

NDSU NORTH DAKOTA STATE UNIVERSITY

January 23, 2023

Re: Upper Great Plains Transportation Institute's 2023-25 Budget Request

Dear Chairman Monson and Members of the House Appropriations Government Operations Division:

The Upper Great Plains Transportation Institute's amended 2023-25 budget request is attached. A new one-time funding request for a study of Multimodal Transportation System Options for Captured Carbon Dioxide has been added to the original request. For the convenience of the committee, I have included this request as a separate amendment (which is the first attached document). It is also included in the revised budget request (the second attached document).

I look forward to discussing this request with you and answering questions about UGPTI's other budget requests.

Sincerely,



Denver Tolliver
Director
Upper Great Plains Transportation Institute
North Dakota State University

Multimodal Transportation System for Captured Carbon Dioxide

As stated in N.D.C.C. 38-22-1, "it is in the public interest [of North Dakota] to promote the geologic storage of carbon dioxide. Doing so will benefit the state and the global environment by reducing greenhouse gas emissions." Governor Burgum's vision is for North Dakota to lead the nation in carbon capture, utilization, and storage (CCUS) and achieve carbon neutrality by 2030. CO₂ has many industrial uses—including enhanced oil recovery—that could spur economic growth and productivity in the state.

North Dakota has the capacity to safely store much of the nation's carbon dioxide output for years to come. However, leading the nation in CCUS (while meeting the demands of industry for carbon dioxide) will require the movement of substantial quantities of CO₂ into the state. Many miles of new pipeline will be needed, not only in North Dakota but in the surrounding region. However, the approval and construction of new pipelines is a lengthy process and controversial in certain respects. North Dakota has little control over the construction of pipelines in other states—which would be needed if CO₂ is to be imported into North Dakota.

While pipelines can serve large installations with connections to the trunk-line network, many possible sources of CO₂ are not served by pipeline and it is not economically feasible to connect all these dispersed sources to the network. However, many of them are already being served by rail. According to the Association of American Railroads (AAR), about 12,000 shipments of CO₂ are transported by railroads in the United States each year in specially designed tank cars. According to AAR, "railroads are interested in working with the Department of Energy to explore opportunities to transport captured carbon dioxide." Because the railroad network is already in place, the acquisition of new right-of-way across farmland and the exercise of eminent domain would not be needed to start transporting CO₂.

A strategic vision for a multimodal CO₂ transportation system that includes both pipeline and railroad options is needed. The purpose of this one-time funding request is to conduct such a study, develop a proposal for federal funding that will illustrate the potential roles of railroads in transporting CO₂, and model CO₂ supply chains to better understand how railroads might serve industries currently located in North Dakota, or companies that might be interested in locating in the state.

In this study, UGPTI will collaborate with Class I and regional railroads, interested industries, and state agencies, including the Departments of Agriculture, Commerce, and Transportation and the Oil and Gas Division. The project will result in assessments of:

- The potential for a multimodal transportation system to transport CO₂ into and within North Dakota
- The potential for transportation of CO₂ by rail and the complementary roles that railroads could play in a comprehensive CO₂ transportation system (including serving CO₂ hubs and distribution centers)

North Dakota State University
Upper Great Plains Transportation Institute
Agency 627
Denver Tolliver, Director

2023-2025 Biennial Budget Request (Amended)

Presented to:
The House Appropriations Committee
Government Operations Division

January 25, 2023

Background Agency Information

Legislative Directives and Purpose N.D.C.C 54-53-03 The Upper Great Plains Transportation Institute’s purpose is to “conduct and supervise research in the field of transportation and logistics in order to facilitate acquisition of a wider knowledge and understanding of marketing factors associated with the geographical location of the state of North Dakota and the upper great plains in the field of transportation and their influence on the socioeconomic systems of the state, region, and country” UGPTI’s research areas “must include the study of commodity and other freight movements into and out of the state in order to better know and understand the various factors affecting the marketing of area products and services (N.D.C.C 54-53-03).”

Advisory Council N.D.C.C 54-53-02 The Legislature established a transportation council to serve in an advisory capacity and “consult with the Institute in matters of policy affecting the administration of this chapter and in the development of transportation in the state of North Dakota.” The council shall elect its own chairman and the Director of the Institute shall serve as the executive secretary of the council.

Administration N.D.C.C 54-53-01 The Institute must be administered by and in conjunction with the North Dakota State University of Agriculture and Applied Science. The president and administration of the North Dakota State University are responsible for the selection of personnel for and the administration of the Institute.

Major Accomplishments in Current Biennium

Biennial Road & Bridge Needs Assessment With its general fund appropriation, UGPTI conducted its biennial analysis of county, township, and tribal road investment needs in the state. The study included 71,808 miles of road, including 5,843 miles of paved county road and 56,656 miles of gravel road. UGPTI staff and student employees counted and classified vehicles at 424 locations on county, township, and tribal roads throughout the state, recording the total number of vehicles per day at each site, as well as the number of trucks, by size category. When combined with NDDOT traffic counts on county roads, UGPTI’s traffic data provide a comprehensive picture of traffic around the state. In addition to the traffic counts, UGPTI analyzed the surface conditions of more than 2,750 miles of paved county road, collecting ride quality data in a cost-effective manner using sensors and special smart phones apps to measure road roughness and video images to assess road conditions (e.g., cracking) and develop composite ride scores. A survey was administered to each county to determine blading and gaveling practices, the sources and costs of gravel, and other cost factors needed for the unpaved portion of the road analysis. All 53 counties responded to the survey. The current conditions of 2,336 bridges on county roads were assessed during the biennium. The results are summarized below.

County, Township, & Tribal Road & Bridge Needs (Millions)

Time Period	Unpaved Roads	Paved Roads	Bridges	All
Twenty Years	\$6,545.66	\$3,248.80	\$715.57	\$10,510.01
Current Biennium	\$660.35	\$557.10	\$139.42	\$1,356.87
Avg. Biennial	\$654.57	\$324.88	\$71.56	\$1,051.00

Audits

A team from the Office of the State Auditor audited UGPTI's financial transactions and expenditures for the biennium that ended June 30, 2021. The audit did not identify any areas of concern. This was the only audit of UGPTI during the biennium.

UGPTI Funding Sources

*Special
Funds*

UGPTI does not operate facilities or assess fees that generate revenue on a continuous basis. Rather, UGPTI's special funds appropriation request represents the authority to collect grants and contracts from state and local agencies and private industries. Most of UGPTI's special funds originate from the North Dakota Department of Transportation under a strategic agency partnership that has benefited North Dakota for the last four decades. The ND Wheat Commission and several metropolitan planning organizations (MPOs) are the other regular providers of grant funding in addition to the NDDOT. There is uncertainty in the levels of these grants and contracts that will be received during any biennium.

*Federal
Funds*

The federal fund request represents a ceiling for UGPTI's federal grant collections. It is the agency's best projection of the authority needed to procure all grants that may become available during the biennium. The vast majority originates from the U.S. Department of Transportation (U.S. DOT), including grants from the Office of the Secretary, Federal Highway Administration, Federal Transit Administration, Federal Motor Carrier Safety Administration, and the National Highway Traffic and Safety Administration. Some grants (such as the University Transportation Center grant) are provided directly to UGPTI by federal agencies. In other cases, the funds are "federal source funds" provided by third parties through the federal procurement process. Although federal funds are important to UGPTI's budget, they have pre-determined uses. Ultimately, UGPTI has limited discretion in determining which critical issues are researched with federal funds. Federal research funds (although very important) are not a substitute for state research dollars.

*General
Funds*

Although state general funds comprise a minor portion of UGPTI's overall budget, they are essential to the agency's success and sustainability. State general funds are needed to match federal grants and provide continuity in times of delay or disruption in federal funding. Many of UGPTI's direct grants (such as the University Transportation Centers grant) require a 100% match of non-federal source funds. UGPTI's general funds are the only dependable source of match for these funds. Moreover, general funds are the only hard dollars in UGPTI's budget. Federal and special funds are provided at the discretion of intermediate agencies and third parties and are subject to the budget limits placed on these agencies.

Details

Specifically, the funding will be used to repurpose and equip a room in the Quentin Burdick Building, including remodeling expenses, computer workstations for staff and students, monitors to display field and traffic data, mini supercomputer to process large incoming data streams and run computationally intensive data mining and machine learning algorithms, servers to store and archive large data streams, and supporting telecom equipment.

Freight Transportation & Logistics Biennial Surveys and Reports

Background and Needs

North Dakota's economy is dependent on freight transportation and logistics services. Transportation and supply-chain bottlenecks and breakdowns have major impacts on producers and industries. The Legislature and State agencies need comprehensive and current information to monitor rapidly changing industry activity levels and logistics patterns and identify trends, issues, and needs in a proactive manner. UGPTI currently analyzes and publishes shipment data from elevators to markets. However, this report covers only a portion of the supply chain and does not include information on farm-to-elevator, farm-to-processing plant, and elevator-to-processing plant movements or manufactured goods.

Benefits to the State

If this request is funded, UGPTI will conduct surveys and publish reports each biennium about the transportation patterns and needs of agricultural processors, shipments from farms to elevators, inbound and outbound shipments to and from manufacturing plants by mode and shipment type (as well as assessments of the quality of transportation services provided), and information on commercial trucking in North Dakota, including the sizes of firms, the commodities hauled, the types of equipment used, equipment ages and utilization rates, fuel consumption rates, and other information. In addition to this detailed information, the reports will include assessments of the transportation challenges and needs facing each sector. The reports will provide the Departments of Transportation, Agriculture, and Commerce (and other agencies) with critical planning information.

Details of Request

This request for \$408,134 in base funding has been approved by the North Dakota Board of Higher Education and UGPTI's Advisory Council. However, this funding is not included in the Executive Recommendation presented earlier. The budget request reflects two FTEs. However, this request will not increase UGPTI's total FTE level, as two positions which are currently open will be redefined to provide the two new positions identified in the budget.

UGPTI's Role and Statutory Responsibility

UGPTI is the ideal agency for this effort, as UGPTI can: (1) offer individuals and companies confidentiality of the raw data they provide, (2) combine the data collected by the new surveys with existing data to provide a comprehensive picture of freight transportation and logistics in the State, and (3) serve State agencies and the Legislature by providing them with tailored reports and information each biennium. The request will allow UGPTI to better fulfil its statutory responsibilities to study "commodity and other freight movements into and out of the state in order to better know and understand the various factors affecting the marketing of area products and services."

General Fund Budget Request for 2023-25 Biennium

Item	Funding Category		Total
	Base Level	One Time	
Current Funding Level	\$4,485,607		\$4,485,607
Executive Recommendation	\$305,104	\$432,600*	\$737,704
Freight Transportation & Logistics Option	\$408,134	\$0	\$408,134
Multimodal CO ₂ Transportation Study		\$398,450	\$398,450
Total General Fund Request	\$5,198,845	\$831,050	\$6,029,895

* Transportation Data Intelligence Center included in Executive Recommendation

Additional Request for Salary Package. The requests presented above do not include salary increases for July 1, 2023 or July 1, 2024. The equity adjustment recommended by Governor Burgum is the only salary adjustment provided for in the requests. In addition to the equity adjustment, UGPTI is requesting that the final salary adjustments for the biennium (as enacted by the Legislature) be added to the amounts presented in this request. Moreover, UGPTI requests that 70% of the salary increases for the 2023-25 biennium provided by the Legislature be funded through general funds. UGPTI's grants and contracts do not include built-in escalation clauses to pass through salary increases to federal or state funding agencies. This request is consistent with the funding formula for the equity adjustment recommended by Governor Burgum.

**ANALYSIS OF THE STRATEGIC INVESTMENT AND IMPROVEMENTS FUND
FOR THE 2021-23 AND 2023-25 BIENNIUMS
(REFLECTING THE 2023-25 BIENNIUM EXECUTIVE BUDGET RECOMMENDATION)**

	2021-23 Biennium		2023-25 Biennium	
		\$863,342,901		\$1,252,056,624
Beginning balance				
Add estimated revenues				
Production royalties (2017 SB 2134; 2019 SB 2211) ^{1,2}	\$280,340,662		\$217,118,000	
Oil and gas bonuses ^{1,2}	0		0	
Mineral revenue refund repayments (2017 SB 2134; 2019 SB 2211) ²	(37,901,738)		0	
Mineral leases ¹	5,137,352		0	
Investment earnings ¹	(2,732,343)		17,650,565	
Oil and gas tax collections (2021 HB 1015; 2021 SB 2014, 2021 SB 2249, 2021 SB 2319; executive budget) ^{3,4}	898,500,000		493,963,459	
Total estimated revenues		1,143,343,933		728,732,024
Total available		\$2,006,686,834		\$1,980,788,648
Less estimated expenditures and transfers				
Secretary of State				
Information technology project (executive budget)			\$1,500,000	
Office of Management and Budget				
Information technology projects (2021 HB 1015)	\$3,251,304			
Transfer to the cultural endowment fund for the maintenance of public arts projects (2021 HB 1015)	1,000,000			
Deferred maintenance funding pool			20,000,000	
Information Technology Department				
Information technology projects (executive budget)			34,351,650	
Attorney General				
Litigation funding pool (2021 HB 1003)	3,000,000			
North Dakota University System				
Capital building fund program (2021 SB 2003; executive budget)	19,000,000		19,000,000	
Campus projects (2021 SB 2003)	2,863,000			
Lake Region State College				
Wind turbine replacement project (executive budget)			480,000	
Dickinson State University				
Agriculture and technology education building project (executive budget)			900,000	
Mayville State University				
Old Main renovation project (executive budget)			3,779,100	
Minot State University				
Dakota Hall demolition project (executive budget)			765,000	
Dakota College at Bottineau				
Old Main renovation project (executive budget)			3,700,000	
Veterans' Home				
Parking lot repairs (executive budget)			750,000	

State Department of Health and Human Services - Human Services Division			
Information technology projects (executive budget)			11,000,000
State Hospital project planning and design (executive budget)			10,000,000
Job Service North Dakota			
Unemployment insurance information technology project (executive budget)			45,000,000
Insurance Commissioner		200,000	
Study of lignite coal industry insurance (2021 HB 1010)			
Industrial Commission		9,500,000	
Transfer to the oil and gas research fund (2021 SB 2014)		250,000,000	
Transfer to the clean sustainable energy fund (executive budget)			250,000,000
Bank of North Dakota		15,000,000	
Transfer to the innovation loan fund to support technology advancement (2021 HB 1141)			
Department of Corrections and Rehabilitation			
Information technology project (executive budget)			2,307,000
Heart River Correctional Center project (executive budget)			161,200,000
James River Correctional Center maintenance shop project (executive budget)			1,550,000
Adjutant General			
National Guard deferred maintenance projects (2021 HB 1016)		1,000,000	
Dickinson Readiness Center project (executive budget)			10,000,000
Camp Grafton project (executive budget)			6,000,000
Department of Commerce			
Beyond visual line of sight unmanned aircraft systems (2021 SB 2018)		19,000,000	
Enhanced use lease grants (2021 SB 2018)		7,000,000	
Job development grant (2021 SB 2018)		1,500,000	
Workforce safety grant (2021 SB 2018)		1,500,000	
Agriculture Commissioner		5,000,000	
Grasslands grazing grant program (2021 HB 1009)			5,500,000
Bioscience grants (executive budget)			
Upper Great Plains Transportation Institute			
Remote sensing infrastructure (2021 SB 2020)		225,000	
Branch Research Centers			
Capital projects at the Carrington Research Center, the Central Grasslands Research Center, the Hettinger Research Center, and the Langdon Research Center (2021 SB 2020)		2,073,000	
NDSU Main Research Center			
Equipment storage sheds (executive budget)			1,900,000
Deferred maintenance projects (executive budget)			720,000
Northern Crops Research Center			
Feed center project (executive budget)			3,900,000
State Historical Society			
Historic site projects (executive budget)			6,751,500
Medora area planning (executive budget)			2,000,000
Exhibit projects (executive budget)			595,000
Parks and Recreation Department			
Various capital projects at parks and deferred maintenance (executive budget)			5,000,000
Local park district grants (executive budget)			6,000,000

State park matching grants (executive budget)			1,500,000
Lake Metigoshe master plan (executive budget)			750,000
Department of Transportation			
Matching federal funds (executive budget)			300,000,000
Transfer to the general fund (2021 HB 1015; executive budget)	410,000,000		400,000,000
Administrative costs/other fees	3,517,906		4,000,000
Total estimated expenditures and transfers		754,630,210	1,320,899,250
Estimated ending balance		\$1,252,056,624	\$659,889,398
Restricted fund income		68,349,040	68,349,040
Reserve relating to potential title disputes (2017 SB 2134; 2019 SB 2211) ^{2,6}		80,000,000	80,000,000
Loan guarantees (2011 SB 2306; 2013 SB 2287; 2019 SB 2296; 2021 SB 2230) ⁷			
Estimated ending balance - Unobligated		\$1,103,707,584	\$511,540,358

¹The amounts shown reflect projections by the Department of Trust Lands for the 2021-23 bienniums.

²Senate Bill No. 2134 (2017) changes the definition of the ordinary high water mark related to sovereign minerals, reducing the mineral revenue to the strategic investment and improvements fund and requiring refund payments for previously received mineral revenues. The bill appropriated \$100 million from the strategic investment and improvements fund and authorized \$87 million from a line of credit through the Bank of North Dakota for the mineral revenue refund repayment during the 2017-19 biennium. Some production royalties may be deposited in the strategic investment and improvements fund prior to the implementation of the repayment process. The bill provided legislative intent that the \$87 million line of credit is to be repaid from the strategic investment and improvements fund; however, the total amount of funding needed for mineral revenue refund repayments is unknown and any changes to the amount of funding or the line of credit repayments will be determined by future legislative assemblies. Mineral revenue refund repayments began in the fall of 2020. The amounts shown for the refund repayments reflect the amounts paid through April 2022 pursuant to the department's continuing appropriation.

House Bill No. 1202 (2019) clarifies the definition of navigable waters, which may affect the state's mineral interests and mineral revenue deposited in the strategic investment and improvements fund. However, the estimated impact is unknown.

³Estimated revenues - The estimated allocations for the 2021-23 biennium are based on actual oil and gas tax revenue allocations through April 2022 and the 2021 legislative revenue forecast for the remainder of the 2021-23 biennium.

⁴House Bill Nos. 1014 and 1066 (2019) and Senate Bill Nos. 2016, 2249, 2312, and 2362 (2019) change the oil and gas tax revenue allocation formulas. The combined effect of the bills results in a decrease in the allocations to the strategic investment and improvements fund.

House Bill No. 1015 (2021) increases the oil and gas tax revenue allocation limit for the state disaster relief fund by \$5 million and aligns the allocations to the municipal infrastructure fund and the county and township infrastructure fund to provide allocations to the two funds at the same time after the initial allocation to the strategic investment and improvements fund. For the 2021-23 biennium only, Senate Bill No. 2014 (2021) limits the allocations to the North Dakota outdoor heritage fund to \$7.5 million per fiscal year. Senate Bill No. 2249 (2021) increases the oil and gas tax revenue allocation limit for the state disaster relief fund by \$5 million, the same as House Bill No. 1015 (2021). Senate Bill No. 2319 (2021) allocates a portion of the oil and gas tax revenue collected from oil wells that cross into a reservation to the tribes decreasing the state's share of oil and gas tax revenues. The combined effect of the bills results in an increase in the allocations to the strategic investment and improvements fund.

⁵House Bill No. 1014 (2019) provides a contingent transfer of up to \$40 million from the strategic investment and improvements fund to the infrastructure revolving loan fund if the actual oil and gas tax revenues deposited in the strategic investment and improvements fund during the 2017-19 biennium exceed \$755 million. The contingency was met, and the amount shown for the 2019-21 biennium reflects the actual transfer to the infrastructure revolving loan fund.

⁶These amounts represent mineral revenues received from areas of the Yellowstone and Missouri Rivers and Lake Sakakawea where mineral rights are in dispute. Pursuant to action of the Board of University and School Lands, this portion of the fund balance is designated to be held in reserve. The assigned fund balance is adjusted only when approved by the board, which is usually done in August of each year.

⁷Senate Bill No. 2287 (2013) increased the guarantee reserve fund balance from 25 to 100 percent, not to exceed a total of \$25 million, through July 31, 2015. After July 31, 2015, the amount of reserves for all guaranteed loans must be determined by a formula that will provide an adequate amount of reserves as determined by the Bank of North Dakota. Money may be transferred from the strategic investment and improvements fund to reimburse lenders for guaranteed loans in default.

Senate Bill No. 2296 (2019) increased the limit for loan guarantees to \$50 million. Senate Bill No. 2230 (2021) increases the loan guarantee limit to \$80 million.

FUND HISTORY

House Bill No. 1451 (2011) provided the lands and minerals trust fund be renamed the strategic investment and improvements fund, and as soon as feasible after June 30, 2011, the State Treasurer close out the lands and minerals trust fund and transfer any remaining unobligated balance to the strategic investment and improvements fund. The lands and minerals trust fund originated in 1977 when the Legislative Assembly transferred to the Board of University and School Lands possessory interest in properties obtained by the Bank of North Dakota, including tracts of real property and reserved mineral interests.

All income from the sale, lease, and management of the mineral interests relating to these properties is deposited in the strategic investment and improvements fund, pursuant to North Dakota Century Code Section 15-08.1-08. The principal and interest of the fund may be used for one-time expenditures relating to improving state infrastructure or for initiatives to improve the efficiency and effectiveness of state government. Money in the fund may be included in draft appropriation Acts under Section 54-44.1-06 and may be appropriated by the Legislative Assembly, but only to the extent the money is estimated to be available at the beginning of the biennium in which the appropriations are authorized.

Prior to July 1, 2015, if the unobligated balance of the strategic investment and improvements fund exceeded \$300 million at the end of any month, 25 percent of any revenues received for deposit in the strategic investment and improvements fund were deposited instead into the legacy fund in the subsequent month. In House Bill Nos. 1176 and 1377 (2015), the Legislative Assembly amended Section 15-08.1-08 to remove the provision related to the additional deposits of revenue in the legacy fund from the strategic investment and improvements fund. The unobligated balance in the fund is defined as the balance in the fund reduced by appropriations or transfers from the fund authorized by the Legislative Assembly, guarantee reserve fund requirements under Section 6-09.7-05, and any fund balance designated by the Board of University and School Lands relating to potential title disputes related to certain riverbed leases.