MATANUSKA-SUSITNA BOROUGH Fish & Wildlife Commission

350 E Dahlia Ave., Palmer, Alaska 99645

CHAIRPERSON
Andy Couch

VICE CHAIR
Pete Probasco

MSB STAFF
Maija DiSalvo

BOARD MEMBERS
Howard Delo
Larry Engel
Tim Hale
Gabe Kitter
Bill Gamble
Kendra Zamzow
Ex officio: Jim Sykes

Special Meeting

August 22, 2024

Supplemental Handout – Table of Contents

Physical Location of Meeting: Assembly Chambers, DSJ Bldg, Palmer. Remote Participation: See agenda.

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Planning Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7833
www.matsugov.us

August 22, 2024

Ryan Anderson
Commissioner, Alaska Department of Transportation & Public Facilities
P.O. Box 112500
3132 Channel Drive
Juneau, AK 99811-2500

Dear Commissioner Anderson:

On behalf of the Matanuska-Susitna Borough (MSB) Fish and Wildlife Commission (FWC), a body created to advise and make recommendations to the Assembly, Borough Manager, and/or any state or federal agencies, departments, commissions, or boards possessing jurisdiction in the area of fish, wildlife, and habitat, please accept the following scoping comments on the proposed West Susitna Access Road project. The FWC is deeply concerned about potential adverse impacts on fish and wildlife habitat, struggling fish populations, displacement of wildlife, and limitations on existing fishing and hunting opportunities in the West Susitna region due to the scale and scope of the proposed project.

The Alaska Department of Transportation's (ADOT) stated purpose and need for the 22-mile project includes increased access for recreation and settlement *and* the economic development of resources.[1] We are aware of the Alaska Industrial Development and Export Authority's (AIDEA) efforts to build the West Susitna Industrial Access Road – a 100-mile road to access mining claims in the West Susitna region. We understand that the ADOT project will directly connect to the larger AIDEA project. Therefore, we encourage ADOT and AIDEA, both state entities, to conduct an environmental review for the entire 100-mile project to fully understand the impacts, as opposed to only a 22-mile segment of the larger project.[2]

While we are not opposed to projects that increase access and encourage economic development, there are often significant environmental, social and economic costs that must be carefully evaluated prior to moving forward. Due to the scale of the entire project and the potential significant adverse effects to anadromous streams, connected wetlands, and fish and wildlife populations, we recommend the preparation of a full Environmental Impact Statement (EIS) following the Environmental Assessment (EA) process.[3] The EIS would evaluate the project impacts in more detail and would allow for a more robust public process.

[1] West Su Access, Draft Brief Statement of Purpose & Need at 2.
[2] 40 CFR §1501.3(b) ("The agency shall evaluate, in a single review, proposals or parts of proposals that are related closely enough to be, in effect, a single course of action.")
[3] 40 CFR §1501.3(d)

In recent years, the Mat-Su region has experienced declines in salmon populations. Major threats to salmon include urbanization, overharvest, habitat alteration or loss, and the pressures associated with warming ocean and inland water temperatures. Roads are already a major contributing factor of habitat loss in the MSB, and the spread of invasive species like Northern pike and elodea due to increased access are all known contributing factors to declines in salmon populations.[4] [5] To date, the MSB, in collaboration with local partners, has spent significant resources replacing culverts to reconnect "1000 stream miles and more than 6000 acres of lake habitat for salmon rearing and spawning." [6] This ongoing work represents a major commitment by the MSB to revitalize our fisheries. This massive investment is also one of the major reasons why we are concerned about the West Susitna Access Road project.

The proposed West Susitna Industrial Access Road will cross 182 streams, at least 83 of which are known to support salmon populations. Productive salmon habitat requires a high diversity of freshwater habitats.[7] These habitats are created naturally as rivers and streams move back and forth across floodplains, often creating unique "off-channel" protective areas that are essential to salmon reproduction and juvenile survival.

Roads that bisect or parallel waterways prevent rivers and streams from naturally migrating across floodplains, leading to habitat fragmentation and loss.[8] Even with careful culvert placement, rivers, and streams will eventually migrate, cutting off access to upstream habitats, or if prevented from shifting, will become disconnected to critical off-channel habitats that are essential to salmon survival. In addition, roads are often designed to confine rivers to a particular channel, which can lead to dramatic changes in water temperature, chemistry, and flow. These impacts, coupled with the impacts of rising water temperatures due to climate change, have the potential to adversely affect all levels of the food chain, which decreases available nutrients and food sources needed for juvenile salmon survival.[9]

For these reasons, both the West Susitna Access Road project and the larger West Susitna Industrial Access Road project have the potential to cause significant adverse effects on fish and wildlife habitats and already struggling salmon populations throughout the West Susitna region. We urge the ADOT to conduct a more rigorous EIS of the proposed project and consider the significant environmental, social, and economic effects of the entire 100-mile road. Thank you for your consideration.

Sincerely,

Andy Couch
Chair, Matanuska-Susitna Borough Fish & Wildlife Commission

[4] Sepulveda, A.J., D.S. Rutz, S.S. Ivey, K.J. Dunker, and J.A. Gross. 2013. Introduced northern pike predation on salmonids in southcentral Alaska. Ecology of Freshwater Fish 22:268-279. DOI: 10.1111/eff/12024.
[5] Bradley, P., C. Jacobson, and K. Dunker. 2022. Operational Plan: Alexander Creek Northern pike suppression, 2022-2024. ADFG Regional Operational Plan No. ROP.SF.2A.2022.21. 27 pp.
[6] Matanuska-Susitna Borough Fish and Wildlife Commission, It Takes Fish to Make Fish Report, 2024.
[7] Brennan, S.R., D.E. Schindler, T.J. Cline, T.E. Walsworth, G. Buck, and D.P. Fernandez. 2019. Shifting habitat mosaics and fish production across river basins. Science 364:783-786. DOI: 10.1126/science.aav431
[8] Angermeier PL, Wheeler AP, Rosenberger AE (2004) A conceptual framework for assessing impacts of roads on aquatic biota. Fisheries 29:19–29
[9] Wenger, S. J., D. J. Isaak, C. H. Luce, H. M. Neville, K. D. Fausch, J. B. Dunham, D. C. Dauwalter, M. K. Young, M. M. Elsner, B. E. Rieman, A. F. Hamlet, and J. E. Williams. 2011. Flow regime, temperature, and biotic interactions drive differential declines of trout species under climate change. Proceedings of the National Academy of Sciences of the United States of America 108:14175–80. DOI: 10.1073/pnas.110309710

Re: Fw: ADNR Public Scoping Process: Public meeting (today) & written comment end of month

Jim Sykes<lzmtsykes@gmail.com>

You forwarded this message on Thu 8/22/2024 9:05 AM

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

Hi Maija

Like your suggested changes. It's been a while since I've been involved with and EIS. There used to be a requirement to consider cumulative impacts. That could be one clear negative aspect of applying the process to only a portion of the entire proposed road.

Things that come to mind are increased public access having an impact on fisheries, both permitted and unpermitted activities.

Research into what possible impacts could affect the wetlands and the fisheries requirements used to be far less in an EA than an EIS. The critical current situation with both the wetlands and fish populations demand the highest level of inquiry to ensure conservation, and restoration that needs to be done.

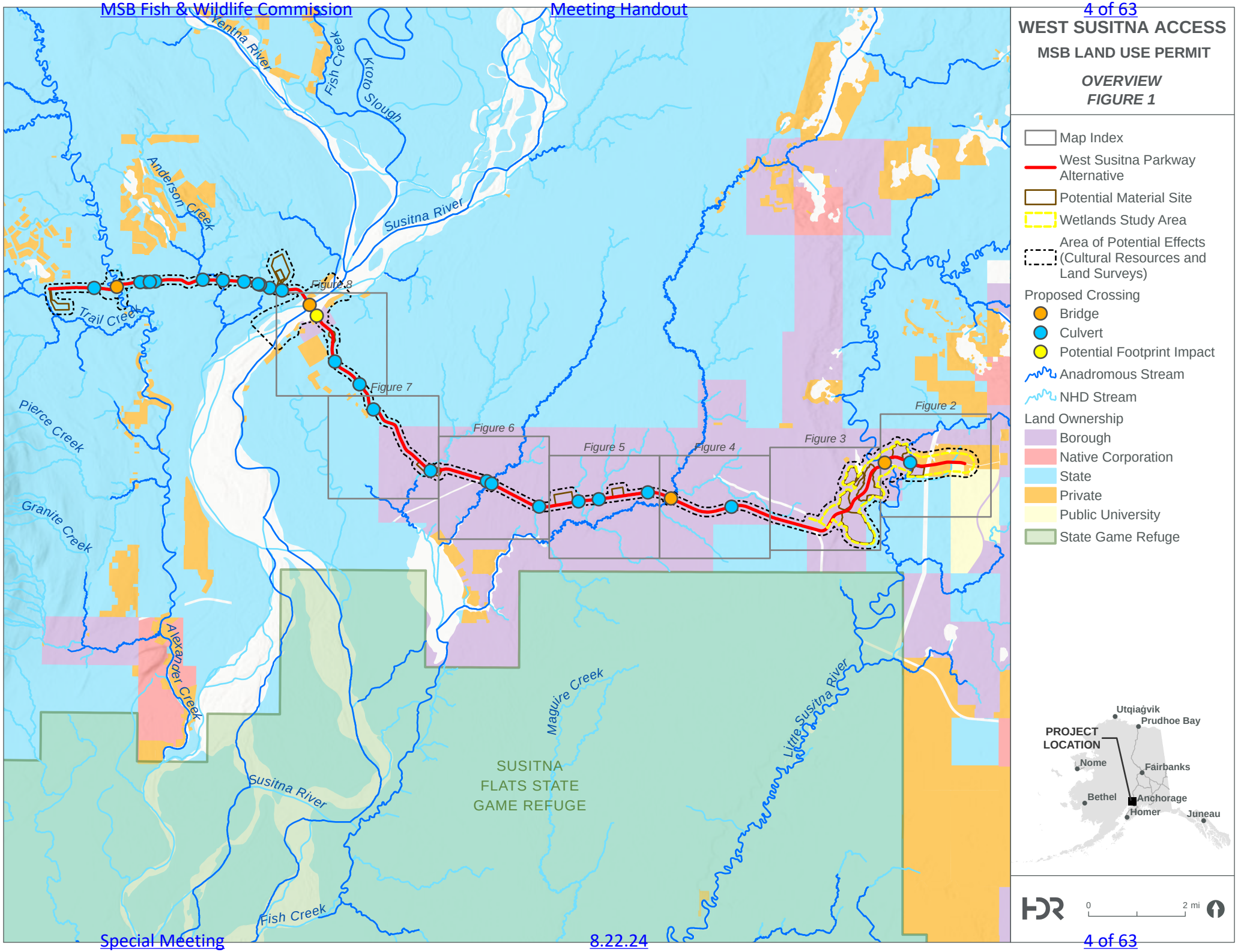
Mat-Su wetlands are the largest consistent basin that drains into Cook Inlet and much of it contains aquatic based vegetation that defines it as being within waters of the US--which demands an additional level of input from anyone who has information--from local and traditional knowledge, user groups, local and regional governments, and anyone who has an interest or knowledge about the potential effects.

The review is being billed as this little tiny project, when in fact it could become very large as soon as the first portion of road creates the opportunity for increased access and development projects that do not have any venue for review.

Just my latest thoughts.

Thanks!

Jim
907-354-6962



WEST SUSITNA ACCESS

MSB LAND USE PERMIT

OVERVIEW
FIGURE 1

- Map Index
- West Susitna Parkway Alternative
- Potential Material Site
- Wetlands Study Area
- Area of Potential Effects (Cultural Resources and Land Surveys)

Proposed Crossing
- Bridge
- Culvert
- Potential Footprint Impact

- Anadromous Stream
- NHD Stream

Land Ownership
- Borough
- Native Corporation
- State
- Private
- Public University
- State Game Refuge

HDR

0 2 mi

Action:

MATANUSKA-SUSITNA BOROUGH
RESOLUTION SERIAL NO. 24-084

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY SUPPORTING THE WEST SUSITNA ACCESS ROAD PROJECT WITH AN EASTERN TERMINUS IN THE POINT MACKENZIE AREA.

WHEREAS, the West Susitna basin covers nearly 6.2 million acres and has a diverse natural resource base; and

WHEREAS, surface road access west of the Parks Highway to public lands in the West Susitna basin is minimal or non-existent; and

WHEREAS, access to public lands in the west Susitna would open a vast geographic expanse inaccessible by road; and

WHEREAS, the Alaska Department of Transportation and Public Facilities (DOT&PF) proposes to construct this project as a new, rural public road to facilitate access to public lands in the West Susitna basin; and

WHEREAS, this project will provide critical infrastructure intended to improve recreational opportunities, access to natural resources, and economic opportunities within the region; and

WHEREAS, the alignment of the West Susitna Access Road in the Point MacKenzie area offers benefits to the community, better utilizes existing transportation infrastructure, including Point MacKenzie and Knik Goose Bay Roads, and positions potential resource development activity in closer proximity to tidewater via

Port MacKenzie while at the same time providing expanded recreational opportunities.

NOW, THEREFORE, BE IT RESOLVED, the Matanuska-Susitna Borough Assembly supports the West Susitna Access Project; and

BE IT FURTHER RESOLVED, the Matanuska-Susitna Borough Assembly supports an eastern terminus in the Point MacKenzie area. A West Susitna Access Road terminus in the Point MacKenzie area will enhance economic opportunities, create a more direct and efficient transportation route for commercial and industrial activities, distribute traffic more evenly across the region, and support access to improved recreational opportunities; and

BE IT FURTHER RESOLVED, the Matanuska-Susitna Borough Assembly urges the DOT&PF to consider the benefits outlined in this resolution and to support the alignment of the West Susitna Access Road with an eastern terminus in the Point MacKenzie area.

ADOPTED by the Matanuska-Susitna Borough Assembly this - day of -, 2024.

_____
EDNA DeVRIES, Borough Mayor

ATTEST:

_____
LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)

McKINLEY RESEARCH GROUP, LLC

Formerly McDowell Group

ECONOMIC IMPACTS OF WEST SUSITNA ACCESS ROAD DEVELOPMENT

October 2022

PREPARED FOR:

State of Alaska Office of the Governor

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Executive Summary

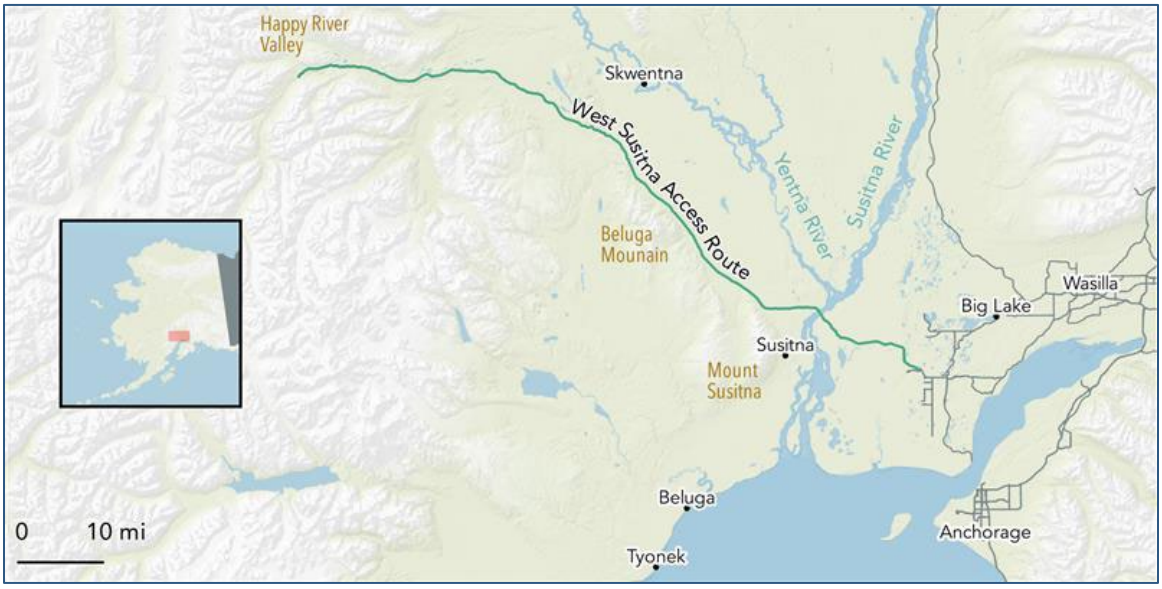
The State of Alaska 2014 *Roads to Resources* report identified the West Susitna Access Road Project as a priority for development in the state. The Alaska Industrial Development and Export Authority (AIDEA), a public corporation of the State of Alaska, and the Matanuska-Susitna Borough (MSB) have partnered to pursue a phased feasibility analysis of the access road project.

The West Susitna Access Road is a proposed, 100-mile public-access roadway from the Port MacKenzie area to the Yentna Mining District. The project would open a vast geographic expanse in the Matanuska-Susitna (Mat-Su) Borough currently not accessible by road. Skwentna and Susitna are the only year-round communities located within 10 miles of the proposed route. The road would provide new access to land with a mix of public and private ownership; many private cabins currently exist within 10 miles of the route.

The proposed route falls entirely on public lands with land east of the Big Susitna River owned by the MSB and land west of the river owned by the State of Alaska, and construction costs are currently estimated at $356.9 million.

This report describes the key potential economic impacts of West Susitna Access Road construction on natural resource extraction industries and recreational use in the region. Environmental impacts of road construction and related industrial traffic are outside the scope of this study.

Proposed West Susitna Access Road



Source: Alaska Industrial Development and Export Authority.

Natural Resource Extraction Potential Impacts

The West Susitna region has abundant natural resources which are currently not financially feasible to extract due in part to lack of road transportation access.

Mining

The region has a long history of mineral exploration. There are three primary projects in various stages of exploration. Advancing any of the projects from development to a producing mine would be significantly more likely if the West Susitna Access Road were constructed, as mine construction alone is currently not financially feasible without enhanced all-weather access. If any one of these projects were developed, the region could see between 200 and 500 new direct mining jobs and $24 million to $59 million in annual operating wages. MSB would benefit from significant new infrastructure subject to property tax, and the State of Alaska would benefit from various mining tax and royalty receipts, estimated at $7 million annually based on the Estelle Project alone.

Forestry and Agriculture

Construction of an access road would also enhance access to lands with timber resources and agricultural-grade soils. With nearly 600,000 acres of forestland in the area, timber resources could be valued at as much as $66.2 million in lifetime sales. However, poor quality timber due to beetle infestation, the need for a more extensive network of access roads, and current low demand for road-accessible timber in the Mat-Su region all make it unlikely for this full value to be realized. Agricultural lands in the region could produce as much as $11.2 million in crop sales annually. Like forestry, agricultural development on land in this region would likely be homestead-scale in the near term due to distance from markets and lack of proven crop potential. If the State and/or Borough sold all acres of agricultural-suited land identified in the West Susitna region, land sale proceeds could total $21.5 million.

Recreation Potential Impacts

The area's potential for recreation and related economic activity is currently restricted by lack of access. Road construction would likely increase visitation to the area for consumptive and non-consumptive recreation uses, given the region's proximity to Alaska's largest population centers. Across multiple recreation opportunities, follow-on infrastructure would be necessary to attract recreational users and grow the area's recreation economy.

There has not been construction of a road with similar length and proximity to major populations in Alaska's recent history, and therefor exact estimates of the number of recreation users which might use the access road are not available without further detailed research.

Fishing

The West Su region currently hosts sport and personal use fishermen. In 2020, an estimated 10,000 anglers sportfished the waterways most likely to be impacted by road construction, catching predominantly coho salmon, other non-Chinook salmon species, and northern pike. Total sportfishing license revenue paid to the State of Alaska from activity on waterways in the West Susitna region was between $250,000 and $600,000 in 2020.

Construction of the West Susitna Access Road is most likely to entice more anglers to the Skwentna River and its tributaries where current access is most limited. The road would also intersect with the new lower Susitna salmon dipnet fishery. In 2020, this fishery saw an estimated 377 days fished, significantly lower than Alaska's most popular personal use fisheries on the Kenai Peninsula. Given the proximity of this dipnet fishery to Anchorage and the Mat-Su, road access would likely draw significantly more participants, to the extent fisheries management allows growth in effort and harvest.

Hunting

The West Susitna region is also a big game hunting destination for moose, Dall sheep, bear, and caribou, among others, with a total 624 big game animals harvested in 2021. Most hunts in the region are classified as general season, the least restrictive hunt type in Alaska with harvest open to residents and nonresidents. In total, 2021 hunting-related revenue based on activity in the West Susitna region was at most $1.9 million to $2.6 million.

The number of hunters in the region has been limited due to lack of access. Road access is expected to draw significantly more hunters to the region, and the highest proportion would likely be Southcentral Alaska residents.

Increased hunting access and interest in the region may enhance the recreation industry through modest increases in demand for hunting guides and potential stops by hunters at local wilderness lodges. However, added pressure on big game species would need to be monitored closely by area biologists, and any regulatory change from general season to more restrictive hunt types would negatively impact wilderness lodges whose marketing position relies on least restrictive hunting access.

Snowmachining

Areas of the West Su region are already popular snowmachining destinations, primarily for Southcentral Alaska residents. Snowmachines also provide significant access to the many seasonal, private cabins in the region. Area rivers act as snowmachine routes, and miles of groomed trails linked to Alaska's road system provide access to unroaded areas in the West Su area. While exact use is unavailable, hundreds of snowmachiners currently recreate in the area. Enhanced road access and follow-on infrastructure such as parking lots with space to accommodate trailers would likely bring new snowmachiners to the area, increase the range of current area users, and reduce pressure on existing areas and infrastructure.

Other Recreation

Along road-accessible regions of Alaska, non-consumptive recreation such as hiking, camping, and wildlife viewing generally accounts for the highest volume of visitors. Non-consumptive recreation in the West Su region has been restricted by lack of road transportation, which also restricts the size of the area's recreation industry. Construction of the West Susitna Access Road and follow-on infrastructure such as trails and campgrounds could significantly increase the volume of recreation users in the area, which can in turn enhance employment and earnings in the area's recreation section.

Wilderness Lodges

Visitors to Alaska drawn to hunting, fishing, snowmachining, and other recreational opportunities in the West Susitna region often stay at one the area's many wilderness lodges. About 25 lodges in the area accommodate a range of activities from hunting and fishing, to skiing and wildlife viewing. While peak summer employment at these lodges totaled 107 in 2021 according to State of Alaska employment records, this measure underrepresents the many self-employed people, family members, and contractors who play a vital role in operation of these small businesses. Taxes paid by area lodges benefit the local and state governments, including a total $61,720 in MSB property tax paid assessed in FY2022, MSB bed tax, and state corporate income tax (between $0 and $100,000 in FY2022).

Enhanced road access to the region would likely have most impact on the five lodges located within two miles of the proposed route. These lodges may see economic benefits from additional drive-in visitors. Any regulatory changes to big game hunting in the region would likely have a negative economic impact to lodges which market primarily hunting packages. For all wilderness lodges in the region, well-defined law enforcement responsibilities and funding would be important to mitigating potential safety and trespass concerns along the access road.

Introduction

The State of Alaska 2014 *Roads to Resources* report identified the West Susitna Access Road Project as a priority for development in the state. The Alaska Industrial Development and Export Authority (AIDEA), a public corporation of the State of Alaska, and the Matanuska-Susitna Borough (MSB) have partnered to pursue a phased feasibility analysis of the access road project.

This study is intended as a high-level assessment of the economic values associated with development of the West Susitna Access Road, including natural resource (mining, forestry, agriculture) and recreational opportunities which would be most impacted by enhanced access. This study is sponsored by the State of Alaska; benefits to the state associated with road construction are highlighted in the document.

Methodology

The study team used a variety of published and unpublished data sources throughout this assessment. These include secondary data provided by the following:

- Alaska departments of Fish & Game, Labor and Workforce Development, Natural Resources, and Transportation & Public Facilities,
- Matanuska-Susitna Borough, and
- Private companies with operating interest in the area.

In addition to secondary data collection, the study team interviewed more than 20 industry representatives, local and regional recreation organizations, and other stakeholders to assess potential economic impacts related to road construction. Interview participants included:

- Alaska Coal Regulatory Program
- Alaska Department of Fish & Game, Division of Wildlife Conservation
- Alaska Department of Fish & Game, Records and Licensing
- Alaska Department of Fish & Game, Division of Sport Fish
- Alaska Division of Agriculture
- Alaska Division of Forestry & Fire Protection
- Alaska Division of Geological & Geophysical Surveys
- Alaska Range Alliance
- Anchorage Snowmobile Club
- Bulchitna Lake Lodge
- Cook Inlet Region, Inc.
- GoldMining, Inc.

- Jade North
- Matanuska-Susitna Convention and Visitors Bureau
- Mat-Su Trails and Parks Foundation
- Matanuska-Susitna Borough, Community Development Department
- Matanuska-Susitna Borough, Resource Sales
- Nova Minerals Limited
- Rainy Pass Lodge
- Skwentna Roadhouse
- University of Alaska Anchorage, Institute of Social and Economic Research

McKinley Research Group also drafted a survey in cooperation with the Alaska Range Alliance so member lodges and guides could easily provide employment and other economic information. However, the Alliance chose not to implement the survey as part of this analysis.

Study Region

The area in the MSB west of the Susitna River includes a vast geography. The study area used for different components of this assessment varies based on the activity addressed because the impacts of a single road depend on the nature of development in each sector, biological factors, and pre-existing geographic units overlapping this region. For example, discussion of impacts to hunting activity rely on data for the State of Alaska's Game Management Unit (GMU) 16. While this area covers a much broader region than would be directly accessible from the new access road, mobility of the animal species in the area means any impacts to game would be felt much further from the road corridor. In other instances, the area addressed in this assessment is defined as a pre-determined natural resource management unit with pre-existing resource estimates for assets such as timber or agricultural soils.

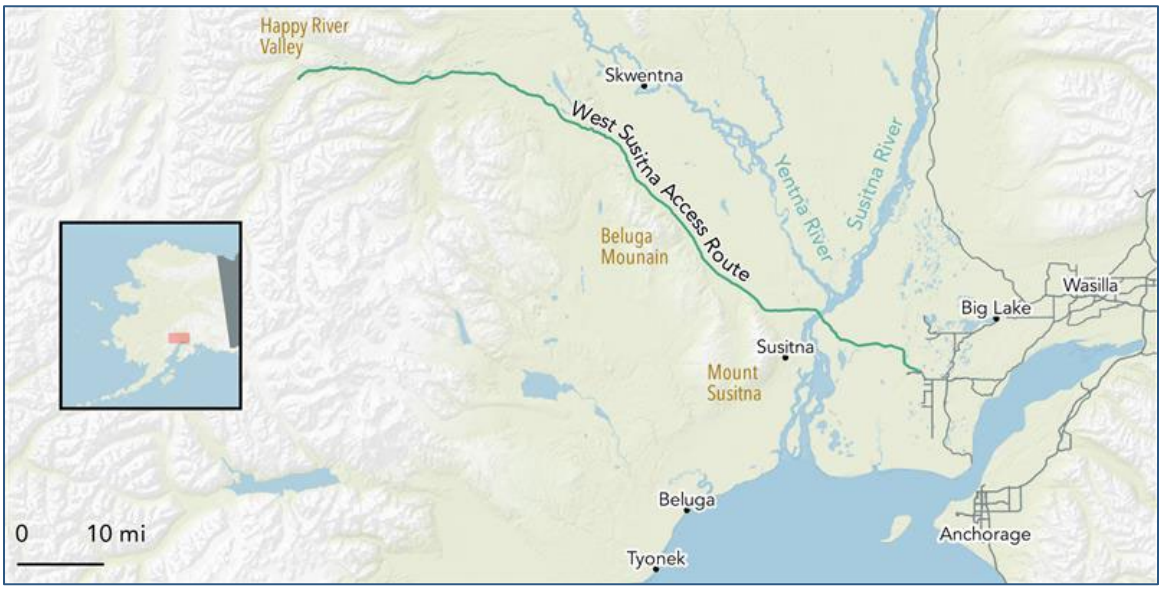
West Susitna Access Road Project

The area referred to in this report as the West Su region covers a large geographic area west of the Susitna River. The area is largely inaccessible by road except for the Petersville Road, a 32-mile road at the far north end of the Mat-Su Borough. The region is a popular recreation destination for Alaska residents and visitors, who often stay at one of the area's many wilderness lodges. Areas in the West Su region also have a long history of mineral exploration.

West Susitna Access Road Project

The West Susitna Access Road is a proposed, 100-mile public-access road project leading from the Port MacKenzie area to the Yentna Mining District in the Matanuska-Susitna (Mat-Su) Borough. Beginning in Fish Creek (near Port MacKenzie), the planned route runs northwest into the Alaska Range. The proposed road would have a surface width of 24 feet with a design speed of 45 miles per hour. The route would cross 156 known waterbodies, requiring 11 bridges and 145 culverts. As proposed, the road falls entirely on public lands with land east of the Big Susitna River owned by the Matanuska-Susitna Borough and land west of the river owned by the State of Alaska. Most of the route falls within State lands managed by the Alaska Department of Natural Resources.

Figure 1. Proposed West Susitna Access Road



Capital costs for West Susitna Access Road construction are currently estimated at $356.9 million.[1] The construction cost of the road could be recovered through various financial mechanisms, as have other publicly funded developments elsewhere in Alaska.

Year-Round Communities

Outside of the area immediately surrounding the beginning of the proposed route, few communities with year-round residents are in the West Su region. Two communities within the area – Susitna and Skwentna – are near the proposed route. Tyonek and Beluga could potentially see enhanced access from construction of the access road and follow-on infrastructure.

Table 1. West Susitna Region Community Characteristics

Community	Borough	ANCSA Regional Corporation	Population	Distance from Proposed Access Route
Susitna	Matanuska-Susitna	Cook Inlet Region, Inc.	10	6.1 miles
Skwentna	Matanuska-Susitna	Cook Inlet Region, Inc.	60	10.0 miles
Beluga	Kenai Peninsula	Cook Inlet Region, Inc.	35	31.4 miles
Tyonek	Kenai Peninsula	Cook Inlet Region, Inc.	151	41.1 miles

Source: Alaska Department of Commerce, Community, and Economic Development.

Land Ownership

Construction of the access road would likely have the most immediate impact on land within about 10 miles of the proposed route. The 3,078 parcels in this 10-mile route corridor encompass about 73,000 acres of land.[2] About 61% of the land within this radius is owned by the Matanuska-Susitna Borough, State, or Federal government. The remaining 39% is owned by private individuals or businesses, including Alaska Native Claims Settlement Act (ANCSA) regional or village corporations.

Table 2. Land Ownership Within 10 Miles of Proposed West Susitna Access Road Route

Owner Type	Number of Parcels	Total Acres
Privately-Owned	2,618	28,448
Private	2,602	25,726
ANCSA Corporation	16	2,722
Government-Owned	460	44,500
State of Alaska	307	19,404
Matanuska-Susitna Borough	140	24,979
Federal Government	13	117
Total	**3,078**	**72,948**

Source: Matanuska-Susitna Borough and McKinley Research Group estimates.

[1] HDR Alaska, Inc. *Preliminary Engineering Report West Susitna Access – Phase 2*. March 2, 2021.
[2] 10-mile radius from proposed West Susitna Access Route excludes on-road areas of the Mat-Su Borough.

Of all land within this 10-mile radius, 90% is vacant, including 75% of privately held lands. Residential buildings in the area are generally small, personal use cabins owned by individuals.

Table 3. Land Acres by Building Type, 10 Mile Radius of Proposed West Susitna Access Road Route

Building Type	Privately-Owned		Publicly Owned		Total
	Acres	%	Acres	%	%
Existing Structure	7,064	25%	300	1%	10%
Residential	6,775	24%	256	1%	10%
Residential with Commercial Use	170	1%	44	<1%	<1%
Other Commercial (Utilities, Transportation, Churches)	118	<1%	0	0%	<1%
Vacant	21,385	75%	44,200	99%	90%
Total	**28,448**	**100%**	**44,500**	**100%**	**100%**

Source: Matanuska-Susitna Borough and McKinley Research Group estimates.

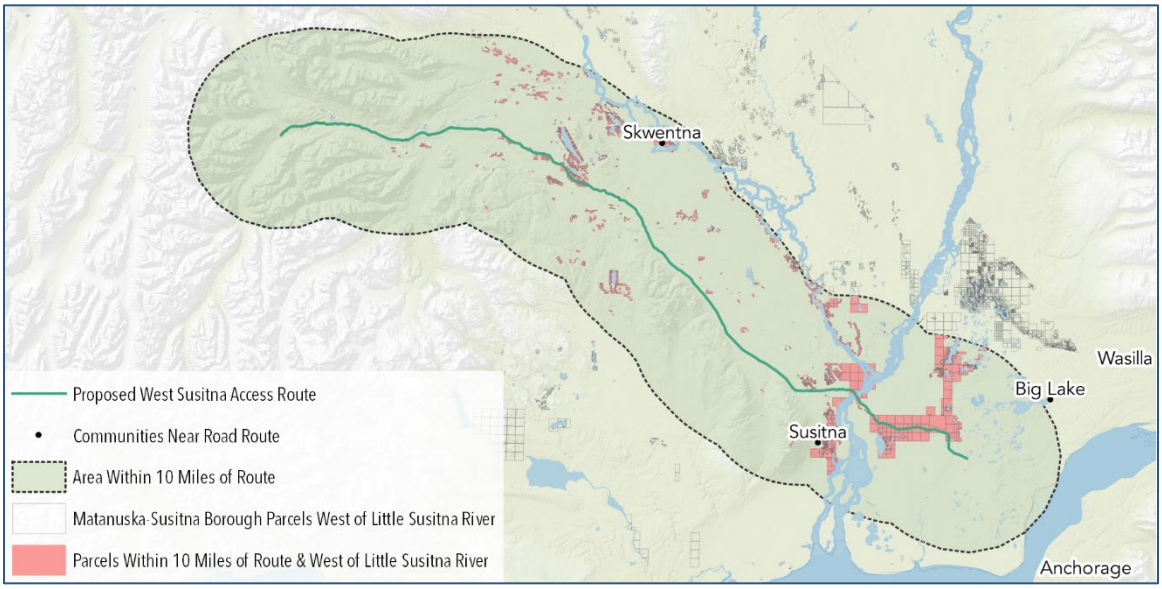
On average, private parcels along the corridor have an assessed value of $21,393 based on MSB tax assessment, including land value of $13,096 and building value of $8,297. Privately held parcels along this corridor were assessed an average $187 in property tax in FY2022.

Table 4. Average Value and Tax Assessed Per Parcel, Private Parcels in a 10 Miles Radius of Proposed West Susitna Access Road Route

Building Type	Land Value	Building Value	Total Value	Tax Assessed
Existing Structure	$17,500	$30,799	$48,299	$422
Residential	$17,502	$29,692	$47,194	$414
Residential with Commercial Use	$15,214	$73,647	$88,861	$826
Other Commercial (Transportation, Churches)	$22,633	$57,183	$79,817	$301
Vacant	$11,472	$0	$11,472	$101
Total	**$13,096**	**$8,297**	**$21,393**	**$187**

Source: Matanuska-Susitna Borough and McKinley Research Group estimates.
Note: Excludes parcels with utility infrastructure.

Figure 2. Parcels Within 10 Miles of the Proposed West Susitna Access Road Route



Source: Matanuska-Susitna Borough and McKinley Research Group.

Project Status

The Alaska Industrial Development and Export Authority (AIDEA) filed an Environmental Review Permit Application with the U.S. Army Corps of Engineers (USACE) in May 2022.

Natural Resource Extraction Impacts

This section describes potential impacts of West Susitna Access Road construction on mine development, forestry and timber sales, and agricultural operations in the region.

Mining

Yentna Mining District and Adjacent Claims

Access to mineral resources is the primary driver of the West Susitna Access Road project. The road is intended to run through the Yentna Mining District, a broad geographic area running from Denali National Park to Cook Inlet. The district has several known hard rock mineral resources (including copper, gold, silver, molybdenum, iron, and platinum group elements) and coal resources.

As of July 2022, there are 2,253 active mining claims held by 128 leaseholders in the Yentna Mining District. The proposed access route is designed to lead to the largest cluster of claims near the Tordrillo Mountains in the Alaska Range. Another significant cluster of claims is in the northwest corner of the Yentna Mining District, representing mainly placer mining operations accessible via the Petersville Road. For purposes of this study, mining claims which would most benefit from road access via the proposed route are those south of the Yentna River, accounting for 1,439 claims covering 220,040 acres. Another 18 claims (1,800 acres) in the Redoubt District are within 10 miles of the proposed route.

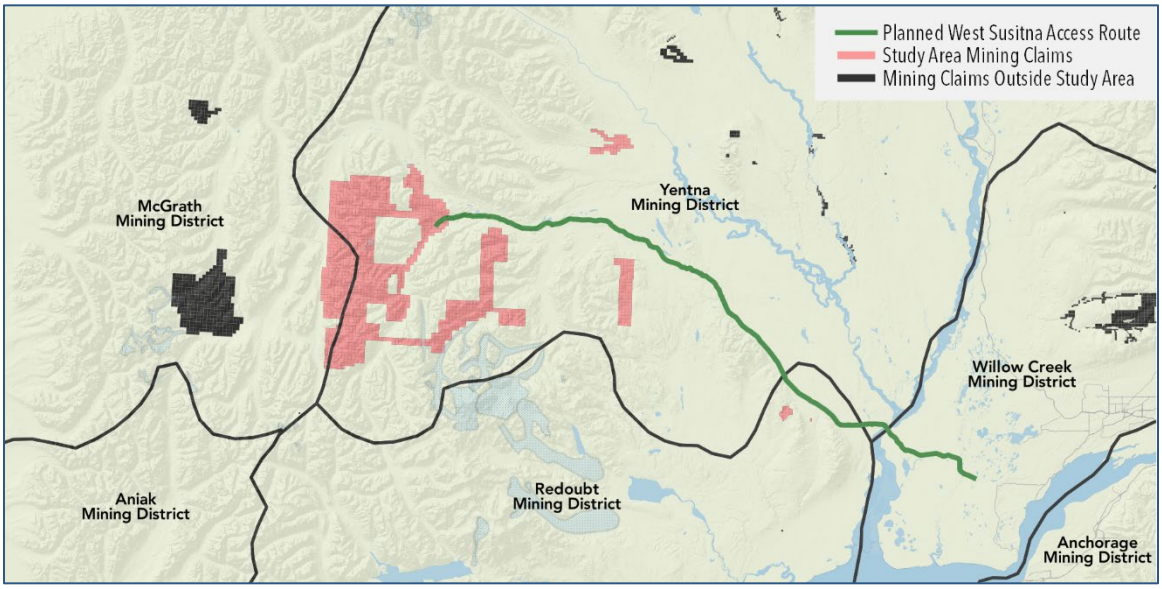
An additional 265 claims (42,400 acres) in the McGrath District are contiguous with this "South Yentna" area. Although these claims are some distance from the end of the proposed route, development costs associated with projects on those claims could be substantially reduced if an access road were in place.

Table 5. Mining Claims Adjacent to the Proposed West Susitna Access Route

Mining District	Number of Claims	Unique Leaseholders	Acres
Yentna District south of Yentna River	1,439	5	220,040
McGrath District (contiguous)	265	2	42,400
Redoubt District	18	2	1,800
West Susitna Access Road Adjacent	**1,722**	**7***	**266,280**

Source: Alaska Department of Natural Resources and McKinley Research Group.
Note: Data are current as of July 2022.
* Two leaseholders have claims in multiple mining districts.

Figure 3. South Yentna Mining District Claims and Proposed Access Route



Source: Alaska Department of Natural Resources and McKinley Research Group.

Coal Fields

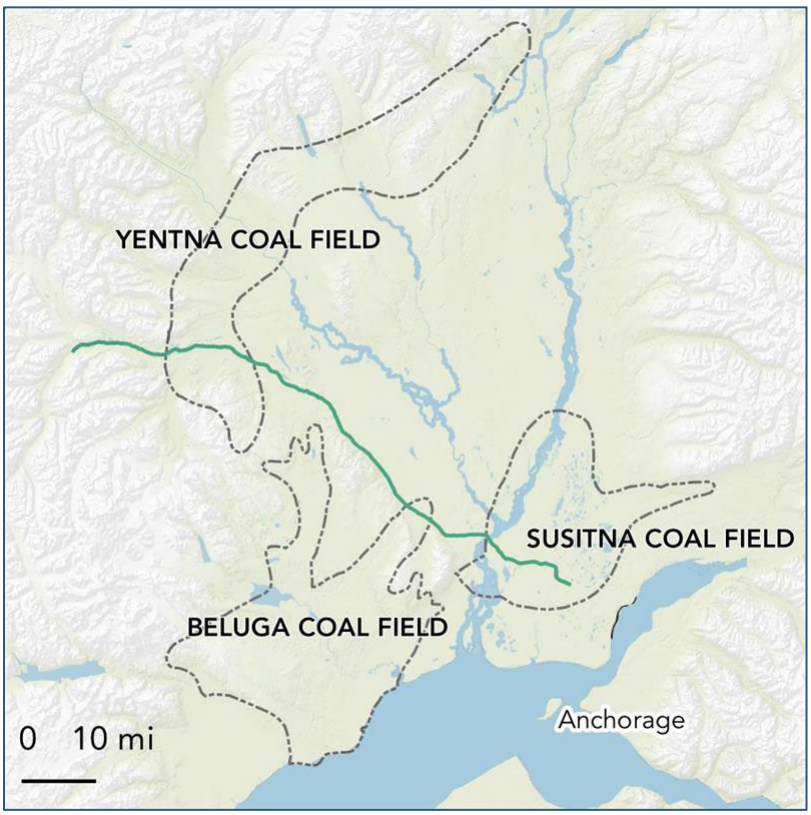
The West Susitna region also includes three coal fields with a combined identified resource of over 10 billion short tons of coal. As with much of the area west of the Susitna River, much of the land in these areas is owned by the State of Alaska. The coal resource in this region is generally ultra-low sulfur coal, similar to the coal resources extracted at the Usibelli Coal Mine (Alaska's only producing coal mine). Ultra-low sulfur coal is used in-state to generate heat and electricity for Interior Alaska, and in the past has been exported to Asian markets and Chile as a blending coal mixed with higher sulfur-content coals.

Table 6. Coal Resource in the West Susitna Region

Coal Field	Coal Rank	Identified Resource (short tons)
Beluga Field	Subbituminous	10 billion
Yentna Field	Subbituminous	1 billion
Susitna Field	Subbituminous	110 million
Total	-	11.1 billion

Source: West Susitna Access Reconnaissance Study, Alaska Department of Transportation and Public Facilities, 2014.

Figure 4. Coal Fields in the West Susitna Region



Source: Alaska Department of Natural Resources and McKinley Research Group.

The region has been the site of several coal development projects pursued by various companies over the last decades. The State of Alaska has one active coal lease within the Yentna Coal Field, held by the Alaska Asia Mining Company and covering 8,960 acres.[3]

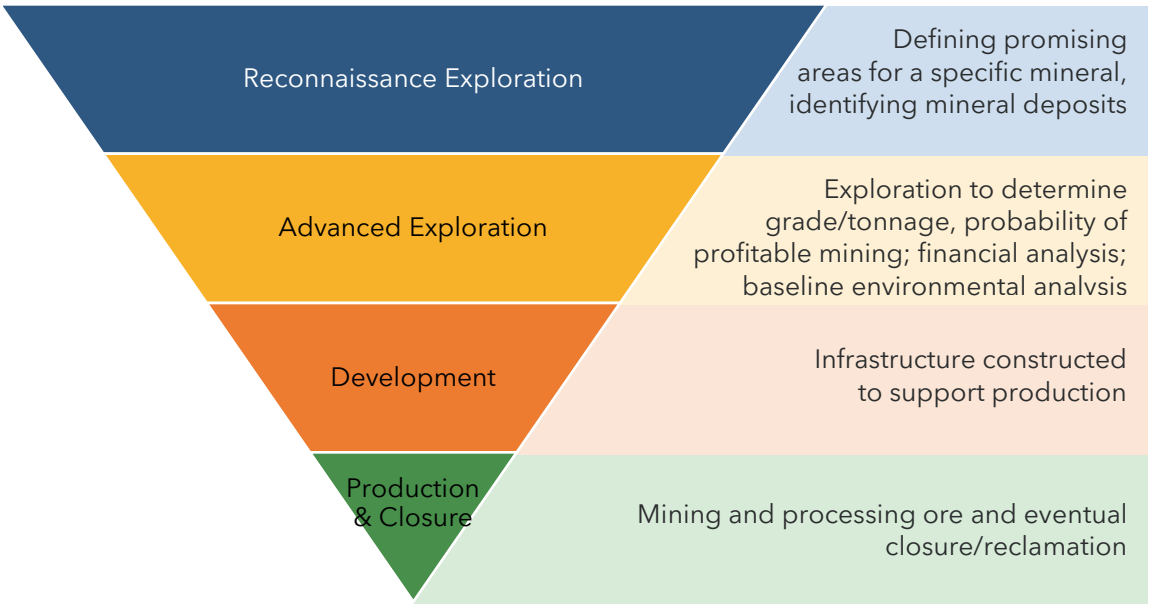
The Mining Cycle and Timeline

Years, and sometimes decades, of exploration, environmental and financial study, and permitting are generally required to move from identifying a mineral resource to development of needed infrastructure and operations. Planning, permitting, and development must also consider closure and reclamation.

At each stage of this process, barriers such as insufficient resources, economic infeasibility, or permitting requirements may prompt a mining company to sell or otherwise discontinue exploration, development, or production.

[3] Flatlands Energy Corporation. *Coal Exploration Application*. May 9, 2018.

Figure 5. The Mine Cycle Timeline



Source: McKinley Research Group.

Exploration Projects

While a range of exploration activity occurs across the claims in this region, the West Susitna area currently has two hard-rock and one coal development projects.

Table 7. Mineral Exploration Projects, West Susitna Study Area, 2022

Project	Owner	Land Ownership	Resources	Inferred Resource	Status
Estelle	Nova Minerals Limited	State of Alaska	Gold, copper, silver	6.6 Moz.	Moderate exploration
Whistler	GoldMining Inc	State of Alaska	Gold, copper	2.8 Moz.	Significant exploration
Island Mountain	GoldMining Inc	State of Alaska	Gold, copper	2.0 Moz.	Significant exploration
Raintree West	GoldMining Inc	State of Alaska	Gold, copper	1.6 Moz.	Significant exploration
Canyon Creek	Alaska Asia Mining Company	State of Alaska	Coal	165 Mmst.	Moderate exploration

Source: Nova Minerals Limited, GoldMining Inc, Alaska Department of Natural Resources, and UAA ISER.

ESTELLE GOLD PROJECT

The Estelle Gold Project is owned by Nova Minerals Limited and is situated on about 20 known gold and polymetallic (copper/silver/gold) prospects. Mining claims associated with the project

are located on state-owned land. The company's drilling program has focused on two main deposits – the Korbel Main and RPM North deposits.

Nova currently operates the Whiskey Bravo camp as its base for exploration activity. The company employs between 40-60 workers for about nine months annually to pursue exploration activity.[4] Company officials estimate 95% of current employees are Alaska residents, with about 70-80% living the Mat-Su Borough. Employees are housed at an 80-person, on-site camp facility. The camp is connected to Alaska's road system by a 100-mile, seasonal snow road (operational January-March) which enables the relatively cost-efficient movement of heavy machinery, fuel, and other supplies. Due to water crossings and terrain, this snow road can be used to move most exploration equipment but would not provide appropriate access for mine camp construction or moving large-scale mining equipment.

In 2022, the company completed a Phase 1 Scoping Study to assess the potential to support an open pit mining operation based on resources at the Korbel Main Deposit. The study confirmed the potential economic viability of a stand-alone gold operation at the site, which would include an open pit mine and mill. The company is preparing to conduct Phase 2 of the Scoping Study which will incorporate resources from the RPM North Deposit. Nova has proceeded with environmental studies and plans to complete a pre-feasibility study by the end of 2023, with a goal of a final investment decision in 2025 followed by mine construction in 2026. Based solely on the Korbel Main Deposit, capital costs to construct the mine are an estimated $424 million, including site infrastructure, plant, and mining equipment costs. These costs could increase to $500-$600 million, when including mining of resources from RPM North.

Table 8. Estelle Gold Project Deposits, Million Ounces of Gold

Deposit	Indicated Resource (Moz)	Inferred Resource (Moz)
Korbel	3.0	5.1
RPM North	-	1.5

Source: Nova Minerals Limited.

Construction of the West Susitna Access Road is critical to building an operating mine at the Estelle Project due to inadequacy of seasonal snow roads to meet material and equipment movement needs for mine construction. Company officials estimate construction would take 18 months and require about 600-800 workers to complete. During the mine operating phase, Nova expects the mine to employ about 200-400 workers on an annual average basis based solely on the resource at the Korbel Main Deposit.

[4] Based on personal communities with Nova Minerals Limited in August 2022.

WHISTLER

Owned by GoldMining Inc., the Whistler Project is a gold-copper exploration project on 304 mining claims on state-owned land. The project includes three deposits with estimated mineral resources – Whistler, Raintree, and Island Mountain deposits. Between 1986 and 2011, several project operators pursued drill programs, resulting in a total 257 holes concentrated in the Whistler (52 holes), Raintree (94 holes), and Island Mountain (36 holes) areas. Open pit and underground mining configurations are under consideration for this project.

Table 9. Whistler Gold Project Deposits, Million Ounces or Pounds

Deposit	Gold (Moz)	Copper (Mlbs)	Silver (Moz)	Gold-Equivalent (Moz)
Indicated Resource				
Whistler	1.7	399.4	6.8	2.7
Raintree (pit and underground)	0.2	22.6	1.6	0.3
Island Mountain	-	-	-	-
Total Indicated	**1.9**	**422.0**	**8.3**	**3.0**
Inferred Resource				
Whistler	1.7	455.3	7.3	2.8
Raintree (pit and underground)	1.3	125.4	4.9	1.6
Island Mountain	1.7	130.8	3.8	2.0
Total Inferred	**4.7**	**711.4**	**16.1**	**6.4**

Source: GoldMining Inc.

A 50-person camp is located on-site and has been used primarily for summer fieldwork. The previous company exploring these deposits, Kiska, had constructed a seasonal winter trail south from the Petersville Road area to the project site to facilitate movement of fuel, equipment, and other exploration and camp materials.

GoldMining Inc., which purchased the projects in 2015, is currently building out a plan for the restart of exploration drilling in the coming exploration seasons. Currently at the resource analysis stage, the company plans to advance to the Scoping Study stage over the next two years. There are currently no estimates of capital cost of construction, operating employment, established mine life, or other financial factors are available for this project.

CANYON CREEK

The Canyon Creek coal project is an exploration project within the Susitna Coal Basin. Leases associated with the project are located on state-owned land southwest of Skwentna. In 2018, the Alaska Asian Mining Company, an exploration firm, received a permit to drill up to 20 exploration holes over a two-year period. Drilling was expected to be helicopter-supported with

no road or camp infrastructure construction at this phase.[5] The Canyon Creek project coal resource is estimated at 165 million short tons.[6]

SUMMARY

Economic evaluation of mining projects generally includes estimates of labor requirements during mine and/or mill operations. The Estelle Project is the only exploration project in this region for which estimates of operating phase employment are available.

Employment requirements can be estimated for the remaining projects based on estimated resources, grade, mine life, stripping ratio, and prevailing commodity price assumptions. In 2022, the University of Alaska Anchorage (UAA) Institute of Social and Economic Research (ISER) used this methodology to estimate direct employment requirements related to mineral exploration projects across Alaska, including projects which would benefit from improved access with development of the proposed West Susitna route. The following table describes estimated employment for each project as reported by Nova Minerals Limited and UAA ISER.[7] Associated wages are based on average annual wages paid by the mining sector in Alaska in 2021 as reported by the Alaska Department of Labor and Workforce Development's (DOLWD) Quarterly Census of Employment and Wages (QCEW).

Given the varying stages of development across the major exploration projects in the West Susitna region, construction and operation of these mining projects are unlikely to be concurrent if projects are found economically feasible. If any one of the projects became an operating mine, it is reasonable to expect that direct jobs associated would range from a low of 200 jobs up to a high of 500 jobs. This range of employment would likely support between $24 million and $59 million in annual wages, in 2021 dollars.

Table 10. Potential Annual Direct Mine Operating Jobs and Wages, West Susitna Area

Project	Operating Jobs	Operating Wages ($millions)
Estelle	200-400	$24-$47
Whistler	500	$59
Island Mountain	360	$42
Raintree West	230	$27
Canyon Creek	300	$35

Source: University of Alaska Anchorage, Institute of Social and Economic Research; Alaska Department of Labor and Workforce Development; and McKinley Research Group estimates.
Note: Whistler, Island Mountain, and Raintree West are all within the Whistler Gold Project. Operating jobs estimates are based on a combined resource estimate from each deposit.

[5] Flatlands Energy Corporation. *Coal Exploration Application*. May 9, 2018.
[6] Bob Loeffler and Professor Brett Watson, University of Alaska Anchorage Institute of Social and Economic Research. *The Economic Potential of Alaska's Mining Industry*. March 8, 2022.
[7] Ibid.

Potential Access Road Impacts

As with any industry, the economic activity supported by an operating mine extends beyond the people directly employed at the mine site. Additional employment is supported as the mining company purchases goods and services from other businesses in the state or local economy, referred to as "indirect impacts." Mine employees spending their wages in the local economy supports addition "induced impacts." Collectively, these indirect and induced impacts are known as multiplier effects. Multiplier effects differ by industry and company based on industry labor intensity, resident hire, economic leakage (percent of goods or services purchased from out of state), transportation modes, and many other factors.

For Alaska's hard rock mining sector, employment multipliers range from 1.8 to 2.4 and labor income multipliers from 1.5 to 1.9.[8] The exact multiplier effects associated with operation a new mine in the West Susitna area would differ based on mine design (i.e., open pit versus underground), infrastructure developed to support the mine (i.e., mill construction, location of electricity production), types of goods and services used to support operations (i.e., chemicals, machinery, environmental services), transportation modes, and need for on-site camp services to house employees and contractors.

Based on the multiplier impacts of producing mines in Alaska, exploration projects in the West Susitna region could support a range of additional jobs and wages in the state economy once operational, as described in the following table. Total jobs and wages supported would vary significantly based on the project, from a low of a total 380 jobs supported up to a high of 1,200 total jobs (including direct, indirect, and induced impacts). Total wages related to a fully developed mine once in operations could range from a low of $38 million up to $115 million.

This level of total employment would be supported during the operating phase of the mine's life but would likely be lower during initial production and mine closure.

Table 11. Potential Annual Mine Direct and Multiplier Impacts, West Susitna Area

Project	Operating Jobs	Operating Wages ($millions)	Total Jobs Impact Range	Total Wage Impact Range ($millions)
Estelle	200-400	$24-$47	380-960	$38 - $90
Whistler	500	$59	950 – 1,200	$95 -$115
Island Mountain	360	$42	680 – 860	$65 - $80
Raintree West	230	$27	450 – 550	$40 - $55
Canyon Creek	300	$35	500 – 1,000	$50 -$70

Source: University of Alaska Anchorage, Institute of Social and Economic Research; Alaska Department of Labor and Workforce Development; and McKinley Research Group estimates.

[8] Based on McKinley Research Group (formerly McDowell Group) economic impact reports for Fort Knox Mine, Greens Creek Mine, Kensington Gold Mine, Pogo Mine, Red Dog Mine, and Usibelli Coal Mine.

The Mat-Su area economy would benefit most from mine development and operation in the region served by the West Susitna Access Road. Property tax payments related to mine infrastructure (described below) would be substantial, much of the mine workforce and their families could live in the borough, and local businesses would be positioned to provide some services and supplies. There is currently little certainty about the timing and scale of mine development in the area served by the road, but it is possible that mining could become a key economic engine in the Matanuska-Susitna Borough.

MINING PAYMENTS TO LOCAL AND STATE GOVERNMENT

Alaska's producing mines generate revenue for state and local governments through a mix of property, corporate, and other taxes and fees; royalties; and payments in lieu of tax (PILT). The types and scale of revenue generated depend to a large extent on the mine's location, land ownership, and local taxing jurisdiction. The following are the primary government revenue sources that would likely result from development of a mine in the West Susitna region.

Table 12. Mining Industry Payments to State and Local Government

Revenue Sources	Description
Mineral-Specific State Government Revenues	
Mining License Tax	Tax on the net income of, and royalties received in connection with, all mining property in the state irrespective of land ownership status. For mining income under $40,000, no tax is charged; for income over $100,000, the tax is capped at $4,000 plus 7% of net income and royalties, less exploration and other credits. Except for quarry rock, sand, and gravel, and marketable earth mining operations, new mining operations are exempt for a period of 3.5 years after production begins.
Annual Claim Rental	Locators and holders of State mining locations are required to pay an annual rental fee. For all leases, the annual rent if $0.88 per acre per year for the first five years, $1.75/acre for the second five years, and $4.25/acre thereafter.
Production Royalty	The Production Royalty Law (AS 38.05.212) requires holders of state mining locations to pay a production royalty on all revenues received from minerals obtained from state land. The production royalty is 3% of net income.
Coal Rents and Royalties	The standard rate for coal royalties on state lands for new leases is 5% of gross value.
Other State Government Revenues	
Corporate Net Income Tax	All corporations doing business in Alaska must file a tax return. The corporate net income tax payment is based on profitability and is calculated from the federal taxable income with certain Alaska adjustments. Multi-state corporations apportion income on a "water's edge" basis using the standard apportionment formula of property, payroll, and sales. Tax rates are graduated from 1% to 9.4% in increments of $10,000 of taxable income. The maximum rate (9.4%) applies to taxable income of $90,000 and higher.
Local Government Revenues	
Property Tax	Tax on the assessed value of real property based on mill rate determined by local taxing jurisdiction annually.

Annual Claim Rental

Exploration companies active in the West Susitna region currently pay annual claim rental fees to the State of Alaska. In State Fiscal Year (SFY)2022, mining claim fees related to the claims within the study area totaled $490,145. Claim rentals fees increased over the last five fiscal years for the claims in this region. Between SFY2018 and SFY2019, claims fees increased between 14% and 21% based on the age of mining claims held. From SFY2019 to SFY2022, standard fees did not increase and the increase in total claim rental for the West Susitna region can be attributed to a higher number of claims held.

Table 13. Annual Mining Claim Rental Paid to State of Alaska for Claims in West Susitna Region, SFY2018-FY2022

State Fiscal Year	Yentna District	McGrath District	Redoubt District	Study Region Total
2018	$203,905	$4,900	$1,845	$210,650
2019	$280,068	$16,500	$2,175	$298,743
2020	$385,358	$31,350	$3,975	$420,683
2021	$376,920	$45,128	$3,975	$426,023
2022	$430,813	$55,358	$3,975	$490,145
Average	**$335,413**	**$30,647**	**$3,189**	**$369,249**

Source: Alaska Department of Natural Resources.

The State of Alaska will continue to earn mining claim revenue from claims held in this region regardless of the construction of an operating mine.

Mining License Tax and Production Royalty

Mines constructed in the West Su region will pay Alaska's Mining License Tax based on mining net income. This tax is levied statewide on all mining net income and royalties received in connection with mining activity regardless of land ownership. Mining License Tax receipts are variable year-to-year, totaling $9.0 million in SFY2021.

The active exploration projects in the West Su region are located on state land. Any operating mine constructed related to these projects would be subject to a state mineral production or coal royalty. In SFY2021, the state received $1.6 million in mineral production and $2.6 million in coal royalties.

The Estelle Project is the only exploration project in the region with financial feasibility estimates suitable to estimate annual State of Alaska revenues during the operating phase should the mine be constructed. Based on the Korbel Deposit, if the Estelle Project became an operating mine, the state would receive an estimated $700,000 in production royalties each year over a 16-year horizon. The project would pay an average of $2 million in annual Mining License Tax. No Mining License Tax would be assessed in the first 3.5 years of operation per Alaska statute, and taxes

would be highest in the later years of the mine's life.[9] Royalty and Mining License Tax paid to the State of Alaska by the Estelle Mine could more than double these estimates with the development of the RPM North Deposit.

Table 14. Annual Mining License Tax and Production Royalties Paid to State of Alaska, SFY2012-FY2021 ($Millions)

Sate Fiscal Year	Mining License Tax	Mineral Production Royalties	Coal Royalties
2012	$40.7	$9.0	$2.9
2013	$46.8	$9.8	$2.8
2014	$23.5	$7.0	$2.5
2015	$38.7	$4.6	$2.4
2016	$11.1	$2.8	$2.2
2017	$41.5	$3.1	$2.2
2018	$47.3	$2.5	$2.0
2019	$47.8	$0.8	$2.5
2020	$35.4	$0.2	$2.4
2021	$9.0	$1.6	$2.6

Source: Alaska Department of Revenue, and Alaska Department of Natural Resource Geological & Geophysical Surveys.

Alaska Permanent Fund

The Alaska Constitution was amended in 1977 to establish a permanent investment fund, into which, "at least 25% of all mineral lease rentals, royalties, and royalty sale proceeds, federal mineral revenue sharing payments and bonuses received by the state" are to be deposited annually. This 25% rate applies to state mining leases issued on or before December 1, 1979. For mines operating with state leases issued after December 1, 1979, 50% is deposited into the Permanent Fund. The exact value of royalty receipts that would be paid to the State of Alaska from an operating mine in the West Susitna region is unknown and would depend on the mine's profitability. However, 50% of these royalty payments would be deposited into the Alaska Permanent Fund.

Corporate Net Income Tax

Mines in the West Susitna region will also pay an Alaska corporate net income tax. The State of Alaska levies the corporate net income tax based on profitability; it is calculated from federal taxable income with certain Alaska adjustments. Multi-state corporations apportion income on a "water's edge" basis using the standard apportionment formula of property, payroll, and sales.

[9] Mining License Tax and Mineral Production Royalty estimates based on information provided by Nova Minerals Limited based on revisions to the publicly available Preliminary Economic Assessment of the Korbel Deposit.

Tax rates are graduated from 1 to 9.4% in increments of $10,000 of taxable income. The maximum rate (9.4%) applies to taxable income of $90,000 and higher. Total corporate income taxes paid by the mining industry are highly variable year-to-year. In 2021, corporate income taxes collected from Alaska's mining industry totaled $8.9 million.

As described previously, the Estelle Project is the only exploration project in the West Susitna region with financial feasibility estimates appropriate to describe the level of Corporate Net Income Tax that would be assessed annually if the mine were constructed. Based on the Korbel Deposit, production at Estelle would result in an average annual $4.3 million in Corporate Net Income Tax over a 16-year horizon.[10] Corporate Net Income Tax paid to the State of Alaska by the Estelle Mine could more than double these estimates with the development of the RPM North Deposit.

Table 15. Annual Corporate Net Income Tax Collections Paid to State of Alaska by Mining Companies, SFY2016-FY2021 ($Millions)

Sate Fiscal Year	Corporate Net Income Tax
2016	$1.6
2017	-$0.7
2018	$34.6
2019	$6.9
2020	-$7.7
2021	$8.9

Source: Alaska Department of Revenue, and Alaska Department of Natural Resource Geological & Geophysical Surveys.

Local Property Tax

Several of Alaska's operating mines are among the largest property taxpayers to local governments. The extent of property taxed assessed is based on the level of infrastructure constructed to support the mine (e.g., mill, camp services, equipment types), applicable tax exemptions, the mill rate levied by the taxing jurisdiction, and other factors. Current exploration projects in the West Susitna region do not have published estimates of the property value associated with each mine during operating phase. The design of each operation would largely dictate this value. For example, a gold mine with an on-site mill would have a higher property value than one without.

Local governments determine an annual "mill rate," representing $1 of tax per $1,000 of assessed property value. Over the last five fiscal years, the borough's areawide mill rate

[10] Corporate Net Income Tax estimates based on information provided by Nova Minerals Limited based on revisions to the publicly available Preliminary Economic Assessment of the Korbel Deposit.

averaged 10.263 mills. Additional non-areawide mill rates are set based on a property's location within one of 17 Road Service Areas and/or one of 29 Fire Service Areas.

Table 16. Matanuska-Susitna Borough
Areawide Property Tax Mill Rates, Borough Fiscal Years 2018-2022

Borough Fiscal Year	Areawide Mill Rate
2018	10.332
2019	10.331
2020	10.386
2021	10.322
2022	9.942
Average	10.263

Source: Matanuska-Susitna Borough.

The following table describes scenarios of potential property tax assessed by the Matanuska-Susitna Borough (MSB) at various property values that could be associated with development of one or more operating mines in the region. For each $25 million in property value, MSB could levy areawide property tax of about $257,000.

MSB property taxes are used to support local public education, debt service, and other borough government operations. Property taxes currently represent the highest share of Matanuska-Susitna Borough (MSB) revenue, accounting for $148.9 million in revenue (63% of total) in FY2021.[11]

Table 17. Matanuska-Susitna Borough Property Tax Scenarios

Property Value Scenario	Average Areawide Mill Rate	Assessed Property Tax Scenario
$25,000,000	10.263	$257,000
$50,000,000	10.263	$513,000
$100,000,000	10.263	$1,026,000

Source: McKinley Research Group estimates.
Notes: Based on FY2018-FY2021 Matanuska-Susitna Borough assessed mill rates.

Nova Minerals Limited's Estelle Scoping Study indicated an expected mine construction capital cost of $424 million, including $57 million in mining equipment. If this capital expenditure were used to assess Estelle's operating mine property value, MSB property tax receipts could total $4.4 million annually. This assessed value and potential property tax would make the Estelle Project one of MSB's largest taxpayers.[12]

[11] Matanuska-Susitna Borough, *Comprehensive Annual Financial Report*, FY2021.
[12] Based on FY2021 principal taxpayers as listed in the MSB *Comprehensive Annual Financial Report*.

Forestry

Natural resources in the West Susitna study area include timber within three state Department of Natural Resources (DNR) subregions – Alaska Range, Mt. Susitna, Susitna Lowlands – and the Fish Creek Natural Resource Management Unit (NRMU). The forestry resources in this area are generally a mix of spruce, birch, cottonwood, balsam, among others. The area has been significantly impacted by spruce beetle infestations, which significantly impact the commercial value of timber resources in the Mat-Su area. Mt. Susitna and Susitna Lowlands have highest potential for timber harvest.

Table 18. Forest Resources in the Study Area

Area/Subregion	Land Ownership	Total Acres	Forestland Acres	Status
Alaska Range Subregion	State	1,500,000	45,000	Limited forestry opportunities due to slow growth rates, uncertain timber regeneration.
Mt. Susitna Subregion	State	824,000	219,000	Not on state timber sale schedule.
Susitna Lowlands Subregion	State	1,060,000	319,000	Not on state timber sale schedule.
Fish Creek NRMU	MSB	23,375	11,946	Not on MSB timber harvest schedule.
Total	-	**3,407,375**	**594,946**	-

Sources: Matanuska-Susitna Borough 2019 Natural Resource Management Unit Plan, Alaska DNR 2011 Susitna Matanuska Area Plan.

Timber resources in the area may have commercial value as sawlogs, woodchips, and biomass. Resources impacted by beetle infestations would be most suited to biomass use for energy generation. None of the forestland areas identified in the West Susitna study region are included in the current State or MSB timber harvest schedules.[13] The most recent MSB *Market Analysis and Timber Appraisal* report conducted in 2007 estimated the value of MSB timber per acre at $85.23, $111.38 in inflation-adjusted 2021 dollars.[14] Applying this estimated value to the total forestland acres identified in this study area, forest resources in the West Susitna region could be worth as much as $66 million if all acreage was harvested.

These estimates of lifetime expected value of all forest acreage in the region does not account for annual allowable cut restrictions which would be imposed on any forestland areas identified for timber sales or financially feasibility of harvesting timber across the entire region.

[13] Matanuska-Susitna Borough Five-Year Timber Harvest Schedule 2021-2025, Alaska Department of Natural Resources Division of Forestry Mat-Su Area and Kenai-Kodiak Area Five-Year Schedule of Timber Sales 2020-2024. Note: State of Alaska schedule includes area of the Fish Creek NRMU east of the Susitna River, accessible via the road system.
[14] Matanuska-Susitna Borough Market Analysis and Timber Appraisal, 2007.

Table 19. Estimated Value of Forest Resources in the Study Area

Area/Subregion	Forestland Acres	Estimated Direct Economic Value
Alaska Range Subregion	45,000	$5,000,000
Mt. Susitna Subregion	219,000	$24,400,000
Susitna Lowlands Subregion	319,000	$35,500,000
Fish Creek NRMU	11,946	$1,300,000
Total	594,946	$66,200,000

Sources: Matanuska-Susitna Borough 2019 Natural Resource Management Unit Plan, Alaska DNR 2011 Susitna Matanuska Area Plan, 2007 MSB Market Analysis and Timber Appraisal.

The per-acre value estimates used above pre-date the impact of bark beetle infestation on the region's timber resources and is likely higher than might be estimated with more current information. The following table shows the selling price per thousand board feet (MBF) as estimated in the 2007 report.

Table 20. Selling Price by Species and Product, Matanuska-Susitna Borough ($ 2007 USD)

Species/Product	Selling Price $/MBF	Value per Acre
Birch	-	$2,276
Cabinet	$1,625	$1,317
Sawlog	$1,300	$382
Firewood	$370	$576
Spruce	-	$3,971
Milled HL	$1,500	$348
Scribe-fit	$1,650	$382
Sawlog	$1,200	$928
Firewood	$370	$37

Sources: 2007 MSB Market Analysis and Timber Appraisal.

Offering successful timber sales on state or MSB-owned land in this region may result in revenue for the state or borough based on the timber resource type and awarded bid. The current MSB timber harvest schedule states beetle-kill spruce is to be sold at no cost due given the public interest in removal of dead trees, and birch, cottonwood, aspen, and spruce will be sold at a minimum of $2.00 per green ton.[15]

[15] Matanuska-Susitna Borough Five-Year Timber Harvest Schedule 2021-2025,

Personal Use Firewood Harvest

Areas within the Mat-Su owned by the state and MSB are currently designated as personal use firewood harvest areas. All state-owned firewood cutting areas are located on the road system. MSB-owned cutting areas include personal use areas within the Chijuk Creek NRMU located northeast of Skwentna. Permits are required for personal use harvest, at a cost of $10 per cord for state permits or $25 total for an MSB permit.

Potential Access Road Impacts

The last commercial timber sale by MSB that resulted in harvest occurred in 2014. Timber resources in the Mat-Su region face several barriers to commercialization. Resource quality (defect rates and beetle kill), long hauling distances, and the lack of industry infrastructure such as commercial sawmills all pose significant challenges to timber sale values.

Construction of the West Susitna Access Road would provide important access to timber resources which are not currently accessible by road, which would be necessary for potentially financially feasible harvest of the resource. However, success of timber sales would still rely on market demand for the type and quality of wood products available in the West Susitna region. The current MSB timber harvest schedule indicates demand for additional timber resources in the borough is limited, and construction of the access road would likely have little impact on increased demand.

"Discussions with local businesses suggest there is little demand for timber from Borough forestland…In conjunction with State timber sales and conversion projects, the timber market is inundated."

– MSB Five-Year Timber Harvest

The West Susitna Access Road is also expected to provide meaningful access to only a narrow portion of the timberlands in the region. While construction of the road would be an important first step, a broader network of roads would be required to access timber in each of the units listed above, and current prices for the relatively low-quality timber available may not support private construction of these additional access roads.

According to individuals interviews for this research, the volume of wood currently on road-accessible forestland in the Mat-Su region realistically meets anticipated future demand for personal use firewood for the foreseeable future. Construction of the West Susitna Access Road could stimulate interest in personal use firewood harvest in the study region. If new cutting areas were designated along the West Susitna Access Road, the state or MSB could see a small increase in revenue from personal use permit sales in this region.

Agriculture

The West Susitna DNR subregions also include lands with identified agricultural potential. The Susitna Lowlands and Mt. Susitna DNR subregions and the Fish Creek NRMU have a combined 48,500 acres of land with soil suitable for agricultural purposes. With the most contiguous acreage of agricultural land, the Susitna Lowlands region is the last large area of state-owned agricultural land in Southcentral Alaska.[16]

These large-acre contiguous lands would be best suited for production such as hay farming or livestock grazing which generally require more acreage compared to other crop production. Average crop sales value per acre provides one estimate of the annual potential economic value associated with potential agricultural production in the West Susitna region. Based on the latest United States Department of Agriculture (USDA) Census of Agriculture from 2017, sales per acre of harvested cropland in Alaska averaged $930. This average varies significantly between the state's largest agricultural census areas based on a different distribution of crops planted (vegetables and potatoes versus nursey/greenhouse production). The Anchorage area, which includes the Matanuska-Susitna Borough, averaged $1,574 in sales per acre, while the Fairbanks area averaged $443.[17]

Sales per acre of hay are significantly lower with an equivalent to $233, (the Anchorage area averaging $210/acre of hay). Based on average hay sales per acre, agricultural land in the West Susitna region could have a direct economic value of $11.2 million annually if converted to commercial cropland. These average cropland values are not representative of livestock value per grazing acre, which could represent a significant portion of any potential agricultural activity in the West Susitna region.

Table 21. Estimated Annual Value of Agricultural Resources in the Study Area

Area/Subregion	Agricultural Acres	Estimated Direct Economic Value
Mt. Susitna Subregion	7,000	$1,600,000
Susitna Lowlands Subregion	38,000	$8,800,000
Fish Creek NRMU	3,500	$800,000
Total	**48,500**	**$11,200,000**

Sources: Matanuska-Susitna Borough Asset Management Plan: Natural Resource Management Units, Alaska DNR 2011 Susitna Matanuska Area Plan. United Stated Department of Agriculture Census of Agriculture 2017.

[16] Alaska Department of Natural Resources 2011 Susitna Matanuska Area Plan.
[17] United Stated Department of Agriculture Census of Agriculture 2017.

Potential Access Road Impacts

Large tracts of undeveloped land suitable for agriculture are in limited supply in the Matanuska-Susitna Valley, especially on the road system close to population centers which are the primary markets for Alaska-grown agricultural products. While land further away from population centers may be available, added transportation costs often make commercial agriculture not financially feasible for products like hay or livestock with large land requirements.

Commercial agricultural production in the roadless West Susitna region is currently not feasible due to lack of access to agriculture-suited lands. With no road access, potential producers are unable to move livestock or farm equipment to the region and would find it difficult and costly to move products to market.

Based on interviews with agricultural specialists, construction of the West Susitna Access Road would likely induce small, homestead farming activity in the short-term. Any commercial agricultural activity would likely occur in the long-term (50-100 years post road construction) as suitability of the lands is tested by small-scale efforts.

Landowners such as the State or MSB in the region could benefit from property sales which would likely be required to induce residents to appropriately pursue crop production, or through lease of grazing land. In the short-term, relatively small land sales would be expected given initial interest from homestead-scale residents. Currently, the State of Alaska charges grazing land lease fees based on the number of livestock, not acreage of the lease.[18] Due to this leasing structure and unknown number of livestock which could be accommodated in the West Susitna region, estimates of potential lease revenue are unavailable.

Farmland sales could also provide revenue for the State, Borough, or other landowners in the region. In 2022, the State of Alaska auctioned state-owned agricultural land in the Nenana-Totchaket area of Interior Alaska. While these lands are further from Alaska's largest population centers and transportation networks, the minimum bid provides one measure of sale value per acre for farmland in the state. Across all parcels offered in the Nenana-Totchaket sale, the minimum bid averaged $443 per acre and varied based on land characteristics.[19] If the State and/or Borough sold all acres of agricultural-suited land identified in the West Susitna region, land sale proceeds could total $21.5 million.

[18] State grazing lessors are charged $500 per year for up to 50 grazing animals, and $1,000 per year for herds above 50 animals.
[19] Alaska Department of Natural Resources Division of Agriculture 2022 Alaska State Agricultural Land Offering Auction 494.

Visitor and Recreation Impacts

Outdoor recreation activities can be consumptive (i.e., hunting, trapping, and sportfishing) or non-consumptive (i.e., camping, hiking, snowmachining, boating, riding ATVs, bicycling).

Popular summer activities for local Mat-Su residents and visitors include salmon, trout and grayling fishing, hunting, boating, camping, hiking, kayaking, rafting, and flightseeing. During the winter, recreational activities include skiing, snowshoeing, skating, dog sledding, ice fishing and snowmobiling.

There are several factors that can impact resident and visitor recreation use of the West Susitna region. For residents, population growth has the most significant long-term impact. Changes in fish and wildlife populations, and changes in the management of those resources, would also affect the number of users and user-days associated with consumptive activities of fishing and hunting. These changes can be long-term or short-term. Development of improved access or other infrastructure could induce additional use. Factors related to household income can also impact the number of users and the duration of their trips. For visitors, population is also a significant factor, however, other issues related to destination marketing, travel affordability, and visitor infrastructure development (such as lodges, campsites, restaurants, and tour operations) can impact visitor uses tremendously. Visitors can participate in consumptive and non-consumptive uses; however, the highest volume of visitors are non-consumptive users.

According to the U.S. Bureau of Economic Analysis, Alaska's total outdoor recreation employment was 17,773 in 2020, representing 5.4% of total wage and salary employment in Alaska. These employees represent about $981 million in wage income (or about 3.4% of total compensation in Alaska).[20]

Current Access

The West Susitna region is dotted with lakes, ponds, and expansive wetlands. Without roads, ground transportation is restricted to those who have riverboats, dog-teams, snow machines and off-highway vehicles. The area is more accessible in the winter than in the summer. Once winter arrives the area is transformed. The rivers, lakes and wetlands freeze and turn into trail corridors.[21] Private and commercial aviation is another form of transportation used to reach recreation cabins, lodges, and other areas for recreation.

[20] https://www.bea.gov/data/special-topics/outdoor-recreation.
[21] https://matsugov.us/trails/about-trails

Mat-Su Visitor Market

Out-of-State Visitors

Out-of-state visitor volume was last estimated at roughly 400,000 out-of-state visitors in 2016, with 89% visiting in the summer months of May-September and 11% in the winter.[22] Between 2016 and 2019 (pre-pandemic), out-of-state visitor volume to Alaska visitation increased by 17%. Assuming Mat-Su experienced similar growth over that period, its 2019 volume can be estimated at roughly 450,000 out-of-state visitors, with the highest concentrations in Talkeetna and Palmer/Wasilla.

It is also interesting to note the "market penetration" of the region: out of all out-of-state visitors to Alaska in summer 2016, 17% reported visiting at least one location in the Mat-Su. (This excludes those passing through, without stopping.) Highway/ferry visitors (those that had traveled to/from Alaska by highway or ferry) were the most likely to visit the Mat-Su at 31%, followed by air visitors at 29%, and then cruise visitors at 8%.

The economic impacts of out-of-state visitors to Mat-Su in 2016 were estimated at 1,700 jobs, $47 million in labor income, and $133 million in total economic output, including direct and indirect impacts. With visitor volume up in the neighborhood of 17% between 2016 and 2019, those impacts are likely to have grown accordingly.[23]

In-State Visitors

Much less research has been done over the years on the number and characteristics of in-state visitors to the Mat-Su region, although they are acknowledged to represent a significant market. A 2006-07 study estimated that 81% of Mat-Su in-state visitation was from Southcentral residents; 12% were from Interior residents; and 1% to 2% were from other regions of Alaska.[24]

A 2017 study estimated that roughly 300,000 Alaska residents from outside of Mat-Su visited the region at least once in 2016.[25] Note that this estimate does not reflect multiple visits by the same person, and the 300,000 figure likely represents a much higher number of individual visits.

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[22] *Economic Impacts of the Visitor Industry in the Mat-Su Borough*, prepared by McDowell Group for Mat-Su Convention and Visitors Bureau, 2017.
[23] Estimates by McKinley Research Group.
[24] *Alaska Resident Statistics Program*, prepared for Alaska Department of Labor and Workforce Development, 2006-07.
[25] *Economic Impacts of the Visitor Industry in the Mat-Su Borough*, prepared by McDowell Group for Mat-Su Convention and Visitors Bureau, 2017.

State Parks Visitation

The Alaska State Parks in the Mat-Su Borough receive a significant level of traffic from residents and visitors alike, reaching nearly 480,000 in 2021. The most popular destination is Hatcher Pass at Gateway with nearly 135,000 visitors in 2021, followed by Independence Mine Bowl at nearly 60,000.

Consumptive Recreational Uses

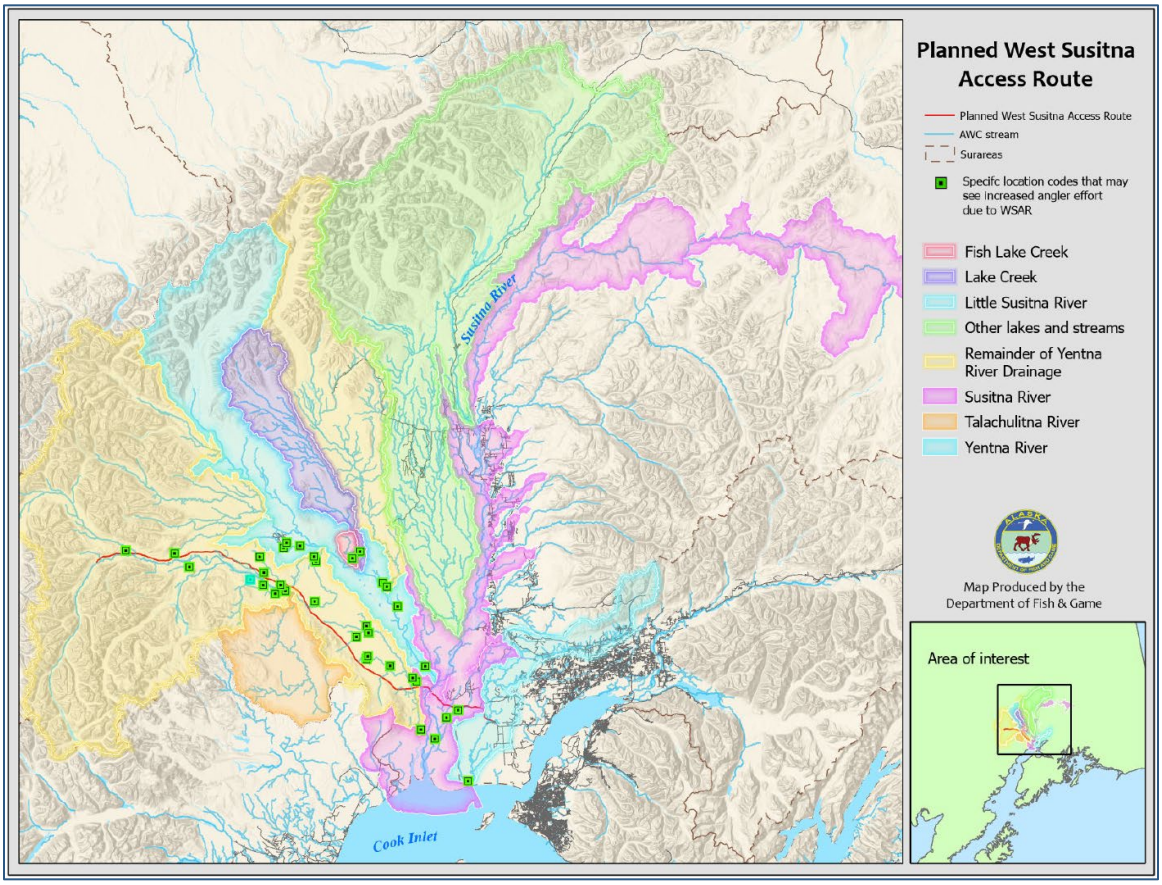
Sportfishing

The West Susitna region's waterways are a sportfishing destination where anglers target salmon, northern pike, smelt/hooligan, and rainbow trout, among other species. Access to the Susitna, Deshka, and Yentna rivers and their tributaries is available at boat launches along the Susitna River on Alaska's road system. The two most frequented of these access points are boat launches at the state-owned Susitna Station and privately-owned Deshka Landing. Waterways farther west in this region have no similar access from the road system, and anglers fly in with small aircraft. Many anglers in this area stay at one of the region's wilderness lodges, accessible only by plane or boat.

VOLUME AND LOCATION OF ANGLERS

The Alaska Department of Fish & Game (ADF&G) identified several waterways which could see enhanced access if the West Susitna Access Road were constructed. These include the Little Susitna, Susitna, Yentna, Talachulitna rivers, and an extensive network of lakes, streams, and creeks in the region.

Figure 6. Sportfish Waterways Potentially Impacted by Planned West Susitna Access Road



Source: Alaska Department of Fish & Game, Division of Sport Fish.

The following table describes the estimated number of resident and nonresident anglers active in the region in 2020. Many anglers likely fish multiple sites in this region, therefore adding the total anglers across all waterways provides an estimate of the maximum number of anglers active in this region, 10,066 in 2020. About 75% of anglers in this region were Alaska residents in 2020.

Given the current roadside access options, the Susitna and Little Susitna rivers are the most popular sportfishing sites in the region, followed by Lake Creek, and the Yentna River.

(See table on next page.)

Table 22. Estimated Anglers by Residence, West Susitna Region Waterways, 2020

Sportfishing Site	Resident Anglers	Nonresident Anglers	Total Anglers
Susitna River	1,480	640	2,120
Little Susitna River (below weir)	1,902	165	2,067
Lake Creek (Yentna drainage)	515	618	1,133
Little Susitna River (above weir)	918	99	1,017
Yentna River	476	497	973
Remainder of Yentna River drainage	616	132	748
Little Susitna River (reach unspecified)	275	187	462
Fish Lake Creek and Fish Lakes	294	132	426
Talachulitna River (Yentna drainage)	325	55	380
Other lakes and streams in the West Susitna drainage	674	66	740
Maximum anglers	**7,475**	**2,591**	**10,066**

Source: Alaska Department of Fish & Game, Division of Sport Fish.

The maximum estimated number of anglers active on sportfishing sites which would be impacted by the West Susitna Access Road decreased annually between 2015 and 2020, likely related to changes in catch and resulting regulatory changes related to chinook (king) salmon fishing in the area. The significant decrease in nonresident anglers in 2020 is likely related to impacts of the COVID-19 pandemic on the recreation and visitor industry statewide.

Table 23. Estimated Maximum Anglers by Residence, West Susitna Region Waterways, 2011-2020

Year	Resident Anglers	Nonresident Anglers	Total Anglers
2011	9,907	7,242	17,149
2012	6,888	5,591	12,479
2013	8,960	6,460	15,420
2014	9,015	6,596	15,611
2015	11,043	8,525	19,568
2016	8,574	7,757	16,331
2017	7,881	7,108	14,989
2018	7,437	6,312	13,749
2019	6,374	5,940	12,314
2020	7,475	2,591	10,066
Average maximum anglers	**8,355**	**6,412**	**14,768**

Source: Alaska Department of Fish & Game, Division of Sport Fish.

SPORTFISHING SPECIES

Sport fishers in the West Susitna region harvested about 14,000 fish in 2020, primarily coho salmon (49%), other salmon species (19%), and northern pike (22%). Sport fishing harvest declined significantly between 2011 and 2020. The 2018 emergency order implementing catch-and-release regulations for chinook (king) salmon sportfishing on the Deshka and Yentna rivers and the remaining Susitna River drainage were a major driver of declining sportfishing activity in the West Susitna region.[26] Citing poor chinook returns to the region, the Alaska Department of Fish & Game (ADF&G) has maintained the catch-and-release restriction and in 2022 implemented full chinook closures on the Deshka River and the Susitna River drainage[27].

Table 24. Annual Number of Fish Harvested by Species, West Susitna Region Waterways, 2011 and 2020

Species	2011 Harvest	2020 Harvest	% Change
Salmon	28,645	9,628	-66%
Coho	18,569	6,957	-63%
Chinook	4,158	0	-100%
Other salmon species	5,918	2,671	-55%
Smelt/Hooligan	6,763	593	-91%
Northern pike	3,667	3,197	-13%
Rainbow trout	468	263	-44%
Other species	714	600	-16%
Total	**40,257**	**14,281**	**-65%**

Source: Alaska Department of Fish & Game.
Note: Based on sportfish sites potentially impacted by West Susitna Access Road as identified by ADF&G.

SPORTFISHING LICENSE SALES

Residents and nonresidents must purchase a license to participate in sportfishing in Alaska. Costs vary by residency and days fished. In 2020, residents paid an annual $29 sportfishing license fee, while non-resident fees were a maximum $145 for an annual license. Based on the maximum number of anglers in 2020 (10,066), total sportfishing license revenue paid to the State of Alaska from activity on waterways in the West Susitna region was between $250,000 and $600,000.

The region saw a significant decline in nonresident sportfishing activity between 2019 and 2020, likely due to the impacts of the COVID-19 pandemic on nonresident travel. Based on the

[26] Alaska Department of Fish & Game, Sport Fishing Emergency Order No. 2-KS-2-10-18.
[27] Alaska Department of Fish & Game, Sport Fishing Emergency Order No. 2-KS-2-32-22 and 2-KS-2-34-22.

maximum number of anglers in 2019, sportfishing license revenue paid to the state was between $275,000 and $1 million.

These estimates of revenue to the state should be considered maximum revenue related to the West Susitna region given anglers activity on multiple waterways across Alaska and potential purchase of combination sportfishing/hunting licenses.[28]

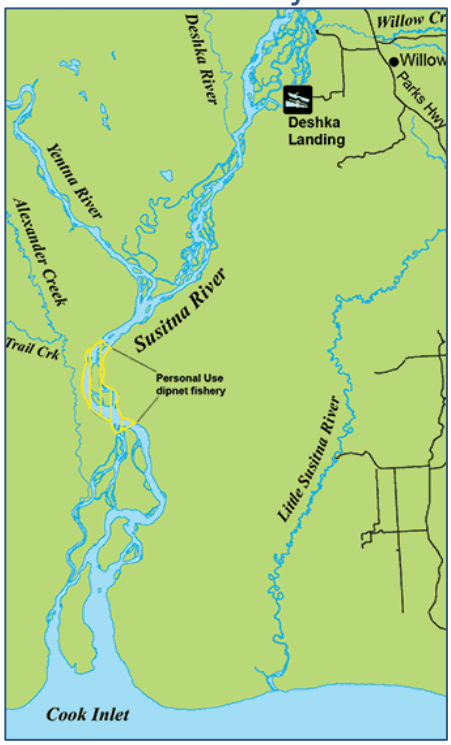
Personal Use Dipnet Fishing

Personal use fisheries are only open to Alaska residents. A valid resident sport fishing license is required to participate in personal use fishing. Since 2020, a portion of the lower Susitna River has been open as a personal use dipnet fishery. The open area runs downstream from Susitna Station to the northern portion of Bell Island/Alexander Creek. Alaska residents may dipnet from a boat or shore in this area between July 10-July 31.

In 2020, the Susitna River personal use fishery saw an estimated 377 days fished, which describes the total number of days households participated in this fishery. Households in 2020 harvested an estimated 3,671 salmon, of which 62% were sockeye and 20% were pink salmon. Fewer household days fished were recorded in the 2021 season, along with lower salmon harvest from this fishery.

These participation statistics are significantly lower compared to the state's most popular personal use fisheries – the Kenai River and Kasilof River dipnet fisheries – which saw about 20,000 and 10,000 days fished in 2020, respectively.

Figure 7. Lower Susitna Personal Use Fishery



Source: Alaska Department of Fish & Game.

Table 25. Susitna Personal Use Fishery Days Fished and Harvest, 2020-2021

Year	Household Days Fished	Total Salmon Harvest
2020	377	3,671
2021	210	2,824

Source: Alaska Department of Fish & Game.

[28] Data on combination sportfishing/hunting license sales related to the West Susitna region is unavailable.

Potential Access Road Impacts

SPORTFISHING

Additional boat launch infrastructure would be required for the West Susitna Access Road to provide meaningful access to the Susitna and Deshka rivers systems. Individuals contacted for this research noted river conditions at this proposed crossing have no advantages over current access points such as Deshka Landing. Disadvantages of the crossing include adverse river conditions, expected driving time to access the river would likely not save boaters meaningful time, and current infrastructure at Deshka Landing is secure, with some leaving their boats on-site seasonally. These disadvantages, and the requirement to add new launch infrastructure, mean the road is unlikely to facilitate a meaningful increase in sportfishing along these rivers.

The road would also provide more meaningful new access to the Skwentna River and its tributaries, which are accessible via plane. This area has abundant rainbow trout fishing opportunities with no current roadside access point. Additional boat launch infrastructure would likely be required to attract significant new anglers to this region.

PERSONAL USE DIPNETTING

The Susitna River crossing may have an impact on participation in the relatively new lower Susitna dipnet fishery in which Alaska residents are permitted to fish from shore. This fishery is much closer to the Mat-Su and Anchorage population centers compared to the state's most popular personal use fisheries on the Kenai Peninsula, and the West Susitna Access Road would make it more feasible for dipnetters without a boat to access the fishery. However, based on interviews conducted for this study, this section of the Susitna River may be difficult to fish without a boat given the steep bank, fast current, and other factors. Additional infrastructure such as parking, a boat launch, and restroom facilities would likely be required to improve access based on road construction and effectively manage impacts of new entrants.

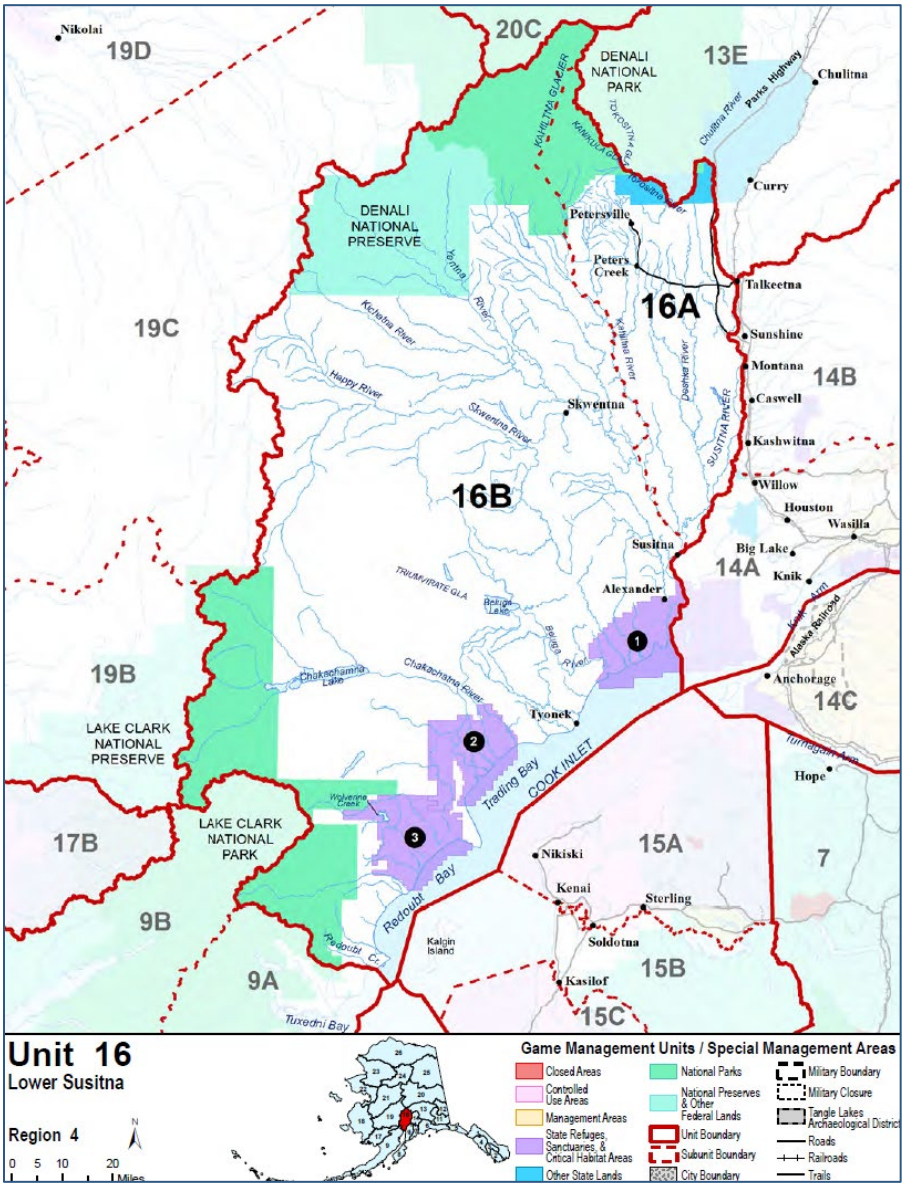
Individuals interviewed for this research recommended the Chitina River in Interior Alaska as the best comparison river to consider potential impacts of enhanced access to the lower Susitna dipnet fishery. Between 2010 and 2019, an average 6,000 permits were fished related to the Chitina River dipnet fishery, with average total harvest of 154,000 salmon.[29]

[29] Alaska Department of Fish & Game, Chitina Personal Use Salmon Fishery as of September 2022.

Hunting

The West Susitna region is also a big game hunting destination for moose, Dall sheep, bear, and caribou, among others. This report's study region is within the Lower Susitna Game Management Unit (GMU) which extends from the west side of Cook Inlet north to Denali National Park. Alaska has various restrictions on hunt eligibility and access based on GMU, species, and hunter residency. The following table describes the different hunt types statewide.

Figure 8. Lower Susitna Game Management Unit 16



Source: Alaska Department of Fish & Game.

Table 26. Alaska Hunt Types

Type	Eligibility	Description
General season hunts	Resident and nonresident	This is the least restrictive type of hunt. Generally open to most residents and nonresidents. Not managed as conservatively as permit hunts and subject to fewer emergency closures.
Permit hunts		Instituted when hunter demand is higher than game population can sustain.
Drawing permit hunts	Resident and nonresident	Hunters apply for permits in November and December, with permits awarded by random lottery. Number of hunters is limited.
Tier II subsistence permit hunts	Resident	Open to residents only, these hunts are held when there is not enough game to satisfy all subsistence needs. Permits awarded by on application scoring.
Registration permit hunts	Resident and nonresident	Generally, number of permits is not limited. Seasons are closed by emergency order if a harvest quota is met.
Tier I registration hunts	Resident	A subset of registration permit hunts limited to resident subsistence use only.
Community subsistence harvest hunts	Resident	Established to accommodate traditional subsistence hunting practices and create group bag limits rather than individual limits.

Source: Alaska Department of Fish & Game.

LOWER SUSITNA GAME MANAGEMENT UNIT HUNT TYPES

Most hunts in the Lower Susitna GMU are classified as general season, with no limits to the number of hunters. Drawing or Tier II permits are required for select resident-only moose hunts in the area.

Table 27. Lower Susitna Game Management Unit Hunt Types

Species	GMU	Hunt Type	Non-Resident Eligibility	Bag Limit	Season Dates
Black bear	16	General season	Yes	Five bears	No closed season
	16B	General season	Yes	Five bears	Sept 15- May 31
Brown bear	16A	General season	Yes	Two bears	No closed season
	16B, one mile of Wolverine Creek	General season	Yes	Two bears	Sept 15- May 31
	16B, remainder	General season	Yes	Two bears	No closed season
Caribou	16A	General season	Yes	One bull	Aug 10 – Sept 20
	16B	General season	Yes	One bull	Aug 10 – Sept 30
Dall sheep	16	General season	No	One ram	Aug 10 – Sept 20
	16	General season	Non-resident only	One ram	Aug 10 – Sept 20
Moose	16B, mainland	Drawing permit	No	One bull	Aug 20 – Sept 25
	16A	Drawing permit	No	One bull	Aug 20 – Sept 25
	16B	Drawing permit	No	One bull	Dec 15 – Feb 28

Moose Continued	16B, Yentna	Tier II	No	Any bull	Dec 15 – Mar 31
	16B, North Beluga	Tier II	No	Any bull	Dec 15 – Mar 31
	16B, South Beluga	Tier II	No	Any bull	Dec 15 – Mar 31
	16A	General season	Yes	One bull	Aug 10 – Sept 25
	16B, remainder	General season	No	One bull	Aug 20 – Sept 25
	16B, remainder	General season	Non-residents only	One bull	Aug 20 – Sept 25
Wolf	16A	General season	Yes	Ten wolves	Aug 10 – Apr 30
	16B	General season	Yes	Ten wolves	Aug 10 – Apr 30
Wolverine	16A	General season	Yes	One wolverine	Sept 1 – Mar 31
	16B	General season	Yes	One wolverine	Sept 1 – Mar 31

Source: Alaska Department of Fish & Game.
Note: Excludes youth permit hunts.

HUNTING SPECIES

Excluding bear hunts, moose hunts make up about 95% of big game hunts in the Lower Susitna GMU.[30] The number of moose hunts in the region increased steadily over the last decade, except for 2021 in which hunting activity was below-average across all species.

The Alaska Department of Fish & Game (ADF&G) follows an Intensive Management Plan to manage population and harvest objectives for moose in this GMU given that species importance to human consumption.[31] The management plan allows for predation control of wolf, black bear, and brown bear to meet moose population objectives.

Until 2020, the moose population in this region was brought above population objectives, with predation control measures in practice since 2015. Preliminary information from 2021 surveying by ADF&G suggests the moose population has been negatively impacted by the last several winters with high snow volume in 2021 and 2022.[32]

(See table on next page.)

[30] Total hunts – successful and unsuccessful – are not available for black and brown bear in this region.
[31] Alaska Administrative Code 5 AAC 92.122 Intensive Management Plan VI.
[32] Personal communications with ADF&G staff.

Table 28. Number of Hunts by Species, Lower Susitna GMU, 2012-2021

Year	Moose	Caribou	Sheep
2012	1,375	52	37
2013	1,596	67	36
2014	1,911	67	36
2015	2,231	91	46
2016	2,269	66	29
2017	2,385	69	31
2018	2,440	70	35
2019	2,429	96	52
2020	2,437	84	34
2021	1,950	66	25
Average	**2,102**	**73**	**36**

Source: Alaska Department of Fish & Game.
Note: Some hunters likely participate in multiple hunts.

The number of big game harvested rose alongside the number of hunts over the past decade. On average, moose account for 60% of big game harvest in the region, followed by black bear (27%), and brown bear (11%). In 2021, big game harvest was below average for all species except caribou, which accounts for a small percentage of regional harvest.

Table 29. Number of Animals Harvested by Species, Lower Susitna GMU, 2012-2021

Year	Moose	Caribou	Sheep	Brown Bear	Black Bear	Total
2012	266	3	11	96	206	582
2013	410	11	11	121	297	850
2014	465	11	10	128	359	973
2015	591	13	16	113	225	958
2016	587	9	8	97	238	939
2017	641	9	7	87	202	946
2018	652	15	10	56	208	941
2019	649	23	20	60	164	916
2020	506	13	7	116	209	851
2021	346	16	4	82	176	624
Average	**511**	**12**	**10**	**96**	**228**	**858**

Source: Alaska Department of Fish & Game.
Note: Some hunters likely participate in multiple hunts.

HUNTING LICENSE AND GAME TAG SALES

The State of Alaska earns hunting-related revenue from activity in GMU 16 through hunting license and big game tag sales. In total, 2021 hunting-related revenue based on activity in the West Susitna region was an estimated maximum of $1.9 million to $2.6 million.

Hunting License Sales

Hunters in Alaska must purchase an annual hunting license, ranging in price from $45 for residents to $160 for nonresidents. Based on the number of hunts and harvest, the maximum amount paid to the State of Alaska from license sales in the West Susitna region in 2021 was between $100,000 and $375,000.

In 2021, hunting activity for several big game species in GMU 16 was below 2019 levels, likely due to the impacts of the COVID-19 pandemic. Based on activity in 2019, the maximum amount paid to the state in hunting licenses related to GMU 16 was between $125,000 and $450,000.

These estimates should be considered the maximum hunting license revenue related to the West Susitna region given hunting licenses can be used statewide and many GMU 16 hunters likely hunt elsewhere in Alaska, and potential purchase of combination sportfishing/hunting licenses.[33]

Big Game Tag Sales

Most hunts in GMU 16 are designated as general season hunts, which do not require purchase of a hunting permit. Game tag sales are the largest State of Alaska revenue source from hunting activity in the West Susitna region. Alaska residents and military personnel pay reduced or no tag fees for hunts in GMU 16. Nonresident tag fees vary by species, from a low of $450 for U.S. residents hunting black bear up to $1,300 for nonresident, non-U.S. residents hunting brown/grizzly bear.

Based on the number of hunts and harvest and nonresident tag costs, the maximum amount paid to the State of Alaska from tag sales in the West Susitna region in 2021 was between $1.8 million and $2.2 million. Based on activity in 2019, the maximum amount paid to the state in big game tag fees was between $2.2 million and $2.7 million.

These estimates should be considered a maximum given data on hunter residency is unavailable and potential purchase of combination sportfishing/hunting licenses.

[33] Data on combination sportfishing/hunting license sales related to the West Susitna region is unavailable.

Table 30. State of Alaska Big Game Tag Fees, 2021

Species	Nonresident, U.S. Resident Tag Fee	Nonresident, Non-U.S. Resident Tag Fee
Moose	$800	$1,000
Caribou	$650	$850
Sheep	$850	$1,100
Brown/Grizzly Bear	$1,000	$1,300
Black Bear	$450	$600

Source: Alaska Department of Fish & Game.

GUIDED HUNTING

Alaska statutes require nonresident hunters to hire guides or be accompanied by a resident relative when targeting the following species: brown/grizzly bear, Dall sheep, and mountain goats. Nonresident hunters targeting other species often choose to hire an experienced guide when targeting species such as black bear, moose, and caribou. Alaska has four categories of licensed professionals related to big game hunting: "master guides" and "registered guide-outfitters" have licenses related to specific GMUs, while assistant guides are not.

As of August 2022, 29 master guides (9 guides) and registered guide-outfitters (20 guides).[34] Nearly 80% (23 guides) resided in Alaska in 2022, including 10 Mat-Su residents, nine Anchorage residents, and four Kenai Peninsula residents. About half of hunting guides in the state hire packers and other support staff. Based on the ratio of guides to support staff as published in *The Economic Impacts of Guided Hunting in Alaska*, the 29 guides active in the West-Su region likely employ an additional 15 people in support roles each year.[35] Hunting guides spend additional money in Alaska on a variety of goods and service in support of their operations, including transportation, outdoor equipment, and gear.

Trapping

The West Susitna region is a popular trapping area for the region's fur-bearing species such as wolf, beaver, wolverine, lynx, and others. Trapping activity generally occurs between November and March, and those participating most often access the region via snow machine and/or trap the area around private seasonal cabins. Data on the number of active trappers or harvest in the region is unavailable. Experts interviewed for this research indicate trapping activity has declined over the last decade due to low fur prices, high cost of fuel to access trapping areas, and generally decreased interest in the activity. Availability of species targeted by trappers in this region is currently not a factor sited in reduced interest in this activity.

[34] Alaska Department of Commerce, Community, and Economic Development, Business & Professional Licensing.
[35] McDowell Group. *Economic Impacts of Guided Hunting in Alaska*. January 2021.

Potential Access Road Impacts

With access to the West Susitna region traditionally limited to boat or airplane, the number of people traveling to the region for hunting and trapping has been limited, especially farther west towards the Alaska Range. Roadside hunting opportunities in Alaska are limited, and construction of the West Susitna Access Road would entice new hunter to the region.

It is uncertain how many hunters would be attracted to new area opened by construction of the West Susitna Access Road. However, the close proximity of the proposed route to the Mat-Su and Anchorage population centers suggests the region could see a significant increase in hunting activity. Decreased transportation costs have the potential to reduce costs faced by hunting guides operating in the region. However, those interviewed for this research expect the highest proportion of new hunters drawn to this region by road construction would be Southcentral Alaska residents.

Individuals contacted for this research indicated all species of big game would be targeted by new hunters in this region. Recent winter conditions have negatively impacted moose and Dall sheep populations in GMU 16, and interview research suggests these species would likely face added pressure from an increase in hunters to this area. Based on population objectives and observed changes to harvest from road construction, ADF&G may reactively recommend changes to hunt types from general season to more restrictive types such as registration or drawing permit hunts. Recommendations would be provided to the Alaska Board of Game, which has authority to alter hunt types.

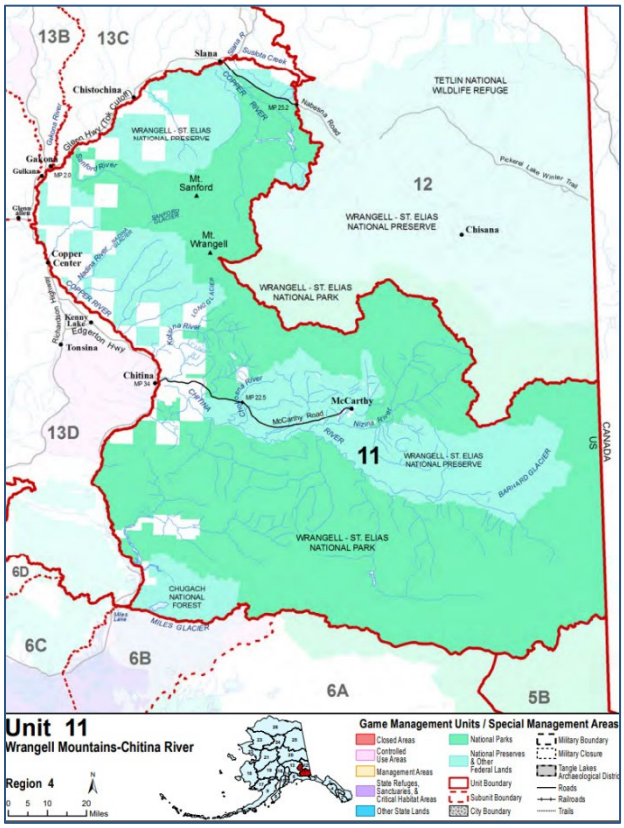
Construction of the access road would also provide significant new trapping opportunities for species like wolf, wolverine, lynx, and marten. Trappers would likely be able to extend their range by snowmachine to new areas from the access road.

"Bisecting Unit 16 with a road you would have limitless trap lines opened up."

COMPARABLE HUNTING UNIT

No recent road construction is perfectly analogous to the proposed West Susitna Access Road given its location close to population centers. However, hunting activity in GMU 11 within the Wrangell-St. Elias National Park and Preserve may offer an example of the level of hunting in an area with access via remote road. The area is accessible from the Richardson Highway via the 93-mile Edgerton Highway, a seasonal road ending at McCarthy, and from the Glenn Highway via the 42-mile Nabesna Road. The area has moose, sheep, bison, goat, and black and brown bear hunting opportunities managed via a mix of drawing permit (bison only), registration (moose and goat), community (moose), and general season (sheep, moose, black and brown bear) hunts. In 2021, GMU 11 had 148 moose hunts (36 harvest), 145 sheep hunts (49 harvest), and 16 bison hunts (16 harvest). Alaska residents represent most hunters in this region. This level of activity is far lower compared to GMU 16 in the West Susitna region and is significantly more remote despite road access. GMU 11 also has additional hunting restrictions related to the area's overlap with the national park and preserve.

Figure 9. Wrangell Mountains-Chitina River Game Management Unit 11



Source: Alaska Department of Fish & Game.

Table 31. GMU 11 Hunts by Species and Residency, 2021

Species	Total Hunts	Percent Alaska Residents
Moose	148	82%
Sheep	145	91%
Bison	16	94%

Source: Alaska Department of Fish & Game.

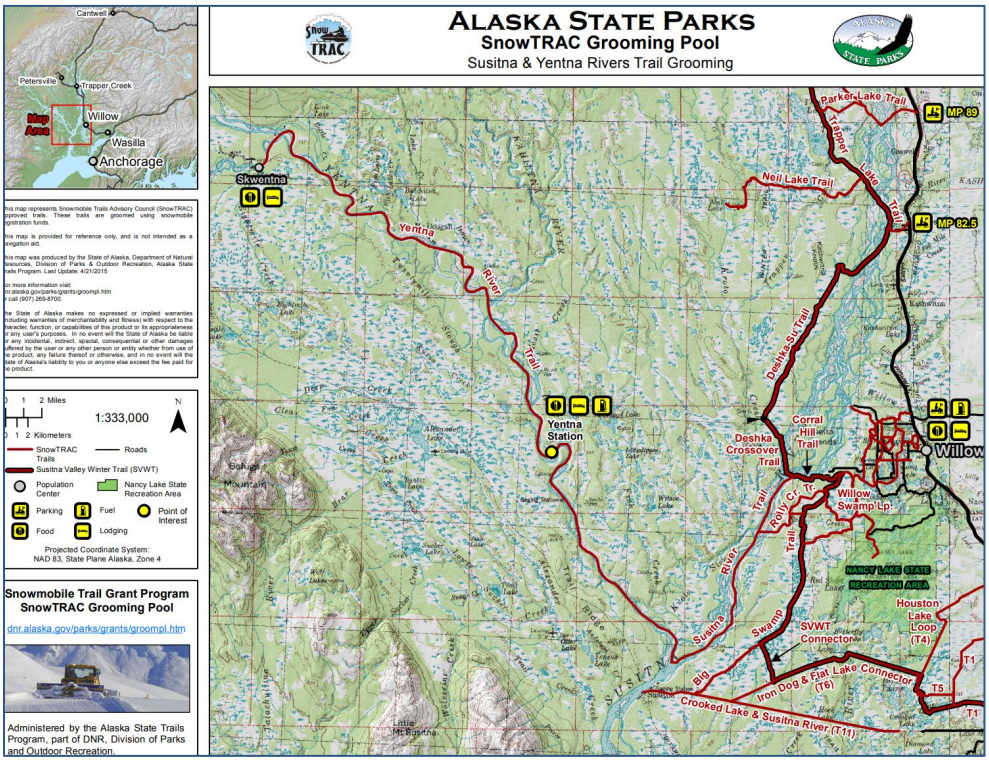
Non-Consumptive Recreation Uses

Snowmachining

The Mat-Su, including the West Susitna region, is a popular snowmachining destination in Alaska. Frozen-over rivers such as the Yentna and Susitna act as main snowmachining route. An extensive network of groomed trails is maintained by various organizations such as the Willow Trail Committee, Big Lake Trails, and Lower Susitna Drainage Association with funding support from Alaska DNR Snowmobile Trails Advisory Council (SnowTRAC) based on state snowmobile registration revenue. Snowmachines frequent a wide geographic area beyond groomed trails in the West Susitna region, and popular destinations include trails south of the Yentna River adjacent to the Historic Iditarod Trail.

Hundreds of snowmachiners recreate in the West Susitna region each year. Most recreational snowmachiners in the West Susitna region are likely Alaska residents. Private cabin owners, including many recreational cabins, use snowmachines to reach their properties during the winter. Users interviewed for this research suggest current infrastructure to support snowmachine use such as parking lots was fully utilized, especially for weekend use.

Figure 10. SnowTRAC Groomed Trails in the West Susitna Region



Source: Alaska Division of Natural Resources.

POTENTIAL ACCESS ROAD IMPACTS

West Susitna Access Road construction would likely open new areas to snowmachine travel and may reduce driving distance to current trails. It is uncertain how many new snowmachiners would be attracted to new area opened by road construction. As with consumptive recreation uses, the proximity of the proposed route to Anchorage and Mat-Su population centers suggests the region could see a significant increase in activity. Current users of West-Su region trails may also disperse to newly opened areas given the current capacity of infrastructure to support snowmachining and interest in new terrain.

Additional infrastructure along the access road would be required to provide appropriate access to new snowmachine terrain. Parking lots with adequate space to accommodate trailers and trailer turnaround would be important to provide access while protecting the terrain. Safety infrastructure such as emergency warming shelters and defined search and rescue authorities are public services that would also be important given the length of the proposed access route. Private services such as a gas station along the route would likely facilitate a broader reach of snowmachiners from the proposed road.

Other Recreation Potential Impacts

Other recreation in the West Susitna region is limited due to lack of access and is often related to personal cabins in the area. The region has no hiking trail or campground infrastructure. Points of interest along the route which might attract additional Alaska residents and visitors include Mount Susitna and the Iditarod Trail.

Construction of the West Susitna Access Road would provide opportunities for additional summer recreation such as hiking or camping. Additional infrastructure would be required to draw visitors and effectively manage public use of the area. Individuals interviewed for this research indicate excess demand exits for camping and public use cabins in the borough given its proximity to Alaska's population centers, bookings at current sites, and temporary closures at current sites in recent years.

Enhanced access is expected to increase the size of the recreation industry in the region. Trail and facilities development in the West Su region would likely spur a substantial increase in visitation and recreation in the area. These types of infrastructure development generally increase visitors' length of stay and spending in an area, increasing the economic impact of the region's recreation industry.

COMPARABLE ROAD TRAFFIC

There has been no road construction project over the last several decades that is perfectly analogous to the proposed West Susitna Access Road given the length of the proposed route and its location close to Alaska's largest communities.

The Petersville Road at the far north end of the Yentna Mining District offers an example of the type of recreational opportunities that could result from road development. Originally built to provide access to mineral deposits, the Petersville Road continues to offer access to placer mining operations, the Petersville State Recreation Mining Areas for personal mining use, and scenic drives with views of Denali. The 32-mile road is generally accessible June-September. On average, the road segment along the first ten miles of Petersville Road, which is paved, sees about 200-300 vehicles each day. Vehicle traffic tapers significantly along the unpaved road segments, with an average of 75 vehicles each year traveling through Milepost 19.

Table 32. Average Annual Daily Traffic Counts by Segment, Petersville Road, 2017-2021 (Number of Vehicles)

Year	Milepost 2	Milepost 5	Milepost 8	Milepost 15	Milepost 19
2017	281	206	124	87	42
2018	*	194	*	*	111
2019	305	187	119	83	113
2020	270	160	100	70	100
2021	300	180	120	110	110
Average	**289**	**185**	**116**	**88**	**95**

Source: Alaska Department of Transportation and Public Facilities.
Note: * Indicates data unavailable for this year.

The Edgerton Highway leading east from the Richardson Highway to McCarthy offers another example of the volume of traffic along Alaska's remote roadways. Originally a railroad route used to access the Kennicott copper mining area, this 93-mile road was converted for car use in 1971 with the addition of a new bridge over the Copper River. The road ends at the town of McCarthy in the Wrangell-St. Elias National Park. Along with the national park, the historic Kennecott Mill is the main attraction in this area. The road is only accessible in summer months.

On average, the road segment along the first ten miles of the Edgerton Highway, which is paved, sees about 450-500 vehicles each day. Vehicle traffic tapers significantly along the gravel segment, with an average of about 80 vehicles traveling through Milepost 61.

Table 33. Average Annual Daily Traffic Counts by Segment, Edgerton Highway, 2017-2021 (Number of Vehicles)

Year	Milepost 10	Milepost 51	Milepost 61
2017	458	78	80
2018	483	80	82
2019	490	81	83
2020	440	70	70
2021	480	80	80
Average	**470**	**78**	**79**

Source: Alaska Department of Transportation and Public Facilities.

BOATING

Motorized and non-motorized boating opportunities exist in the West Susitna region. Day and overnight floats and pack-rafting trips are also possible. Kayaking and canoeing can occur on various water bodies, including lakes and rivers.

CAMPING

Remote camping in a tent or cabin takes place in the West Susitna region. Many private cabins and a few rental cabins are scattered throughout. Camping is often connected to fishing and hunting activity, as well as boating, hiking, wildlife viewing, and snowmachining recreational activities, among others. If a road were developed, roadside camping would be anticipated in formal designated areas (such as campgrounds) or informal areas.

OTHER USES

Summer seasonal ATV use is popular in the Mat-Su Borough. Flightseeing is often combined with other remote fly-in activities, such as hiking, camping, fishing, and hunting. Aviation companies frequently provide flightseeing tours and transport passengers and goods to the region, primarily from Lake Hood (Anchorage) or Willow Airport. With a limited number of airstrips in the area, pilots do not always land on established landing infrastructure of often use gravel bars on rivers and lakes (float planes). The number of registered aircraft in Alaska totals 8,726, including 1,615 registered in the Mat-Su Borough.[36]

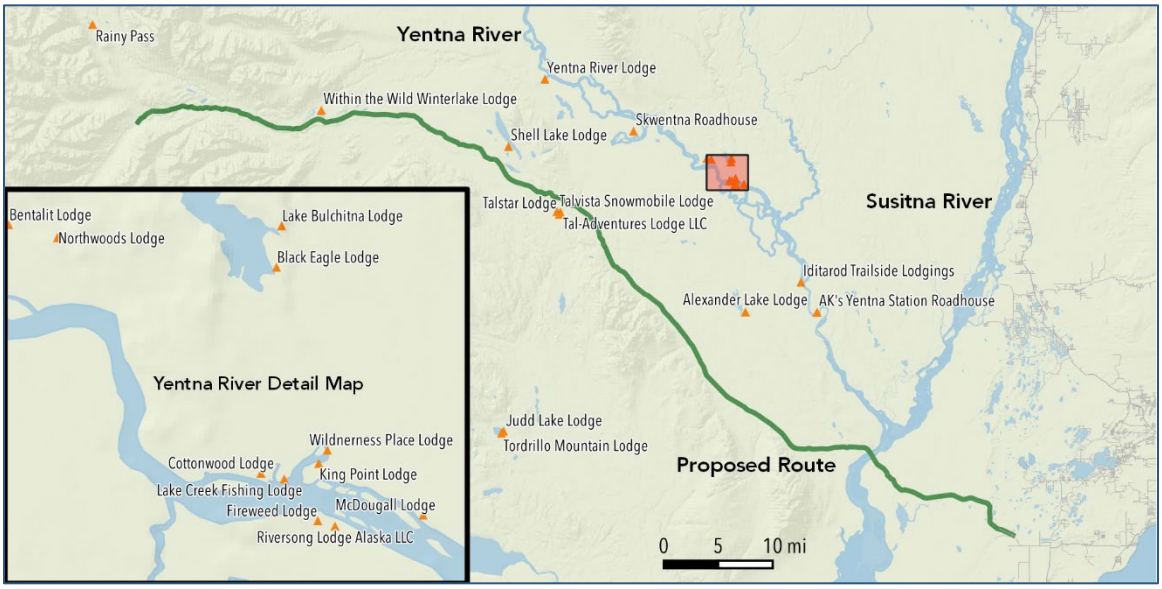
Wilderness Lodges

Visitors drawn to the hunting, fishing, snowmachining, and other recreational opportunities in the West Susitna region often stay at one the many wilderness lodges in the area. About 25 lodges in the area represent a range of service types, from lodging with activities available as add-ons up to full-service packaged experienced including transportation, meals, and excursions. Multi-day packages at several all-inclusive lodges in the area can cost between $2,375 and $17,500 per person depending on the services and activities included. All-inclusive guided hunting packages can cost significantly more, with 16-day combination hunts (moose, Dall sheet, black bear, grizzly/brown bear, caribou) priced at $52,500.

The remote, off-road setting features prominently in the marketing materials of many lodges in the West Susitna region. In addition to sportfishing and hunting, which command premium rates, West Susitna area lodges offer a wide variety of guest activities such as hiking, horseback riding, snowmachining, heliskiing, and boating.

[36] https://registry.faa.gov/aircraftinquiry/Search/StateCountyInquiry

Figure 11. Wilderness Lodges in the West Susitna Region



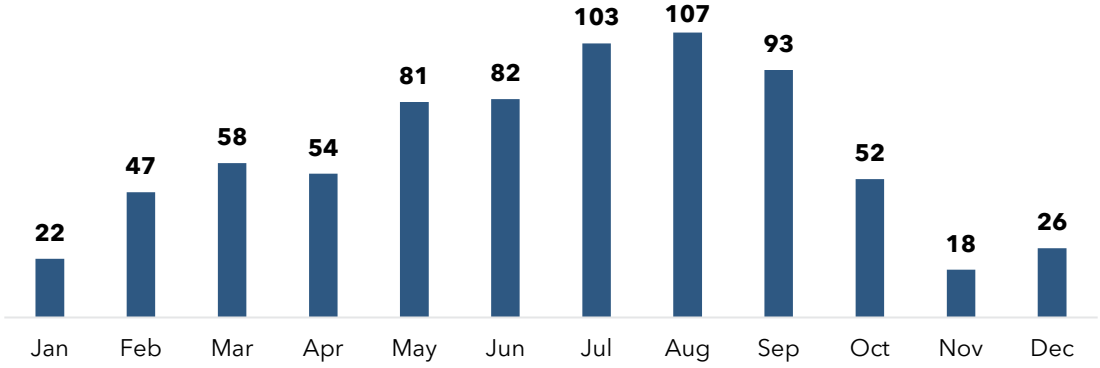
Source: McKinley Research Group.

Economic Impacts of Wilderness Lodges

Employment and spending by the lodges account for the highest share of recreation-related economic activity in the West Susitna region. Monthly employment at the lodges averaged 62 people in 2021 paying a total $3.6 million in wages. Employment is much higher in summer months, peaking at 107 in August 2021, given the mix of activities and services offered. Employment data includes only people hired directly by the lodges for whom the companies are reporting employment to the State of Alaska.

This measure underrepresents the true extent of people working at these lodges given the significant role of self-employment, family members, and contractors in these operations. In total, wilderness lodges in the West Susitna region provide earnings for contracted hunting guides, pilots transporting clients to and from the region, professionals such as mechanics hired to service buildings and equipment, bulk food and grocery suppliers, and many others in Southcentral Alaska.

Figure 12. Wilderness Lodge Employment by Month, West Susitna Region, 2021



Source: Alaska Department of Labor and Workforce Development.

Lodge Payments to Local and State Government

Wilderness lodges in the West Susitna region generate revenue for the state and MSB governments through corporate income, property, and bed taxes.

CORPORATE NET INCOME TAX

State corporate net income tax is paid by all C corporations doing business in Alaska.[37] Tax rates vary from 1% to 9.4% based on the corporation's taxable income. In aggregate, lodges in the West Susitna region paid less than $100,000 in corporate net income tax to the state annually over the past several fiscal years.[38]

MATANUSKA SUSITNA BOROUGH TAXES

Wilderness lodges are subject to MSB property tax. In FY2022, the lodges had an average assessed value of $288,000 and were assessed a total $61,720 in property tax.[39] Overall, the lodges' average assessed property tax ($2,683 per lodge) is higher compared to all other property in the MSB ($2,190 in assessed tax).

The lodges in the region also pay the borough's 5% bed tax. Bed tax revenue specific to the West Susitna region is unavailable. Borough-wide, this tax generated about $1.5 million revenue in 2019, prior to being significantly impacted by reduced travel due to the COVID-19 pandemic. As of 2021, total borough bed tax had recovered to $1.3 million.

[37] Businesses organized as S Corporations or partnerships are not subject to State Corporate Net Income tax.
[38] Based on personal communications with Alaska Department of Revenue. Due to confidentiality concerns, actual total corporate net income tax is unavailable.
[39] Matanuska Susitna Borough.

Potential Access Road Impacts

Of the active lodges in the West Susitna region identified in this research, about one-third are within 10 miles of the proposed West Susitna Access Road route. Lodge owners interviewed for this research noted road access and increased number of visitors to the area could impact the lodges' market position as a remote wilderness experience. As described previously, construction of a public access road in this region is expected to draw additional anglers and hunters to the area. Any decline in big game or fisheries population due to increased harvest, and regulatory changes resulting from added pressure to these populations, could impact the ability of lodges to offer a range of hunting packages. Those interviewed also cited trespass concerns, with an influx of visitors who are not familiar with property ownership in this region potentially impacting their businesses.

Safety Impacts

Several individuals and user groups interviewed for this research described a need for well-defined search and rescue, law enforcement, and other safety responsibilities along the West Susitna Access Road should the route be constructed. Respondents noted the expected influx of new recreation users would likely require search and rescue efforts common to other recreational use areas in Alaska and stressed the importance of appropriately funding these efforts. Interview participants also shared concern about law enforcement, particularly related to trespass concerns on private property. Again, participants stressed the need for defined roles and funding for the Alaska State Troopers' presence along the corridor if the road were constructed.

Subsistence

The same species which bring anglers and hunters to the West Susitna region are also vital subsistence species for regional residents. Based on the most recent subsistence harvest surveys performed by ADF&G, regional residents harvest a total 47,475 pounds of subsistence resources annually. Salmon harvest accounts for over half (52%) of all harvested resources, followed by moose (25%). Other resources such as pike, black bear, caribou, birds, and berries account for the remaining subsistence harvest.

Any pressure on the population of key subsistence species from increased harvest by new anglers and hunters to the region may potentially impact residents who rely on these resources for food.

Table 34. Estimated Annual Subsistence Harvest in Pounds, West Susitna Region Communities

Resource Type	Beluga	Tyonek	Susitna	Skwentna	Regional Total
Salmon	3,471	16,765	1,047	3,356	24,640
Moose	1,735	3,471	3,191	3,675	12,072
All Other Subsistence Resources	2,879	4,012	937	2,935	10,763
Total	**8,085**	**24,249**	**5,175**	**9,966**	**47,475**

Source: Alaska Department of Fish & Game, Subsistence Hunting & Fishing.
Note: Subsistence harvest studies are updated periodically. Data in this table based on research performed in the following years: 2006 (Beluga), 2012 (Skwentna and Susitna), 2013 (Tyonek).

Summary

Construction of the West Susitna Access Road would open a broad geographic area with no current road access. In the near term, the new access road would have significant impacts on the ability of mineral exploration companies to construct and operate mines, which would not otherwise be financially feasible given current infrastructure and permitting processes. Mine development would benefit the Mat-Su economy in terms of new jobs and wages, mine-related spending in the region, and significant development of new infrastructure subject to local property tax. The State of Alaska would also benefit from various taxes and royalties based on mine income.

If the road were open to unrestricted public use, enhanced access to the region would also result in increased fishing and hunting activity, as well as non-consumptive recreation uses such as snowmachining, hiking, and camping. Proximity to the state's primary population centers means Alaska residents would likely represent a high percentage of new recreation users. Follow-on infrastructure like parking lots, boat launches, campgrounds, and trails would be necessary to appropriately accommodate new users and would entice the kinds of increased visitation which generally increase the size of an area's recreation industry. Increased hunting and fishing may exert pressure on the region's wildlife, and state biologists would need to monitor use carefully to ensure appropriate access for subsistence users, Alaska resident sports fishers and hunters, and non-Alaska resident visitors drawn to the area to experience authentic Alaska wilderness.

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