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AGENDA

- Introductions
  - Historical Overview of Inter-regional Coordination
- Region C Water Needs
- Marvin Nichols Reservoir
  - Description
  - Evaluations
- Schedule
- Discussion

2

2

HISTORICAL COORDINATION OVERVIEW

- Participating Entities formed the Joint Committee on Program Development (JCPD)
- **1999 – 2001:** Regions C and D coordinate to select MNR as preferred Sulphur Basin water project
- **2015:** Conflict declared between Regions C and D
  - Conflict resolved by recommending a smaller MNR (313.5 msl) in 2070 and joint strategy with Wright Patman (2050)
- **2019:** Texas Legislature created the Interregional Planning Council to coordinate water planning between regions
- **2019-2020:** Regions C and D hold multiple inter-regional coordination meetings
- **2020:** 2021 Regional Water Plans submitted to TWDB with no interregional conflict
  - Recommended WMS is full size MNR (328 msl)
- **2021:** Receive letter from Region D requesting coordination on MNR

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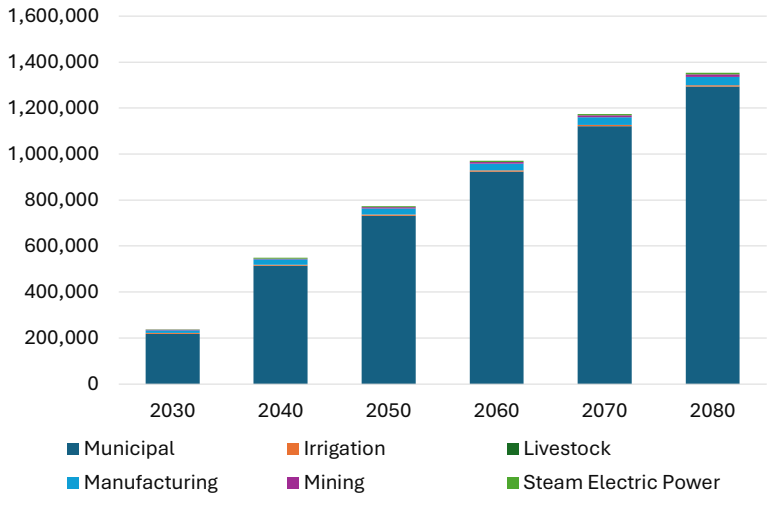
REGION C WATER NEEDS

Projected water needs:

- 1.3 million AF/Y by 2080
- Most is for municipal use



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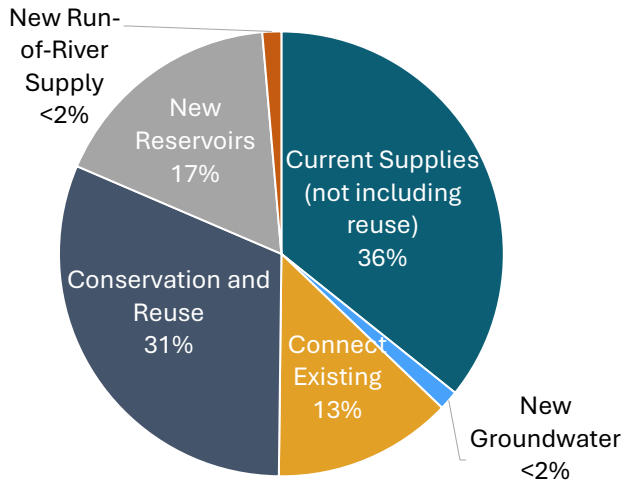
2021 PLAN TOTAL SUPPLIES IN 2070



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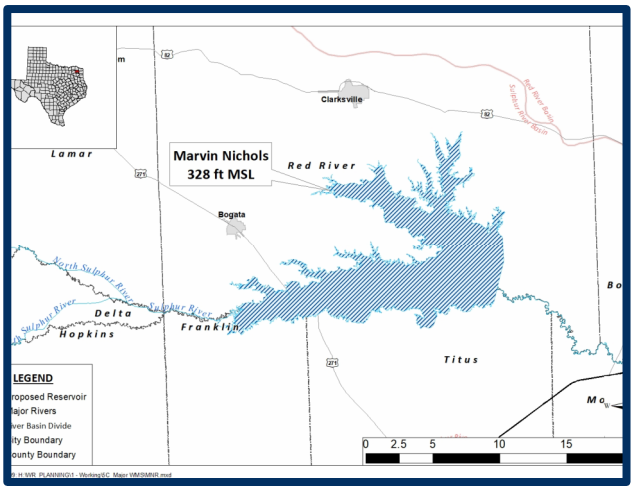


MARVIN NICHOLS RESERVOIR

RECOMMENDED STRATEGY

6

DESCRIPTION OF PROJECT

- Located on Sulphur River in Titus and Red River Counties
- Approximately 100 miles from Metroplex
- Conservation Elevation = 328 ft
  - 1,532,000 acre-feet of storage
  - 66,103 acres surface area
- Reservoir on Sulphur River was first included in State Water Plan in 1968

7

7

SULPHUR BASIN STUDY

- USACE Comprehensive Sulphur Basin Study
  - Sponsors: SRBA, TRWD, NTMWD, DWU, UTRWD, Irving
  - Completed in 2013
  - Basis for much of data for MNR and past RWPs (2016 and 2021)
- Most Recent Study – Completed in 2024
  - Yields using 2019 Sulphur Basin WAM (new drought of record)
  - Updated design requirements and costs
- 2026 Region C Water Plan
  - Reviewed and updated data as appropriate

8

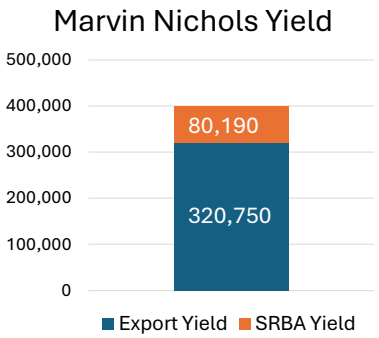
8

YIELD ASSUMPTIONS

- Sulphur Basin WAM, Run 3
  - Priority of currently granted rights
  - No return flows (unless authorized in water right)
- E-Flows for entire Sulphur basin
  - E-Flows are senior to Marvin Nichols

	Total Yield	SRBA	Exported Yield
Yield	400,940	80,190	320,750

Values in acre-feet per year



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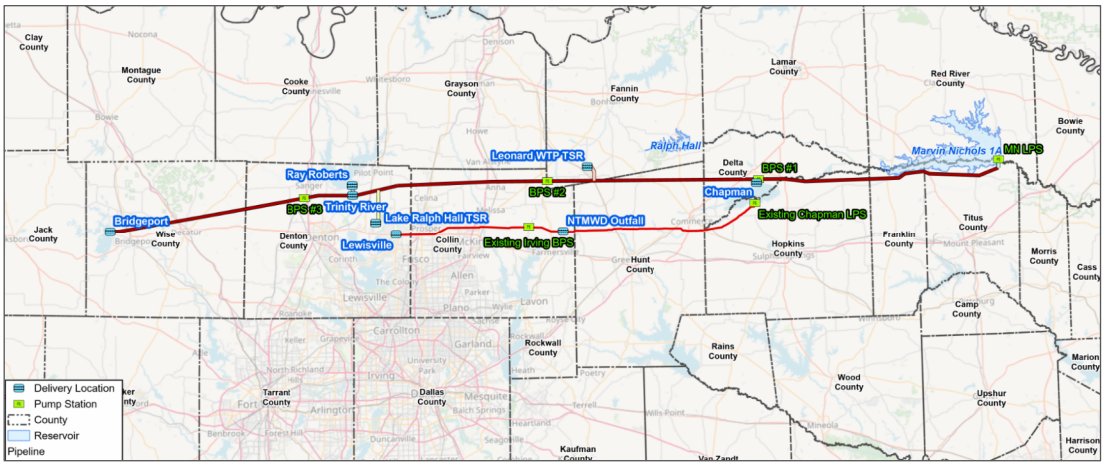
DELIVERY POINTS



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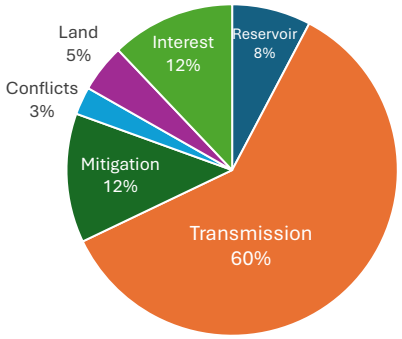
CAPITAL COSTS

Component	Capital Cost (Millions)
Reservoir	$543
Transmission	$4,241
Mitigation/Permitting	$888
Conflicts	$191
Land	$329
Subtotal	*$6,192*
Interest during construction	$851
Total	**$7,043**



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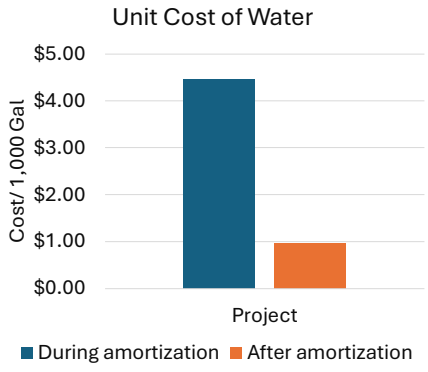
ANNUAL AND UNIT COSTS

Component	Annual Cost (Millions)
Debt Service	$366
Operation and Maintenance	$58
Pumping Costs	$42
Total	**$467**



12

12

IMPACTS OF PROJECT

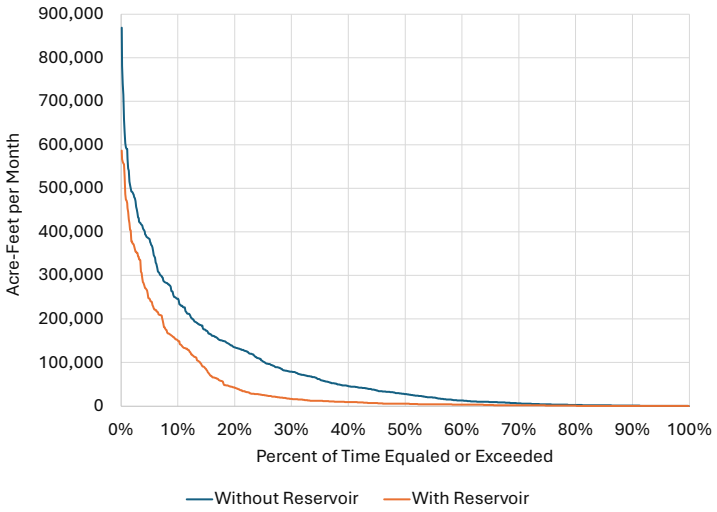
- Quantitative Reporting of:
  - Environmental water needs
  - Wildlife habitat
  - Cultural resources
  - Effect on bays, estuaries, and arms of the Gulf of Mexico
  - Threatened and Endangered Species
  - Agricultural Resources
  - Other Natural Resources

13

13

ENVIRONMENTAL WATER NEEDS

- No SB3 flows established in Sulphur Basin
- Used Lyons Methods for e-flow releases
- Little difference in frequencies of low flows



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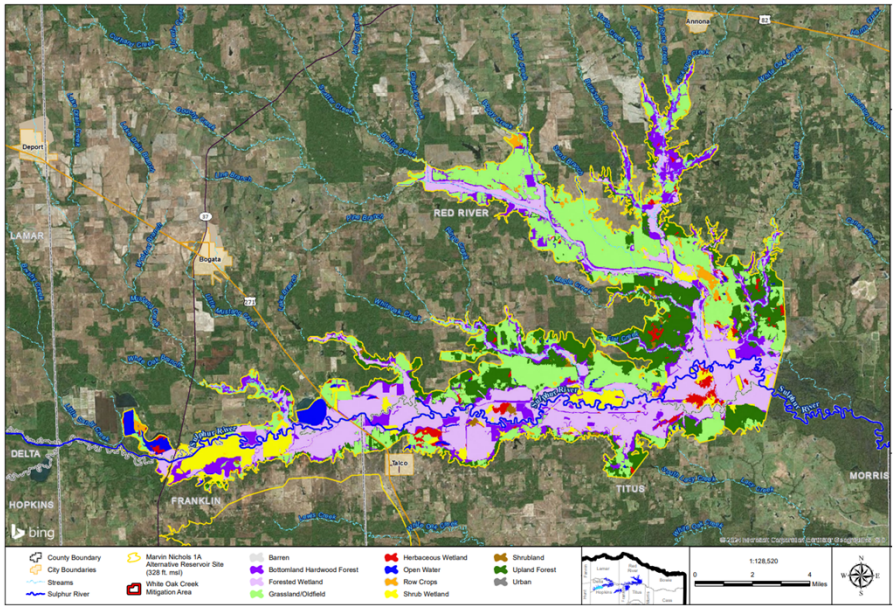
14

VEGETATIVE COVER TYPES



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15

WILDLIFE HABITATS

Cover Type	Acres
Barren	<1
Bottomland Hardwood Forest	9,289
Forested Wetland	19,622
Grassland/Old Field	18,241
Herbaceous Wetland	1,244
Open Water	1,162
Row Crops	706
Shrub Wetland	4,093
Shrubland	444
Upland Forest	11,223
Urban	78
Total	**66,103**

Updated September 2024

16

16

CULTURAL RESOURCES

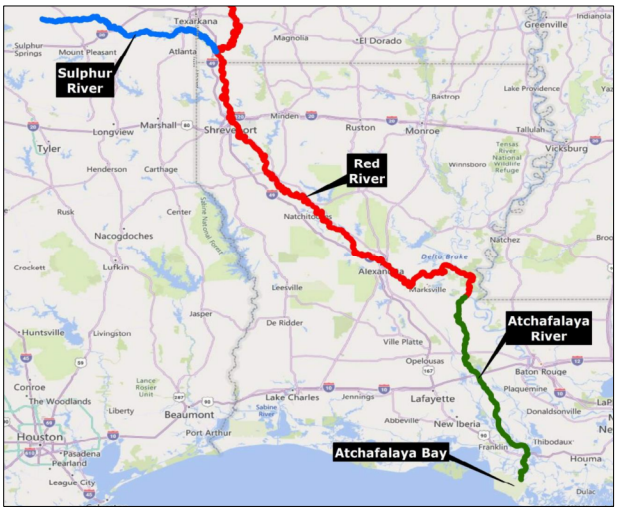
- Much of site has high potential for cultural resources
- 13% of project area has been surveyed for cultural resources
- 1 known cemetery
- 63 known archeological sites
  - 34 are likely eligible for National Register of Historic Places (NRHP)

17

17

EFFECT ON BAYS AND ESTUARIES

- No effect on bays and estuaries
- Discharges to Atchafalaya Bay in Louisiana Gulf Coast



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18

THREATENED AND ENDANGERED SPECIES

- In 3 counties where Marvin Nichols Reservoir is located,
  - 3 Federally-listed endangered species
    - 2 potential to be impacted (American burying beetle, Ouachita rock pocketbook)
  - 4 federally-listed threatened species
    - 1 high potential for impacts (Yellow-billed cuckoo)
  - 1 state-listed endangered species
  - 13 state-listed threatened species
    - 6 potential to be impacted

19

19

AGRICULTURAL RESOURCES

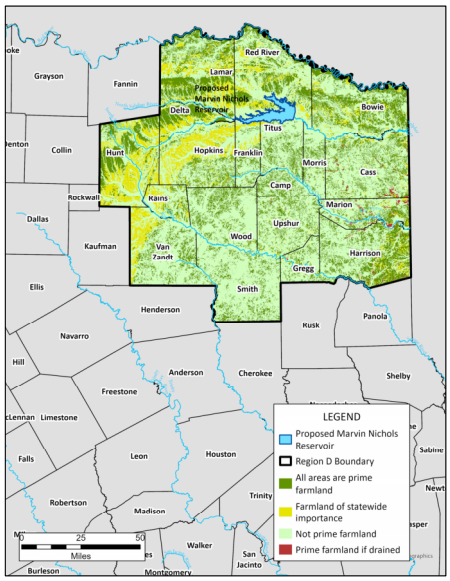
Cover Type		Area (Acres)		Marvin Nichols Reservoir Area as a Percent of Region D
		Marvin Nichols Reservoir	Region D	
Timberlands	Bottomland Hardwood Forest	9,289	416,398	2.2%
	Forested Wetland	19,622	412,751	4.8%
	Upland Forest	11,223	2,869,079	0.4%
Active/Potential Agricultural and Pasture Lands	Row Crops	706	314,184	0.2%
	Grassland/Old Field	18,241	2,843,656	0.6%
Non-Agricultural Lands	Other Land Cover Types	7,022	477,707	1.5%
	Total	**66,103**	**7,333,774**	0.9%

20

20

PRIME FARMLAND

Cover Type	Area (Acres)			Marvin Nichols Reservoir Area as a Percent of Area:	
	Marvin Nichols Reservoir	Region D	Texas	Region D	Texas
Prime Farmland	594	1,922,937	35,523,540	0.031%	0.002%

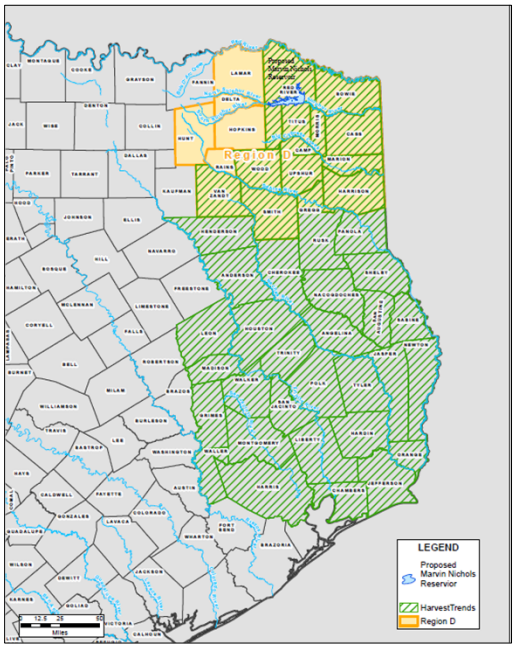


21

21

TIMBER RESOURCES

	Area (Acres)	Percent in Marvin Nichols
Potential Timberland in Marvin Nichols Reservoir		
Bottomland Hardwoods	9,289	
Forested Wetlands	19,622	
Upland Forest	11,223	
Total in Marvin Nichols	**40,134**	
Total Timberland in Red River, Titus, & Franklin Counties	**523,629**	**7.7%**
Total Timberland in Region D	**3,520,917**	**1.1%**
Total Timberland in East Texas	**11,906,539**	**0.3%**



22

22

MITIGATION ASSUMPTIONS

- Assume mitigation land requirements equal reservoir acreage
  - Consistent with recently permitted reservoirs
  - Costs include land and improvements for mitigation
- Mitigation preferences
  - Mitigation banks
  - User-developed mitigation within same watershed (Sulphur River)
  - User- developed mitigation within same River Basin (Red River)
  - Does not need to be in same counties
- Mitigation amounts and locations will be decided during the permitting process
- **Mitigation will offset impacts to natural resources**

23

23

SOCIO-ECONOMIC IMPACTS

Socio-economic impacts of **developing** Project

- Construction of project boost economic activity >$5 billion
- Operation of project boost economies > $120 million/year
- Increased visitor/resident spending > $325 million/year
- Most economic growth occurs in Region D

Socio-economic impacts of **not developing** additional water

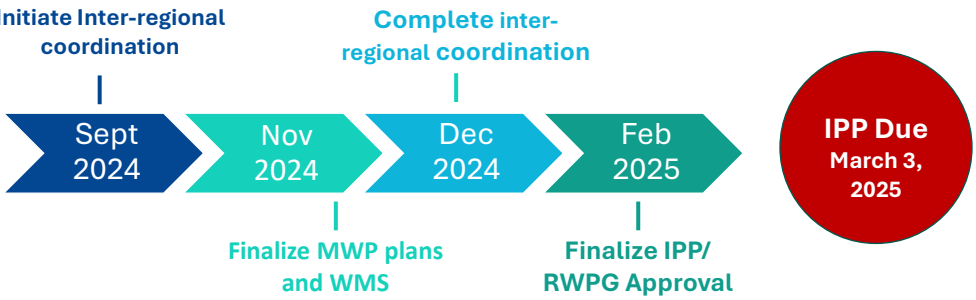
- $48 million in income losses in 2070
- 473,000 job losses in 2070
- Direct impacts to Region C

24

24

25

SCHEDULE



26

26

CONTACT

Simone Kiel, P.E.
Freese and Nichols, Inc.

Region C website:

Region C – Water Planning For North Texas (regioncwater.org)

27

27

Region C and Region D Discussion

Kevin Ward
Region C Chair

28

Public Comment

Kevin Ward

Region C Chair

29