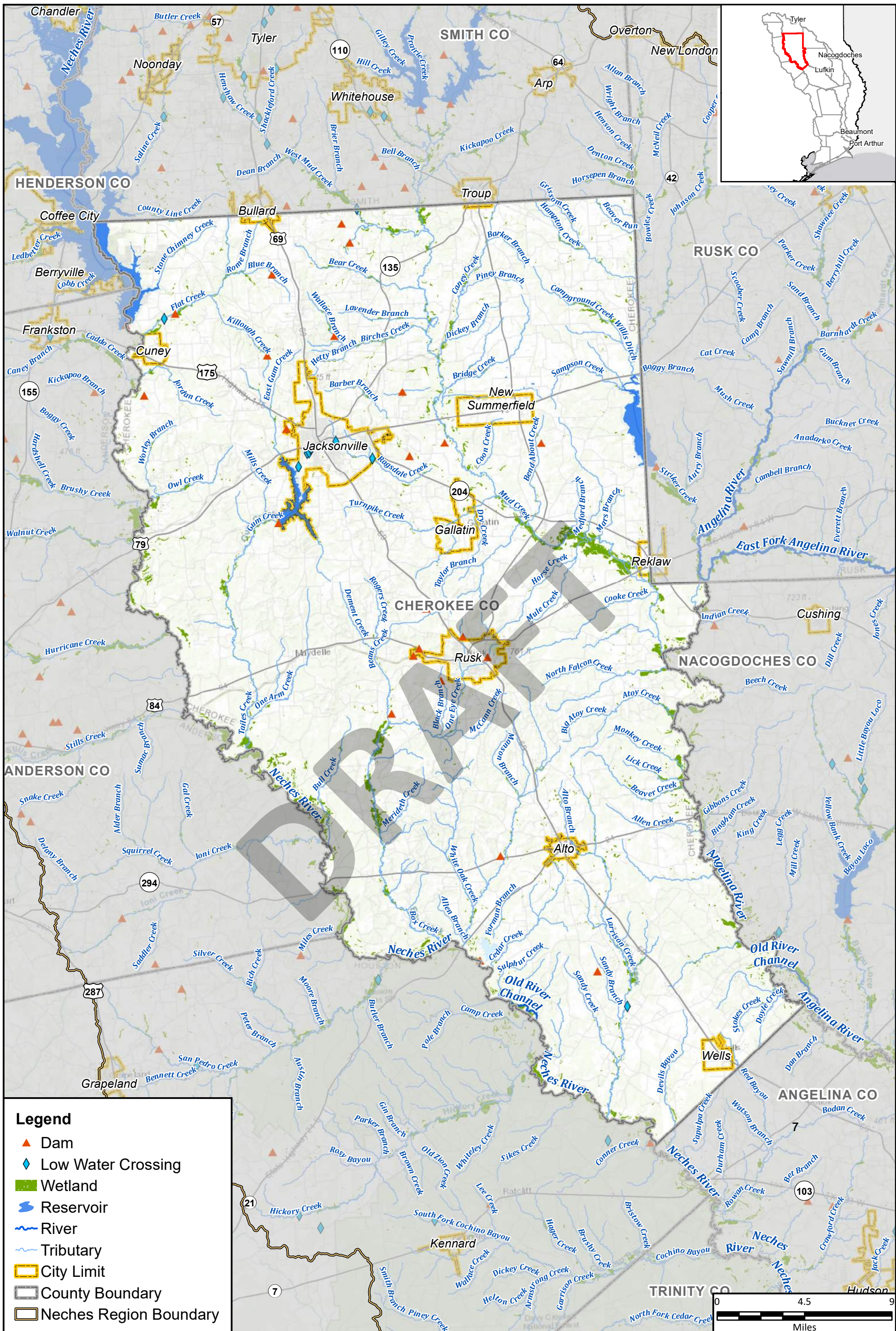


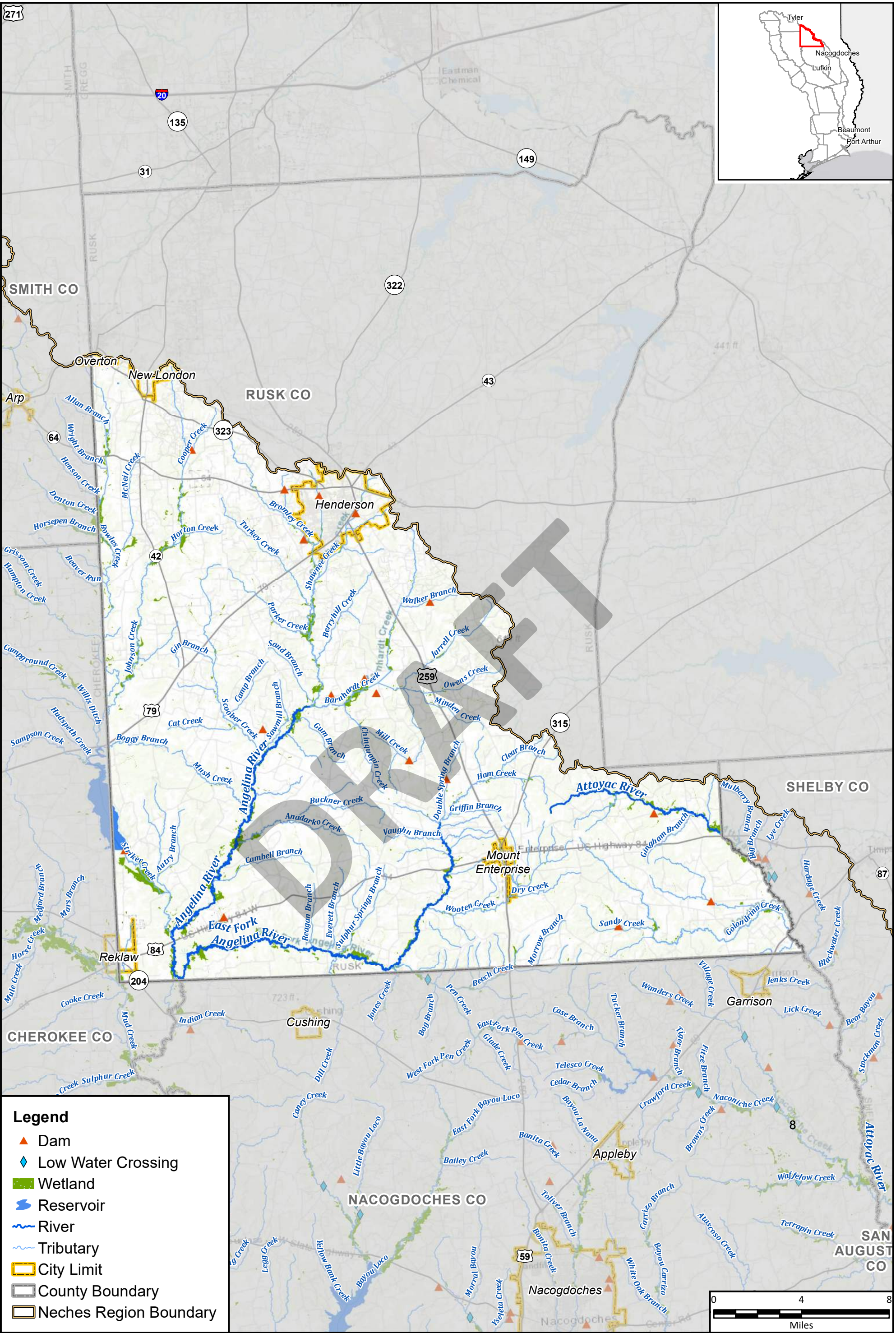
Region 5: Neches Regional Flood Plan
Anderson County

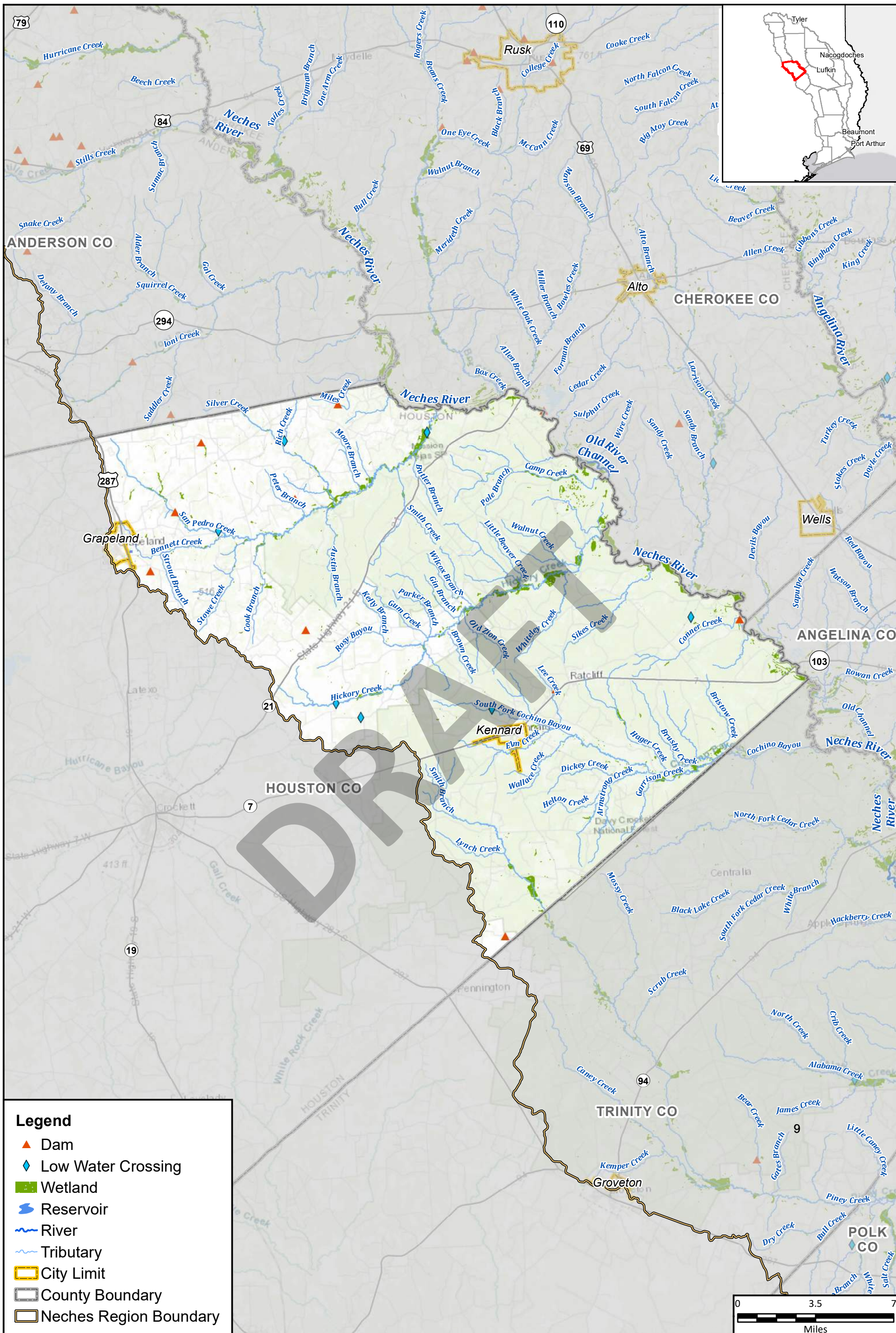
Existing Flood Infrastructure

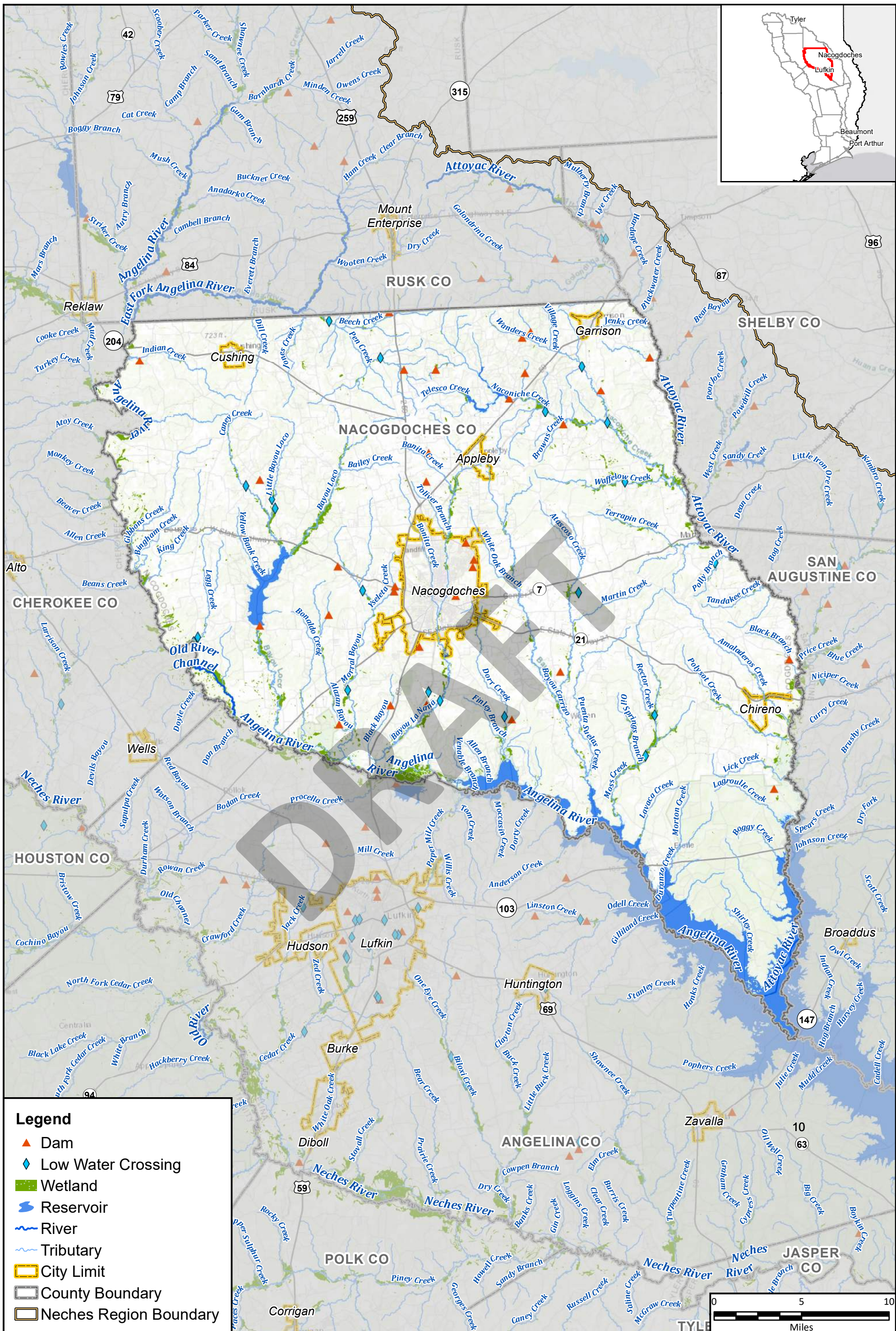


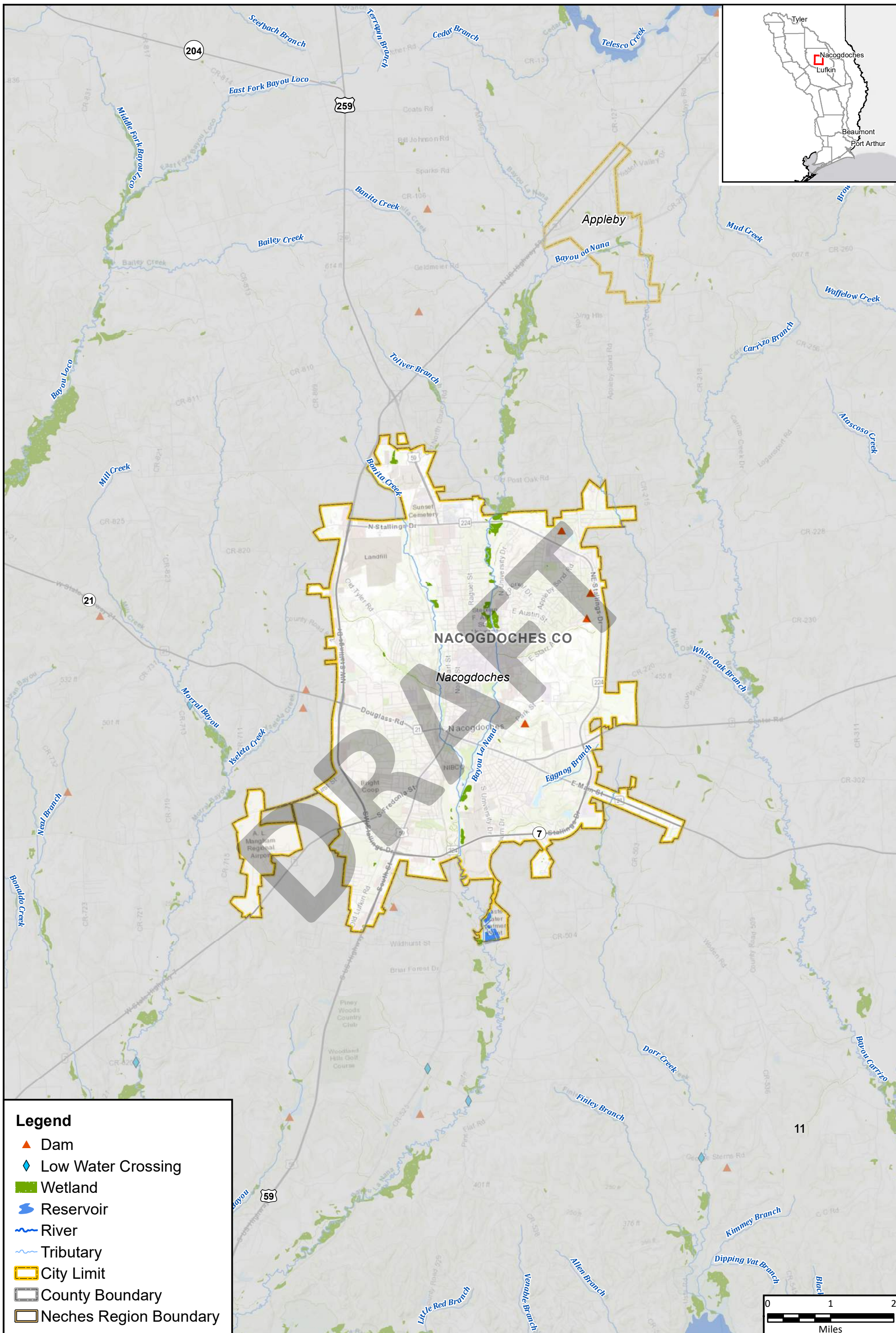
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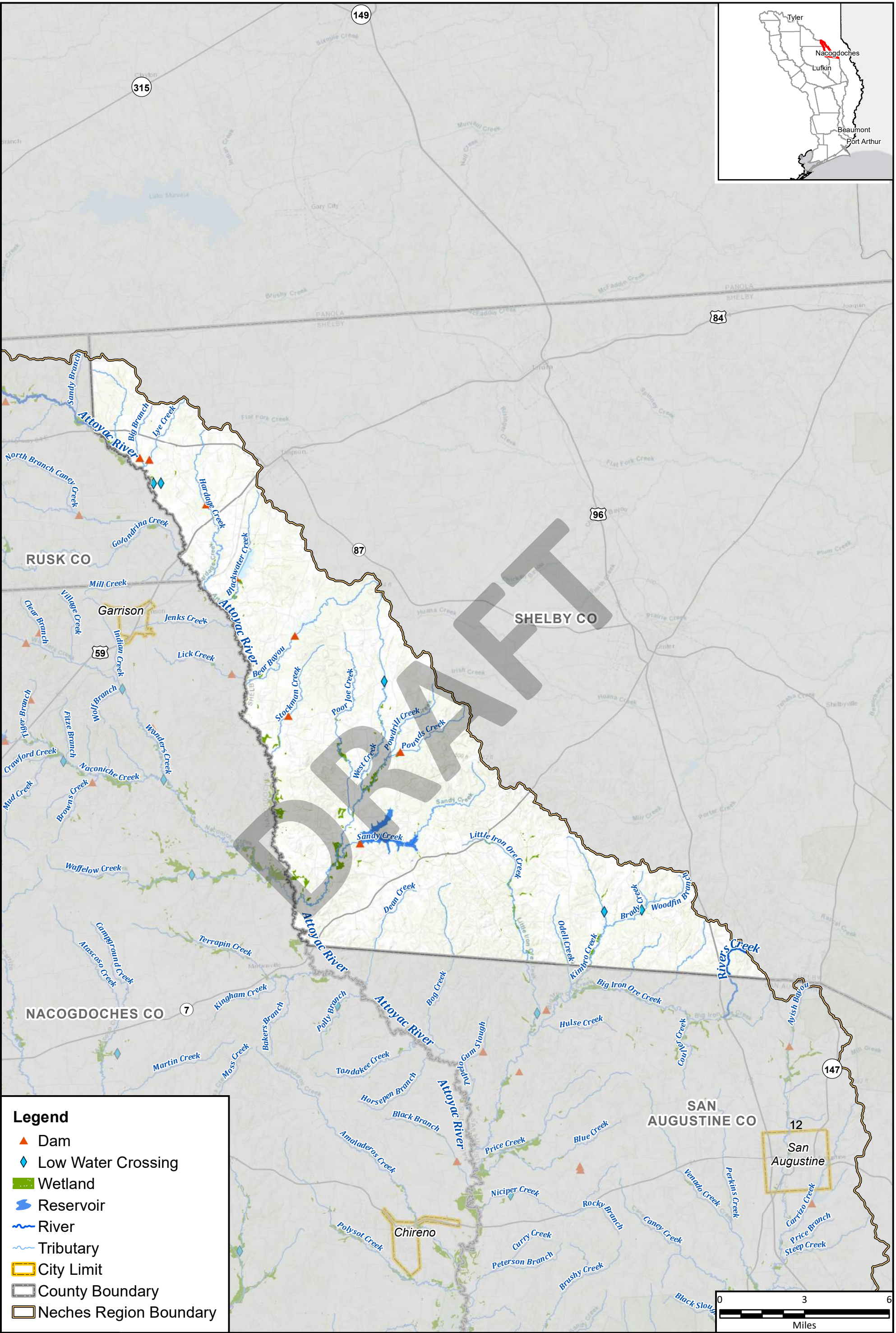






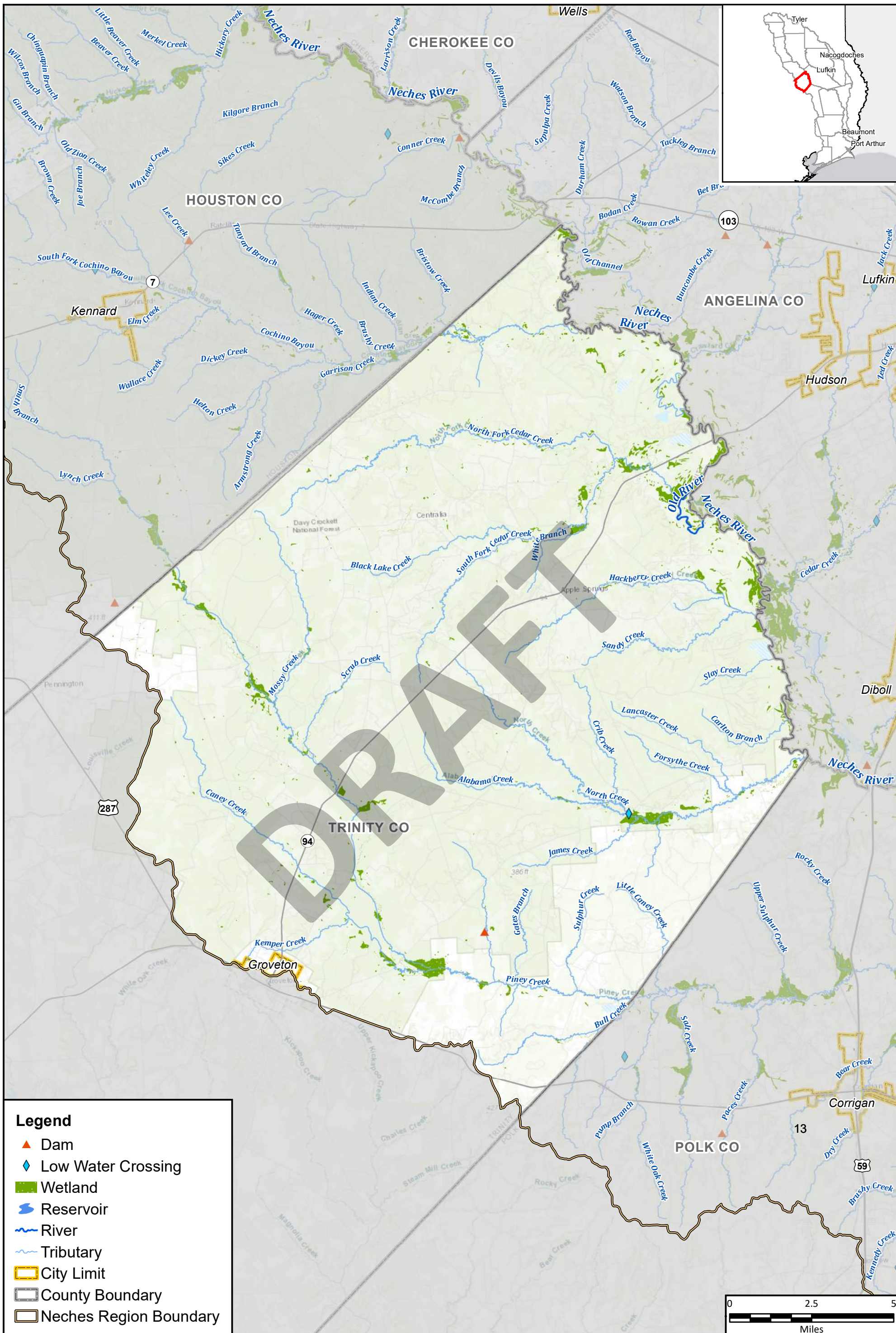
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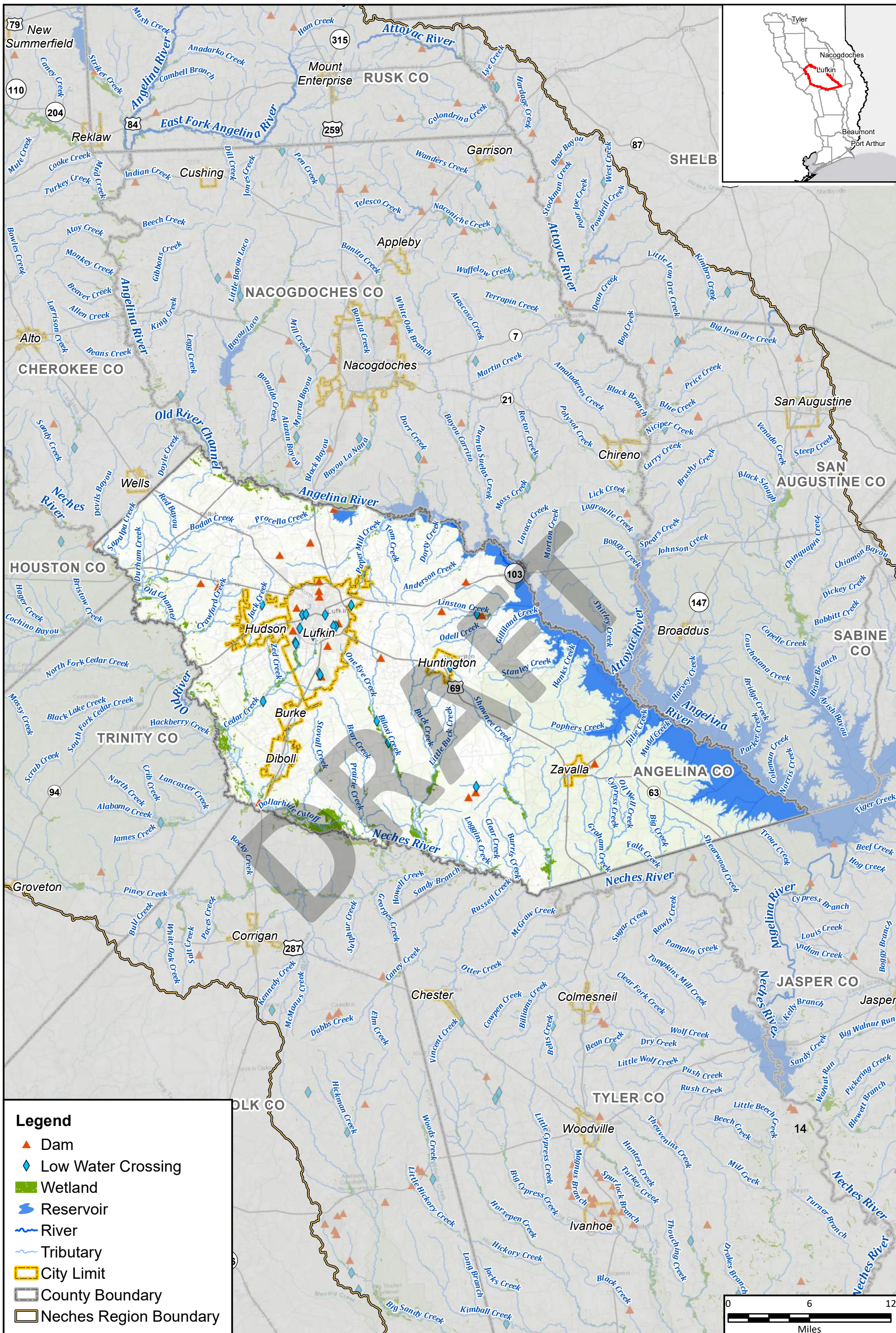
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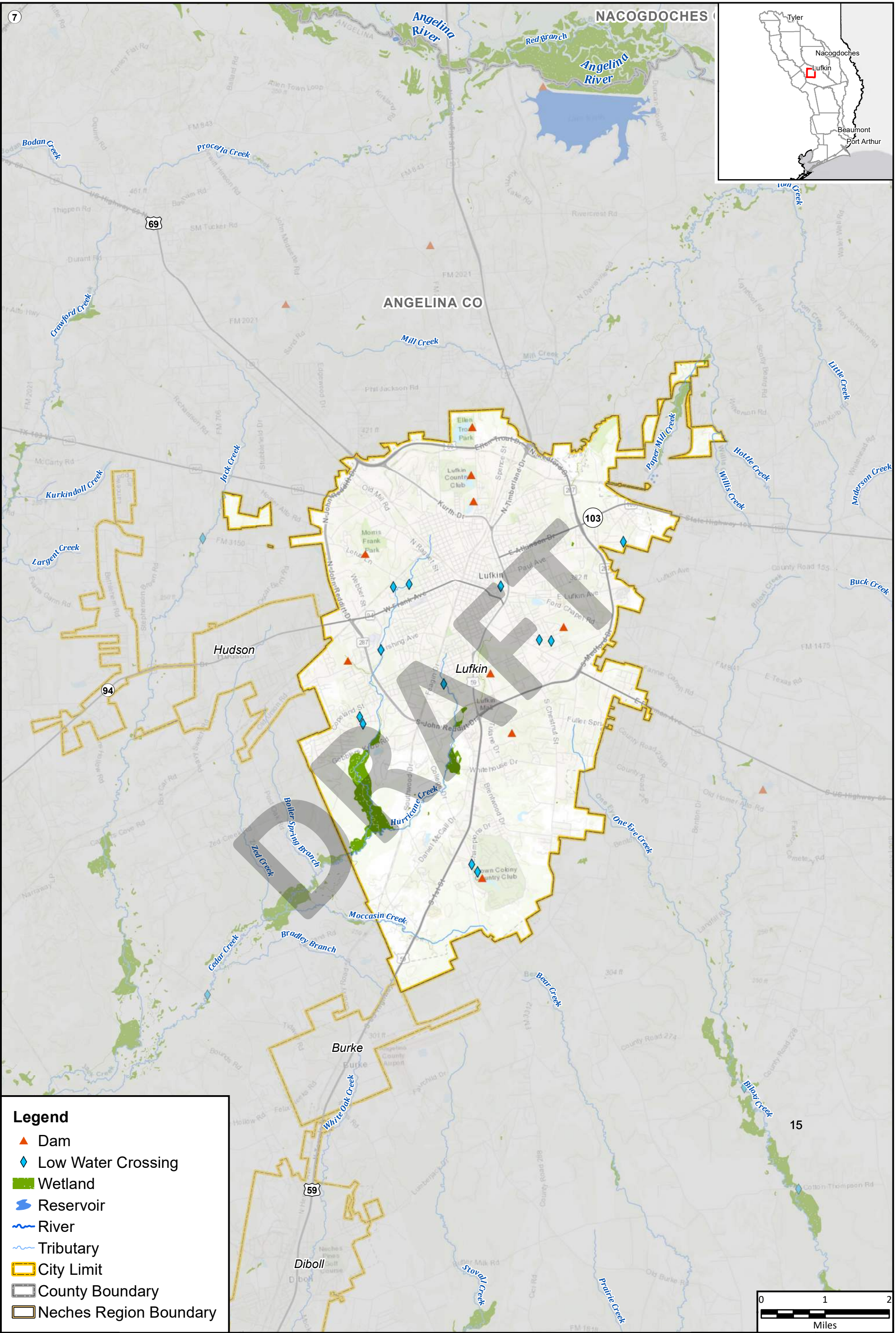


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