

The Economic, Fiscal, and Developmental Impacts of the Proposed Marvin Nichols Reservoir Project

Prepared for:

The Sulphur River Basin Authority

By:

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Executive Summary

- Construction of the dam to impound the proposed Marvin Nichols reservoir will cost between \$247 million and \$301 million. Depending on exact expenditures local economic activity will increase between \$299 million and \$365 million during the 4 to 5 year project. This activity will support in the range of 1,700 to more than 2,000 person-years of employment with associated salaries and wages between \$50.1 million and \$62 million.
- Similarly, the proposed pipeline construction project, with total costs ranging from just over \$1 billion to almost \$1.3 billion, will boost economic activity in Titus, Hopkins, Franklin, Hunt, Collin, Denton, and Wise counties. Total gains in local economic activity will vary between \$1.5 billion and \$1.8 billion while supporting 12,000 to 14,700 person years of employment and raising local earnings in the range of \$443 million and \$541 million.
- After construction of the dam and pipeline is completed, there will be on-going impacts from the operations and maintenance of these infrastructures. Over 200 permanent full-time-equivalent jobs will be supported in the region.
- Once the lake is impounded, new spending will flow to the northeast Texas economy as visitors will come to fish, boat, and participate in other water-recreation activities. These visitors will bring more than \$45 million in new annual spending to the local economy.
- The lake will also attract many new residents to northeast Texas. We estimate that over a 30-year period at least 2,400 new permanent households will be established around the lake. An additional 10,000 residences will likely be built as vacation/weekend/second homes. The construction of these homes will bring an average of over 500 jobs per year to the local economy over the development period. This construction activity will specifically boost market opportunities for local timber industries.
- Spending by new residents in the local economy will eventually rise to \$129 million per year. When combined with the anticipated spending by recreational visitors, more than \$242 million in new economic activity will be created for the Franklin, Titus, Morris, Bowie, and Red River county area supporting 2,800 jobs and increasing local labor income by \$60 million per year.
- The presence of the proposed Marvin Nichols reservoir will enhance the region's attractiveness for business location. As a recreational amenity, the lake will enhance the quality of life features of the region, which is an increasingly important factor in business site location decisions. Industries requiring reliable local water resources will also find new reasons to locate in the area.
- Impoundment of the proposed reservoir and attendant environmental mitigation will remove some timberland from production. Based on U.S. Forestry Service data, the reservoir and mitigation area represent an estimated 104.7 million cubic feet of local

hardwood timber inventories, less than 3 percent of regional totals. However, net annual growth (new growth less harvesting) adds about 153.9 million cubic feet of hardwood timber to the region's inventories according to the Forest Service, more than enough new timber to offset any losses. Moreover, forest product producers, especially sawmills, will see new market demand from infrastructure, residence, and commercial structures construction around the reservoir.

- Local taxing jurisdictions will enjoy not only substantial temporary gains in revenues from business activities related to construction of the dam, pipelines and related infrastructure, and new housing, but they will also see new revenues based on increased property values and spending by visitors and residents. Property taxes on new housing alone will add \$4.5 million to county tax revenues net of any losses due to the lake impoundment and related environmental mitigation. Similarly, net gains in area school district revenues will exceed \$20 million per year at full development. Local taxes on retail sales will generate at least \$465,000 per year with an additional half million dollars per year provided by hotel occupancy taxes.

Table ES1

Temporary Local Economic Impacts of Construction Activities
(2002 dollars)

Description		Impact
Dam Construction		
Impacted counties: Bowie, Franklin, Morris, Red River, Titus.		
Construction period: 4-5 years.		
Construction costs	\$ 246,690,000 to \$ 301,510,000	
Total economic activity	\$ 299,021,000 to \$ 365,471,000	
Total salaries and wages	\$ 50,820,000 to \$ 62,114,000	
Total person-years of employment	1,682 to 2,056	
Pipeline & Pump Station Construction		
Impacted counties: Titus, Hopkins, Franklin, Hunt, Collin, Denton, Wise.		
Construction period: 3-4 years.		
Construction costs	\$ 1,049,285,000 to \$ 1,282,559,000	
Total economic activity	\$ 1,494,309,000 to \$ 1,826,377,000	
Total salaries and wages	\$ 442,592,000 to \$ 540,946,000	
Total person-years of employment	12,058 to 14,738	
Housing Construction		
Impacted counties: Bowie, Franklin, Morris, Red River, Titus. Construction period: 30 years.		
	Total Impact	Average Annual
Construction spending	\$ 1,061,271,000	\$ 35,376,000
Total economic activity	\$ 1,661,329,000	\$ 55,380,000
Total salaries and wages	\$ 412,372,000	\$ 13,746,000
Total full-time-equivalent employment	16,926	564

Sources: Sulphur River Basin Reservoir Study (Summary Report) by Freese & Nichols, authors' estimates.

Table ES2

Recurring Annual Local Economic Impacts (2002 dollars)

Description	Impact
Dam Operations	
Impacted counties: Franklin, Morris, Red River, Titus	
Total economic activity	\$ 3,065,000
Total salaries and wages	\$ 923,000
Total full-time-equivalent employment	24
Indirect state and local business taxes	\$ 186,000
Pipeline & Pump Station Operations	
Impacted counties: Titus, Hopkins, Franklin, Hunt, Collin, Denton, Wise.	
Total economic activity	\$ 37,507,000
Total salaries and wages	\$ 7,725,000
Total full-time-equivalent employment	179
Indirect state and local business taxes	\$ 2,770,000
Visitor and Resident Spending	
Impacted counties: Franklin, Morris, Red River, Titus	
Total annual spending: new permanent residents	\$ 86,390,000
Total annual spending: new weekend residents	\$ 43,031,000
Total annual spending: recreational visitors	\$ 40,500,000
Total economic activity	\$ 242,257,000
Total salaries and wages	\$ 60,767,000
Total full-time-equivalent employment	2,820

Source: Authors' estimates

ES3

Recurring Annual Fiscal Impacts of New Housing Developments and Resident and Recreational Out-of-Area Visitor Spending⁺

Description	Impact
Total taxable value of housing (permanent and weekend residents)	\$ 1,371,524,000
Net [#] gain in county property tax revenues	\$ 4,546,000
Net [#] gain in school district property tax revenues	\$ 20,298,000
Total taxable retail sales	\$ 46,465,000
Total potential* municipal sales taxes (1% rate)	\$ 465,000
Hotel occupancy tax revenues*	\$ 526,000

+ At buildout. # Net of losses to taxable property value of lake and environmental mitigation areas.

* Value will be impacted by land annexation and business location decisions.

Source: Authors' estimates

Section 1: Introduction

To help ensure the long-term water and recreational needs of north Texas, the Sulphur River Basin Authority is considering the impoundment of a large reservoir in the Sulphur River Basin. To be known as the Marvin Nichols Reservoir, construction of the lake and related pipelines will take from six to eight years once the project is underway.

As with any major public works project, the impoundment of Marvin Nichols and the setting aside of associated mitigation areas will have a wide range of economic, environmental, and social impacts. In this report, we focus on the economic, fiscal, and developmental impacts of the proposed reservoir.

After first presenting an economic overview of the Sulphur River Basin counties, we proceed to measure the new employment, income, spending, and tax revenues that will attend the construction and operations of the Marvin Nichols project. We then explore the “ancillary” development likely to occur in conjunction with the dam, in particular the construction of new homes and recreationally based businesses. New and recurring income, employment, and tax receipts associated with this ancillary development are estimated. Finally, we examine the probable impact of Marvin Nichols on the local timber industry and how the new reservoir and its recreational offerings can help attract new businesses to east Texas.

Section 2: Economic overview of the Sulphur River Basin counties.

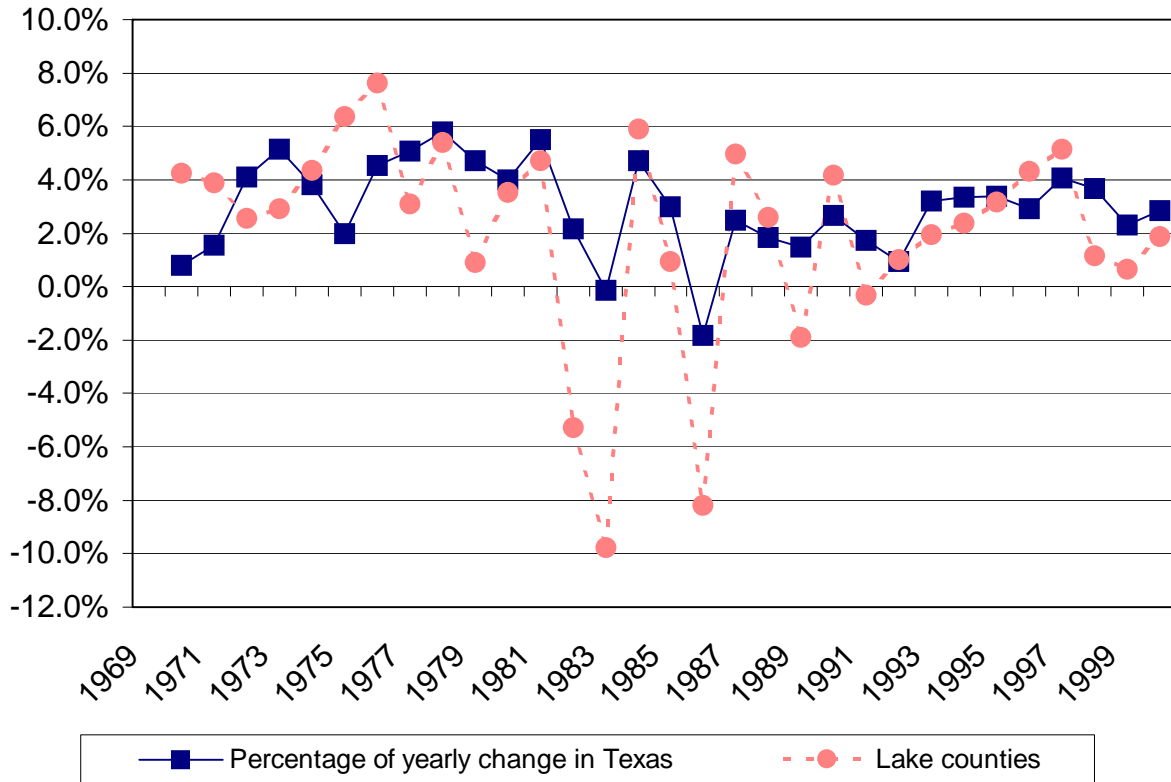
The most affected counties from the proposed Marvin Nichols reservoir include Bowie, Franklin, Morris, Red River, and Titus. Bowie County is home to Texarkana, one of the state’s designated metropolitan statistical areas. Because activities attributable to the metropolitan area mask economic conditions in the extreme western portions of Bowie County, where the proposed

reservoir is likely to exert its greatest economic influence, that county is not included in our assessment of local area economic conditions. However, the economic impact estimates presented later in this report include Bowie County since businesses and residents of Bowie County, particularly in the western portion of the county, will capture some of the economic benefits described in the following analysis.

In 1999, an estimated \$3.6 billion in combined economic activity took place in Franklin, Morris, Red River, and Titus counties. The largest industry, by value of output, is poultry processing, due largely to the presence of Pilgrim's Pride facilities in Titus County. Other important industries include steel mills, transportation equipment manufacturing, timber and wood products, and the provision of electric services. With the exception of poultry processing, these industries are extremely sensitive to overall economic cycles. Therefore, the economy of this region tends to be more volatile than in other parts of Texas.

As can be seen in Figure 1, year-over-year employment change in the four counties has generally followed statewide trends. However, the amplitude of change has been much greater in the local area. For example, between 1986 and 1987 total employment in Texas fell by about 2.0 percent. In comparison, between these same years employment in the four-county area dropped more than 8 percent. Year-to-year employment change in Franklin, Titus, Morris, and Red River counties showed a consistently strengthening job market from 1991 through 1997, while job growth at the state level remained relatively constant. However, since 1997 job growth in these counties has slowed more dramatically than in the state overall. These data suggest that one critical economic development strategy for the counties around the proposed reservoir should be to diversify their economic base, particularly toward industries with greater stability over time.

Figure 1
Year-to-Year Percentage Change
Total Employment State of Texas and Lake Counties*
1969-2000



Source: US Department of Commerce. * Morris, Titus, Red River, Franklin

The proposed Marvin Nichols reservoir offers several economic development opportunities for northeast Texas. In addition to the substantial economic activity that would be generated by construction projects related to the reservoir over a multi-year period, the new lake would attract recreational users whose spending, in turn, would spur investment in new hospitality venues. The region could also compete more effectively for industries that require a reliable water source for their operations. What’s more, many new residents will be attracted to the area to live and work—while current residents will have an additional incentive to remain—

helping to reverse the perennial population loss in some local counties.¹ By supporting new residents, hosting new recreation-based industries, and enhancing the area's attractiveness for industrial site locations, the Marvin Nichols reservoir offers the region the best opportunity to significantly diversify and stabilize the local economy.

Section 3: Economic impacts of dam and related infrastructure construction.

In this section we examine the economic impacts of the construction of the proposed Marvin Nichols Reservoir dam and related pipeline infrastructure. These estimates are based on the most current cost projections for these facilities using the IMPLAN input-output economic modeling system developed by the Minnesota IMPLAN Group. The modeled impacts include the direct effects of spending for construction activities, the indirect effects of local vendors providing goods and services to the construction contractors, and the induced impacts of employees of these firms spending a portion of their earnings in the local economy. All costs and impacts are expressed in constant 2002 dollars.

Economic impact assessments for the dam and reservoir construction projects are modeled for the local area including Bowie, Franklin, Morris, Red River, and Titus counties. Estimates of the impacts of building a water pipeline from the proposed reservoir to the Dallas/Fort Worth area are based on the likely impacts accruing to Titus, Hopkins, Franklin, Hunt, Collin, Denton, and Wise counties.

Constructing the dam for the Marvin Nichols reservoir is expected to cost between 246.7 million and \$301.5 million and to take four to five years. Based on the structure and size of the local economy, a large portion of the goods and services that will be purchased by construction contractors will be provided by firms located outside of the modeled five-county area.

¹ Red River County has experienced a long-term decline in population dropping from 15,682 in 1960 to 14,314 in 2000.

Nonetheless, construction of the dam will provide a substantial temporary boost to the local economy over the multi-year project. Total economic activity in the five-county area will increase between \$299 million and \$365 million during the dam construction phase of the reservoir project. This activity will support 1,700 to over 2,000 person-years of employment paying in the range of \$51 million to \$62 million in salaries and wages (see Table 3-A).

It is estimated that between \$125 million and \$150 million will be spent to compensate property owners for the land that will be consumed by the lake and the additional acreage that will be set aside for environmental mitigation purposes. These payments to land owners represent a transfer of income to the local economy. If fifty percent of the compensation goes to residents of Titus, Red River, Franklin, Morris, and Bowie counties, and these owners spend as little as 20 percent of their income gains, local economic activity will see a temporary increase of \$13 million with attendant impacts on local earnings.

Building the pipeline, pump stations, and other related infrastructure to transport water from the proposed reservoir to the network of reservoirs for Dallas and Fort Worth is expected to cost between \$1.0 billion and \$1.3 billion and to take three to four years. The pipeline is currently projected to begin its route in Titus County and pass through Hopkins, Hunt, Collin, Denton, and Wise counties.² Though it is likely some of the economic impacts from constructing the pipeline and related infrastructure will extend beyond these counties into Red River and other counties in the reservoir basin, we have limited our impact estimates only to those counties the pipeline will likely traverse.

Construction of the pipeline, pumping stations, and related infrastructure will temporarily increase economic activity in the host counties from \$1.5 billion to as much as \$1.8 billion. Between 12,000 and 14,700 temporary person-years of employment will be supported during the

² Final routing of the pipeline has not been determined.

construction phase boosting local payrolls in the range of \$442 million to \$541 million (see Table 3-A).

Table 3-A

**Temporary Local Economic Impacts of Dam, Pipeline,
and Related Infrastructure Construction**

Description	Impact
Dam Construction Impacted counties: Bowie, Franklin, Morris, Red River, Titus. Construction period: 4-5 years.	
Construction costs	\$ 246,690,000 to \$ 301,510,000
Total economic activity	\$ 299,021,000 to \$ 365,471,000
Total salaries and wages	\$ 50,820,000 to \$ 62,114,000
Total person-years of employment	1,682 to 2,056
Pipeline & Pump Station Construction Impacted counties: Titus, Hopkins, Franklin, Hunt, Collin, Denton, Wise. Construction period: 3-4 years.	
Construction costs	\$ 1,049,285,000 to \$ 1,282,559,000
Total economic activity	\$ 1,494,309,000 to \$ 1,826,377,000
Total salaries and wages	\$ 442,592,000 to \$ 540,946,000
Total person-years of employment	12,058 to 14,738

Sources: Sulphur River Basin Reservoir Study (Summary Report) by Freese & Nichols, authors' estimates.

State level impacts, which include the economic activities captured across all Texas counties from the dam and pipeline construction projects, are even more impressive. Building the dam, pipeline, pumping stations, and related infrastructure will boost total state economic activity by \$2.0 billion to \$2.4 billion during the construction phase of the proposed reservoir development. Total labor income in the state will increase between \$510 million to \$623 million through the creation of 14,000 to 17,000 person-years of employment. State and local tax coffers will be enriched in the range of \$39 million to almost \$48 million (see Table 3-B).

Table 3-B

**Temporary Economic Impacts of Dam, Pipeline,
and Related Infrastructure Construction on the State of Texas**

Description	Impact
Construction costs	\$ 1,295,975,000 to \$ 1,584,069,000
Total economic activity	\$ 1,963,126,000 to \$ 2,399,376,000
Total salaries and wages	\$ 510,059,000 to \$ 623,405,000
Total person-years of employment	13,962 to 17,064
Indirect state and local business taxes	\$ 39,156,000 to \$ 47,858,000

Sources: Sulphur River Basin Reservoir Study (Summary Report) by Freese & Nichols, authors' estimates.

Section 4: On-going economic impacts of dam and pipeline operations

Once the dam and pipeline are built, on-going operations and maintenance of these infrastructures will continue to provide jobs and a direct boost to local economic activity. Using the IMPLAN input-output model, we estimate the level of these impacts based on projected operating budgets for the dam and pipeline system. As with our previous construction impact estimates, we have separated the effects of these operations to specifically examine their local economic contributions.

Recurring maintenance and operating expenditures for the dam are estimated at \$2.1 million per year. These expenditures will boost the economies of Titus, Bowie, Franklin, Morris, and Red River counties by \$3.1 million each year³ and provide 24 full-time-equivalent (FTE) jobs paying over \$900,000 in annual wages and salaries. State and local indirect business taxes⁴ will be increased by more than \$180,000 each year as a result of these activities. Note that these estimates do not include the impacts of expenditures for major refits and overhauls of equipment that will occur on a regular basis (see Table 4-A).

³ Expenditure and impact estimates are not inflation-adjusted.

⁴ Indirect business taxes are sales, use, and excise taxes paid by business supported by the activities described. These include vendors to the subject entities and providers of goods and services supported by employee spending.

Maintenance and operating expenses for the pipeline and pumping stations are expected to cost \$13.7 million per year plus millions in new electric service purchases⁵ to support pumping station operations. These expenditures will generate \$37.5 million in total economic activity in Titus, Hopkins, Franklin, Hunt, Collin, Denton, and Wise counties and add 179 FTE jobs paying \$7.7 million in annual salaries and wages. In addition, state and local tax coffers will enjoy \$2.8 million in new business taxes as a result of this increased economic activity (see Table 4-A).

Table 4-A

Recurring Annual Local Economic Impacts of Dam and Pipeline Operations

Description	Impact
Dam Operations	
Impacted counties: Bowie, Franklin, Morris, Red River, Titus	
Total economic activity	\$ 3,065,000
Total salaries and wages	\$ 923,000
Total full-time-equivalent employment	24
Indirect state and local business taxes	\$ 186,000
Pipeline & Pump Station Operations	
Impacted counties: Titus, Hopkins, Franklin, Hunt, Collin, Denton, Wise	
Total economic activity	\$ 36,846,000
Total salaries and wages	\$ 7,726,000
Total full-time-equivalent employment	179
Indirect state and local business taxes	\$ 2,770,000

Source: Authors' estimates

Estimates of the impacts on the State of Texas show that the combined effects of dam and pipeline operations will boost statewide economic activity by \$45 million each year. Approximately 235 FTE jobs will be created paying in excess of \$11 million in wages and

⁵ At full operating capacity, the pumping stations will consume about \$29 million per year in electric services in 2002 dollars. For estimating the local impacts of new final demand in the electric utility industry, we have used \$14.5 million in annual electric purchases.

salaries. Local and state taxing jurisdictions will see about \$3.6 million in indirect business tax revenues as a result of these activities (see Table 4-B).

Table 4-B

Recurring Annual Statewide Economic Impacts of Dam and Pipeline Operations

Description	Impact
Total economic activity	\$ 44,980,000
Total salaries and wages	\$ 11,152,000
Total person-years of employment	236
Indirect state and local business taxes	\$ 3,604,000

Sources: Authors' estimates

Section 5: Developmental impacts of the proposed reservoir

Beyond the substantial local economic impacts of dam and pipeline operations are the likely gains in economic activity that will attend the impoundment of the proposed reservoir. This section examines the impacts of reservoir development on surrounding counties such as recreation-based businesses and land developments, enhanced public parkland, population growth with attendant impacts on local housing construction and retail development, construction of vacation/second home owner-occupied properties, and the opportunity for local communities to compete for industrial relocation and expansion in industries sensitive to water availability.

5.1 Impacts of recreational users

The most certain local development that would attend the impoundment of the proposed reservoir is the creation of water-based recreational amenities including fishing, skiing, sailing, general boating, and camping. More importantly, visitors participating in these activities will come with money to spend. Lodging facilities, eateries, marinas, convenience stores, and support service providers will bring development spending to the area providing new visitors

with many opportunities to leave a portion of their earnings in northeast Texas. Of course, some visitors to these facilities will be current area residents; however, local economies gain to the extent that these residents are currently taking their water recreation spending outside of the local area.

While the professional literature offers few studies examining the economic impacts of lakes specifically, a fairly recent analysis sheds light on one aspect of the economic impact of water recreation activities. A 1995 study conducted by Texas A&M for the Texas Parks and Wildlife Department and the Sabine River Authority surveyed anglers at Lake Fork to assess their levels of local spending. Over two-thirds of the survey respondents were non-local residents, with about one-third hailing from outside of Texas. Non-local angler-visitors to Lake Fork spent an estimated \$14.5 million in Wood, Rains, and Hopkins counties during their fishing trips for food, lodging, and supplies. This level of spending encourages business development and supports jobs. While some of this employment will be seasonal, northeast Texas weather patterns permit water-based recreation on a year-round basis. Other lake-based recreation activities will draw additional out-of-area visitors to the region. Combined with angler spending, we estimate that non-local recreation visitors will add more than \$40 million in new spending to the proposed lake counties. This spending will generate an estimated \$54.8 million in local economic activity, support over 1,000 FTE permanent jobs paying \$19.2 million in wages, salaries, and proprietors' income, and provide \$4 million in state and local taxes (see Table 5-A).

5.2 Impacts of new permanent and weekend residents

One trend clearly evident in northeast Texas is that counties with substantial reservoirs have enjoyed higher population growth than counties without these important amenities. Many recreational lake visitors eventually decide to move close to their favorite reservoirs. Carefully

managed residential development can prove to be a tremendous economic boon for lake county economies. We illustrate these impacts with the following scenario: If the development of the Marvin Nichols Reservoir were to attract 2,400 new permanent-resident households to Red River, Franklin, Titus, Bowie, or Morris counties, less than a ten percent increase in the region⁶, an additional \$129 million in earnings would be added to the local economy.⁷ New permanent-resident spending, not including the impacts of housing construction, will add \$135 million in economic activity to Red River, Bowie, Franklin, Morris and Titus counties combined. This new activity will foster the creation of more than 1,200 FTE permanent jobs pumping \$29.8 million in new earnings into the local economy. State and local taxes associated with new resident spending will approach \$5.7 million per year (see Table 5-A). These estimates do not include the impacts of weekend-residents spending a portion of their earnings in the local economy.

Based on estimated populations at other reservoirs, we expect at least 10,000 households will eventually build second, vacation, or investment housing over a 30 year period.⁸ The pace of development will depend on many market-related factors. One of the most critical of these factors will be the extent to which counties and towns adopt well-reasoned development plans to promote quality growth allowing infrastructure development and publicly-provided services to keep pace with new demand. Assuming these weekend residents are present for an average of 48 days per year, and that they import no more than one-half of their proportional spending items from their permanent residence, over \$43 million in new local annual spending will be brought to

⁶ Not including Texarkana and its suburbs.

⁷ Based on \$53,713 in average household income, which is slightly less than average household income for the lake counties, not including Bowie, in 2000. Our estimates assume that 85 percent of this income is disposable income.

⁸ Given the size of the proposed reservoir and population growth in the state's major metropolitan areas, we feel that 10,000 new temporary-resident households being added over a 30-year period is very conservative. Cedar Creek Lake, which has suffered greatly from a lack of residential development planning in its early years, has an estimated weekend population of about 300,000 versus 40,000 residents that permanently reside in area. Most of these permanent residents commute to the Dallas area for work. The proposed Marvin Nichols reservoir is located too far from the Dallas employment centers to attract this many permanent residents. However, the reservoir is conveniently located for weekend housing.

the lake's host counties. This spending will create more than \$52 million in economic activity, support almost 500 jobs paying \$11.7 million in salaries and wages, and boost state and local tax coffers by \$2.2 million per year.

Ongoing impacts of recreational-users' spending, and local spending by permanent and weekend residents will increase local economic activity by \$242 million each year in constant 2002 dollars. This activity will create over 2,800 jobs and boost local earnings by almost \$61 million annually. State and local taxing entities will see \$12 million in new receipts per year.

Table 5-A

Recurring Annual Local Economic Impacts of New Resident and Recreational Out-of-Area Visitor Spending

Description	Impact
Total annual spending: new permanent residents	\$ 86,390,000
Total annual spending: new weekend residents	\$ 43,031,000
Total annual spending: recreational visitors	\$ 40,500,000
Total economic activity	\$ 242,257,000
Total salaries and wages	\$ 60,767,000
Total full-time-equivalent employment	2,821
State and local taxes*	\$ 11,961,000

* Does not include local personal real property taxes. Source: Authors' estimates

5.3 Impacts of new housing construction

As has been true with other reservoirs, the new permanent and weekend resident households described above will likely reside in single-family units. We estimate that the average cost of land and improvements for permanent-resident dwellings will be slightly less than \$121,000. Based on nationwide housing data examined in several studies, vacation and weekend homes will be valued somewhat less than those of permanent residents. We assume an average market value of \$112,500 per weekend dwelling. About 25 percent of the housing values will be for land; therefore, based on our earlier estimates of the number of households that will eventually occupy the areas around the proposed reservoir, we expect more than \$1 billion

in new residential construction activity to occur in the five-county area over a 30 year period. These construction activities will boost the local economy by about \$55 million per year, on average,⁹ support an average of 564 long-term FTE jobs, and boost local income by \$13.7 million (see Table 5-B).

Table 5-B

Local Economic Impacts of Housing Construction
(30-year development)

Description	Impact	
	Total	Average Annual
Construction spending	\$ 1,061,271,000	\$ 35,376,000
Total economic activity	\$ 1,661,392,000	\$ 55,380,000
Total salaries and wages	\$ 412,372,000	\$ 13,746,000
Total full-time-equivalent employment	16,926	564

Source: Authors' estimates

5.4 Impacts on existing timber industry

Of course, there are some potential downsides to the impoundment of the proposed reservoir. Depending on the final mitigation requirements, as much as 200,000 acres of agricultural land, including 150,000 acres of timberland, could be removed from production. However, it is expected that about one-half of the mitigation area will not be located in the five-county area. In addition, as we noted in a separate briefing paper on this issue, an examination of U.S. Forest Service inventories indicates there is much currently-available timberland that is either not in production or is currently under-harvested within a 100 mile radius of the proposed reservoir (see Appendix A). These inventories can easily offset the loss of timberland due to reservoir impoundment and mitigation, regardless of the exact location of mitigation land, resulting in only minor impacts on the logging and milling industries. The loss to the timber industry should be limited to additional transportation costs associated with accessing new

⁹ Housing construction will not be evenly distributed across the period of development.

regional sources of timber in cases where sawmills are located in the immediate area of the proposed reservoir. However, we believe any increase in operating costs will be more than offset by the additional demand for timber products to support the construction of infrastructure, recreational facilities, lodging, and housing projected to accompany the impoundment of the proposed lake. What's more, construction activities for the dam, pipeline, and related infrastructure will temporarily increase the overall local demand for timber products. Local sawmills should enjoy the benefits of these opportunities, especially through the promotion of buy-local strategies of construction contractors. Over the long term, local sawmills could see a 10 percent or greater annual increase in area business opportunities as lake-based amenities and housing stock are developed.¹⁰

5.5 Business development and recruitment

One of the key attractions for new residents, including business people making location choices for plant sites, distribution centers, and other industrial land uses, is the presence of recreational amenities and quality-of-life features. These characteristics have become critical in the site selection process. Having a large reservoir providing abundant water resources and readily available recreational amenities will greatly enhance the local area's attractiveness as a potential site for business development and industrial recruitment.

There will undoubtedly be opportunities to build new parklands around the lake. Local leaders could promote the designation of a new state park adjacent to the lake. A state park, in turn, would enhance the region's ability to draw visitors based on advertising and marketing provided by the Texas Parks and Wildlife Commission. New parkland would also increase the

¹⁰ This estimate is derived from the estimated value of current output from sawmills located in Red River, Franklin, Titus, and Morris counties and the average demand for sawmill products based on projected economic activity described in the economic impact sections of this report.

area's attractiveness to business and generally support a higher quality of life for current and future northeast Texas residents.

Section 6: Local fiscal impacts

Throughout this report, we have noted the impacts of construction activities and new spending on state and local tax revenues. In this section we will specifically estimate some of the new tax revenues that will be enjoyed by counties and school districts from these previously described activities. We will also consider the impacts on local property taxes from the loss of taxable land in the lake impoundment and mitigation areas.

Taxable value of permanent-resident housing at full development is estimated at \$246.5 million¹¹ while taxable value of weekender housing should reach \$1.1 billion. In total, new residential property values will exceed \$1.37 billion, an increase of 19 percent over current combined taxable property values. These properties will provide an estimated \$4.6 million in ad valorem taxes for Red River, Franklin, Bowie, Titus, and Morris counties. Local area school districts also will benefit tremendously from these developments. Total local school district receipts will increase by \$20.2 million per year at full development; however, most of these properties will not add children to the school rolls. Area municipalities and townships could also benefit from increased property tax revenues depending on the degree to which their taxing jurisdictions are expanded to include land adjacent to the proposed reservoir (see Table 6-A).

Taxable retail sales in the five counties examined in this analysis will increase by \$46 million per year based on spending estimates by recreational users, permanent residents, and weekend residents. This spending will potentially generate over \$460,000 in local sales taxes

¹¹ The average value of homestead, senior citizen, disabled, veteran and other exemptions is estimated at 15 percent of total valuation.

annually. Hotel revenues for room rentals are expected to be \$10.5 million per annum. Based on a local bed-tax rate of 5 percent, these expenditures will boost local tax receipts by an additional \$26,000 annually.

Some temporary loss of local property tax revenues from the lake impoundment and environmental mitigation can be expected. However, the impacts will be miniscule. Currently, the value of the impacted timberland in the five county area is estimated at \$18.2 million, less than one-third of one percent of total taxable property value. This comparatively low valuation is due largely to agricultural exemptions and the type of lumber produced on the land. Regaining the estimated \$337,000 in temporarily lost property tax revenues (\$62,000 combined counties, \$275,000 combined school districts) from the reduction in timber and agricultural land will take less than one average year of housing construction as described in Table 5-B. Moreover, our estimates do not consider the additional taxable value that will be created as stores, bait shops, hotels/resorts, restaurants, and other businesses locate around the lake.¹²

Table 6-A

**Recurring Annual Fiscal Impacts of New Housing Developments
and Resident and Recreational Out-of-Area Visitor Spending**

Description	Impact
Total taxable value of housing (permanent and weekend residents)	\$ 1,371,524,000
Estimated new county property tax revenues	\$ 4,608,000
Estimated loss of county timberland & mitigation area tax revenues	\$ 62,000
Net gain in county property tax revenues	\$ 4,546,000
Estimated new school district property tax revenues	\$ 20,573,000
Estimated loss of school timberland & mitigation area tax revenues	\$ 275,000
Net gain in school district property tax revenues	\$ 20,298,000
Total taxable retail sales	\$ 46,465,000

¹² Though this analysis does not estimate the taxable property values of commercial properties that will locate around the lake, rule of thumb estimates suggest that the valuation will exceed \$30 million per year.

Total potential* municipal sales taxes (1% rate)	\$ 465,000
Hotel occupancy tax revenues*	\$ 526,000

* Value will be impacted by land annexation and business location decisions. Source: Authors' estimates

Section 7: Conclusions

The proposed Marvin Nichols reservoir will provide tremendous short-term economic gains to surrounding northeast Texas counties as the dam and related infrastructures are constructed over a multi-year period. Construction of the dam alone will add \$332 million to local economic activity and provide over 1,800 person-years of employment. The dam will also provide on-going economic opportunities to local businesses and jobs for area residents by creating \$3 million in annual local economic activity and supporting 24 permanent jobs.

Once impounded, the lake will attract substantial new private investment in hospitality industries to provide services, meals, and specialty retail goods to the lake's recreational users. Out-of-area recreational users are projected to spend more than \$40 million per year in the local economy. In addition, as seen with other northeast Texas lakes, new residents will be attracted to the region to take advantage of the new recreational amenities, bringing \$150 million in annual local spending to the area at full development. Combined with recreational spending, these new personal outlays will increase local economic activity by over \$242 million per year and support more than 2,800 permanent jobs. Any comparable industrial investment offering this magnitude of economic benefit would probably require exceptional incentive packages from state, county, and local governments. Construction of housing units for permanent and weekend residents will likely spread over a 30-year period providing long-term job and business opportunities in the construction trades. Furthermore, impoundment of the lake will give area economic development practitioners the opportunity to compete more effectively for industries requiring reliable access to water resources.

An expanded tax base will be another payoff from the ancillary development that will attend construction of the reservoir, allowing local governments to provide a broader range of public services while maintaining competitive tax rates. This, in turn, can enhance the area's ability to attract and retain businesses and workers. Even allowing for the loss of taxable timberland, county and local school districts will realize tremendous revenue gains as development occurs around the reservoir. Area municipalities and townships will also find justification in potential property and sales tax revenues to warrant the provision of services to these new communities, further enhancing the region's attractiveness for new residents and new businesses.

In sum, the economic opportunities supported by the proposed reservoir will promote sustainable development while diversifying the local job base.

APPENDIX A

Briefing Paper

Commentary on: “The Economic Impact of the Proposed Marvin Nichols I Reservoir to the Northeast Texas Forest Industry.” Prepared by Weihuan Xu, Ph.D., Texas Forest Service, Publication # 162.

Prepared by: Terry L. Clower, Ph.D. & Bernard L. Weinstein, Ph.D.

The following is our commentary on the above noted publication prepared by the Texas Forest Service reporting the findings of an economic impact analysis of removing 55,631 acres of upland hardwood and bottomland hardwood forests from production as a result of the impounding of Marvin Nichols I reservoir. In addition, this report assumes that between 187,353 and 749,411 acres of additional timberland will have to be removed from production for environmental mitigation.

We believe that the economic impact analysis relies on some critically flawed assumptions. First, the area required for mitigation falls between 3.37 and 13.47 times the directly affected timberland. Even the low end of this assumption is greatly larger than any mitigation previously required in the State of Texas. A more reasonable estimate of the mitigation factor is 1.54 to 1, the mitigation required for the most recently developed reservoir in Texas.

Second, the description of the analysis, as noted above, is apparently based on hardwood forests and harvesting. According to data from the U.S. Forest Service, for an area approximately 100 miles around the directly affected timberland,¹³ total net volume of growing stock on timberland is 8.76 billion cubic feet, 57 percent of which is softwood. Average annual softwood removals more than double the removals for hardwoods. Casual observation clearly shows that softwoods dominate forest production and harvesting in northeast Texas.

The third critical flaw is based on the analyst’s apparent assumption of a fixed, 100 percent utilized supply. The net volume of hardwood growing stock trees on timberland within 100 miles of the reservoir area is about 3.8 billion cubic feet. The most recent harvest data for this area show total hardwood removals of 123.6 million cubic feet per year. However, there was 153.9 million cubic feet of net annual growth, suggesting that replacement has been exceeding removals. Based on the net volume of growing hardwood stock trees and the total estimated acres of hardwood land in the specified area, removing 101,000 acres of producing land (assuming 65,000 acres of direct loss and a 1.54 to 1 ratio for mitigation) will reduce the net volume of growing hardwood stock by 104.7 million cubic feet or about 2.8 percent of total available volume, less than one year’s net annual growth. Simply put, the data show that even with the loss of land for the proposed reservoir, plus reasonable mitigation assumptions, there remains sufficient untapped supply of timber in the area for loggers and mills to continue

¹³ We have been informed that east Texas mills consider 100 miles as a maximum distance for sourcing timber.

operations at current levels of activity. Moreover, this assumes that 100 percent of the mitigation area will impact local timber interests, an unlikely scenario. Therefore, there is no basis for assuming decreased economic activity and the resulting direct and indirect effects of lower levels of timber harvesting.

The fourth flaw is based on the study's scope. The study projects lost economic activity leading to lower employment and earnings for east Texas workers. In reality, even if there were some reduction in logging and mill activities, many of those workers would find employment in construction trades associated with building the reservoir's dam and related structures.

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Bernard L. Weinstein is director of the Center for Economic Development and Research and a professor of applied economics at the University of North Texas. He has taught at Rensselaer Polytechnic Institute, the State University of New York, the University of Texas at Dallas, and Southern Methodist University. Dr. Weinstein has been a research associate with the Tax Foundation and the Southern Growth Policies Board. He has also worked for several U.S. government agencies including the President's Commission on School Finance, the Internal Revenue Service, and the Federal Trade Commission. Dr. Weinstein has authored or co-authored numerous books, monographs, and articles on the subjects of economic development, public policy, and taxation, and his work has appeared in the nation's leading news and financial journals. He has been a consultant to many *Fortune 500* companies, non-profit organizations, and government agencies, and he testifies frequently before legislative, regulatory, and judicial bodies. He was educated at Dartmouth College (A.B.) and Columbia University (M.A. and Ph.D.).

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