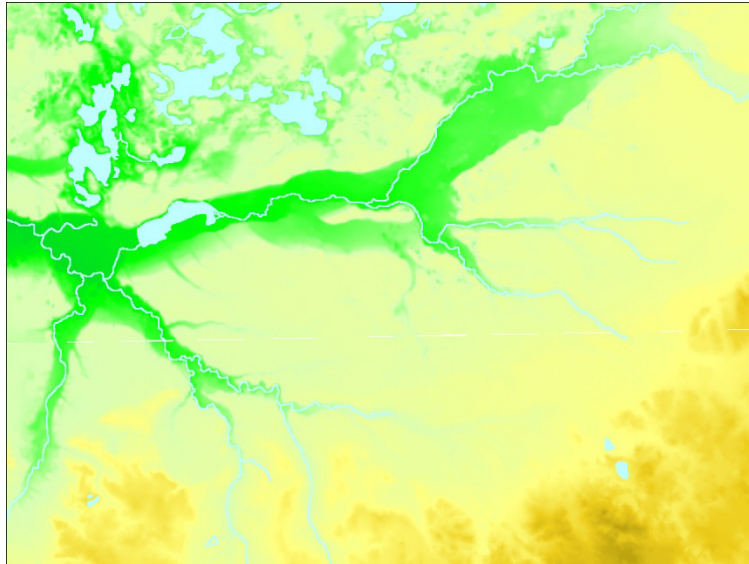


Boardman River Valley Master Plan



Union, Paradise, and East Bay Townships
Grand Traverse County, Michigan

March 2001

Credits

Prepared for:

Union Township

Funding provided by:

Rotary Charities of Traverse City

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Grand Traverse County

Northwest Michigan Council of Governments

United States Geologic Survey

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Summary

Purpose of the Report

The purpose of this report is to provide a conceptual framework for future development and preservation within the portion of the Boardman River Valley that is located between Garfield Road and Supply Road / Fife Lake Road. This project was initiated by East Bay, Paradise, and Union Townships as a proactive approach to retaining the rural, wild, and recreational habitats that now exist in the Boardman River Valley.

The recommendations in this report result from the findings of the Consultant Team with guidance from the Boardman River Valley Steering Committee and are based upon the input from public meeting participants, the goals and objectives of related community plans, an understanding of the environment, and the interplay between land use, transportation, and economics. Together, the individual and community actions taken will preserve and enhance the quality of life and the recreational amenities of the Valley. Taken individually, the result will in all likelihood be unsatisfactory.

A number of areas requiring additional research prior to implementation are mentioned in the study. These areas of additional research should continue to include the participation of Boardman River Valley Steering Committee.

Key Findings

- The Boardman River Valley's beauty and location combine to make it a very desirable place to live and recreate, resulting in potential development pressures on the Valley that may threaten the character that makes the area special.
- Public input and community plans indicate a high degree of uniformity in the desire to preserve the natural character and recreational opportunities of the Valley.
- While there are substantial areas of privately held property within the Valley that have potential for significant development and related service needs, the natural features, topography, and soils combine to limit some development.
- The vast majority of the motorized vehicle trips in the Valley are for residential and recreational access to and from the Valley and, according to the Grand Traverse County Road Commission, there is not a regional need for, nor are there any regional plans for, a major through-Valley road connection.
- Residents of the Valley desire to preserve and maintain the natural character of the roads while improving maintenance and some perceived safety issues.
- The public and private recreational facilities and properties are managed as separate entities resulting in numerous small separate facilities that do not take full advantage of their proximity to each other.

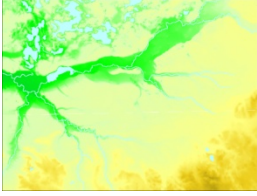
Key Recommendations:

The recommendations are grouped into four interrelated areas: management, conservation and land management, transportation, and recreation. The following summarizes the key recommendations:

- Governmental and private management agencies are urged to cooperate to manage and present the Valley to the public as a distinct place with three unique management districts.
- The key natural and cultural features in the Valley should be managed and protected through community master plans and other planning tools as adopted by the individual townships.
- Consideration should be given to managing, linking, and/or expanding the existing trail networks to establish a locally and regionally significant trail system.
- In cooperation with private landowners, protect key wildlife corridors and other key properties through conservation easements/lands exchanges/purchase or other land conservation alternatives.
- The east-west road system through the Valley should have a low design speed that reflects the natural character and recreational uses in the Valley.
- Although the community is supportive of “protecting” the Valley and willing to consider all possibilities, the onus should not be on the landowners alone.

Action Plan:

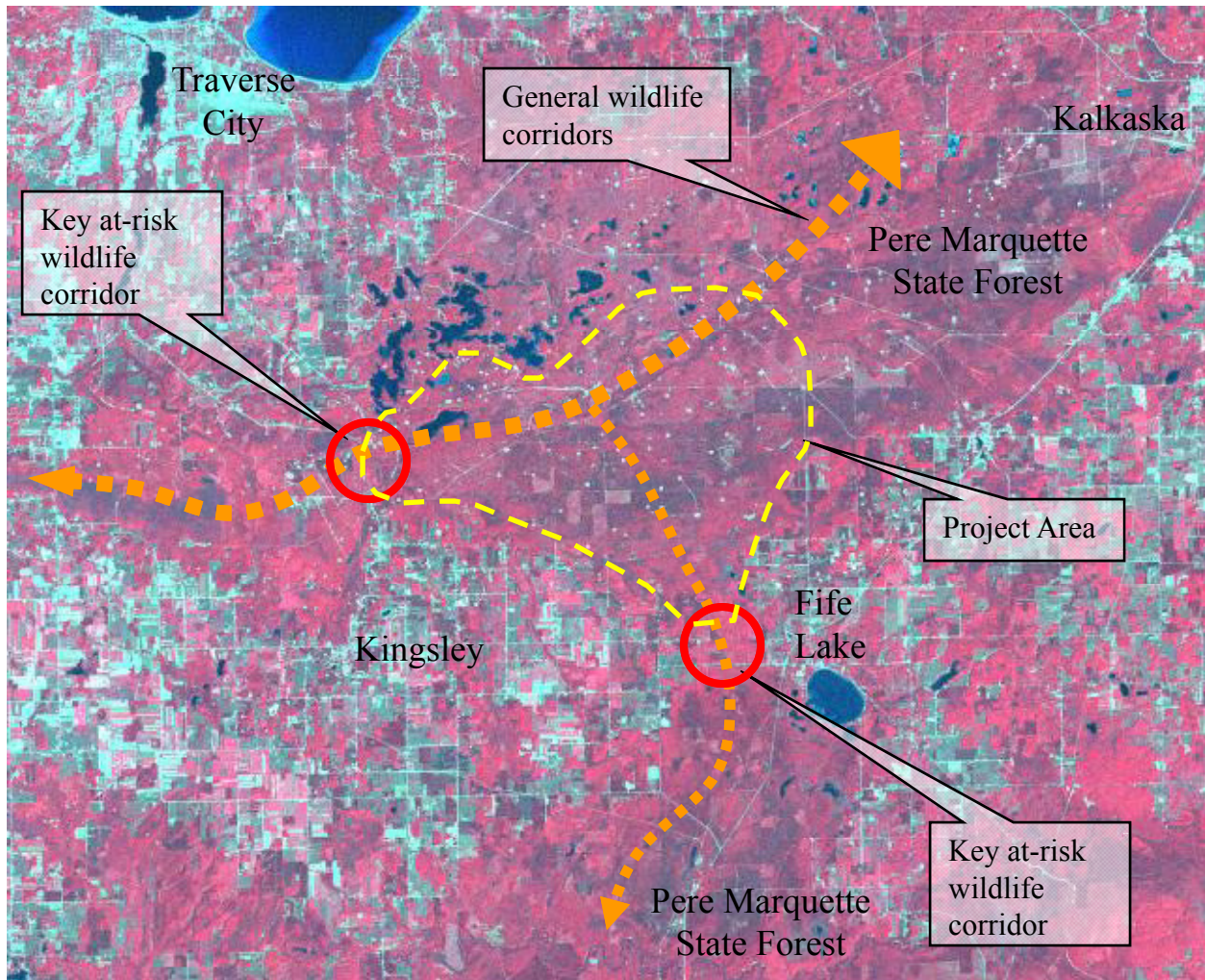
- Adoption of the plan by East Bay Township, Paradise Township, Union Township, Grand Traverse County Board of Commissioners, Grand Traverse County Road Commission, Rotary Camps and Services, City of Traverse City, and Michigan Department of Natural Resources.
- Revision of Community and Agency Master Plans to reflect the plan.
- A comprehensive code review of the existing zoning of the three townships and drafting of specific language that reflects the zoning recommendations.
- Design and establishment of informational and interpretive signage at key entries and central locations of the Valley.
- Undertake a complete study of the recreational trail system to determine specific recommendations for management changes and improvements.
- Coordinate efforts of MDNR, Grand Traverse Regional Land Conservancy, and Rotary Charities to approach targeted conservation properties and inform owners of voluntary options and benefits.
- Incremental alignment and roadway improvements to Brown Bridge Road with scaled back improvements to the Brown Bridge Road, Knight Road, and Mayfield Road stream/river crossings.



Project Context

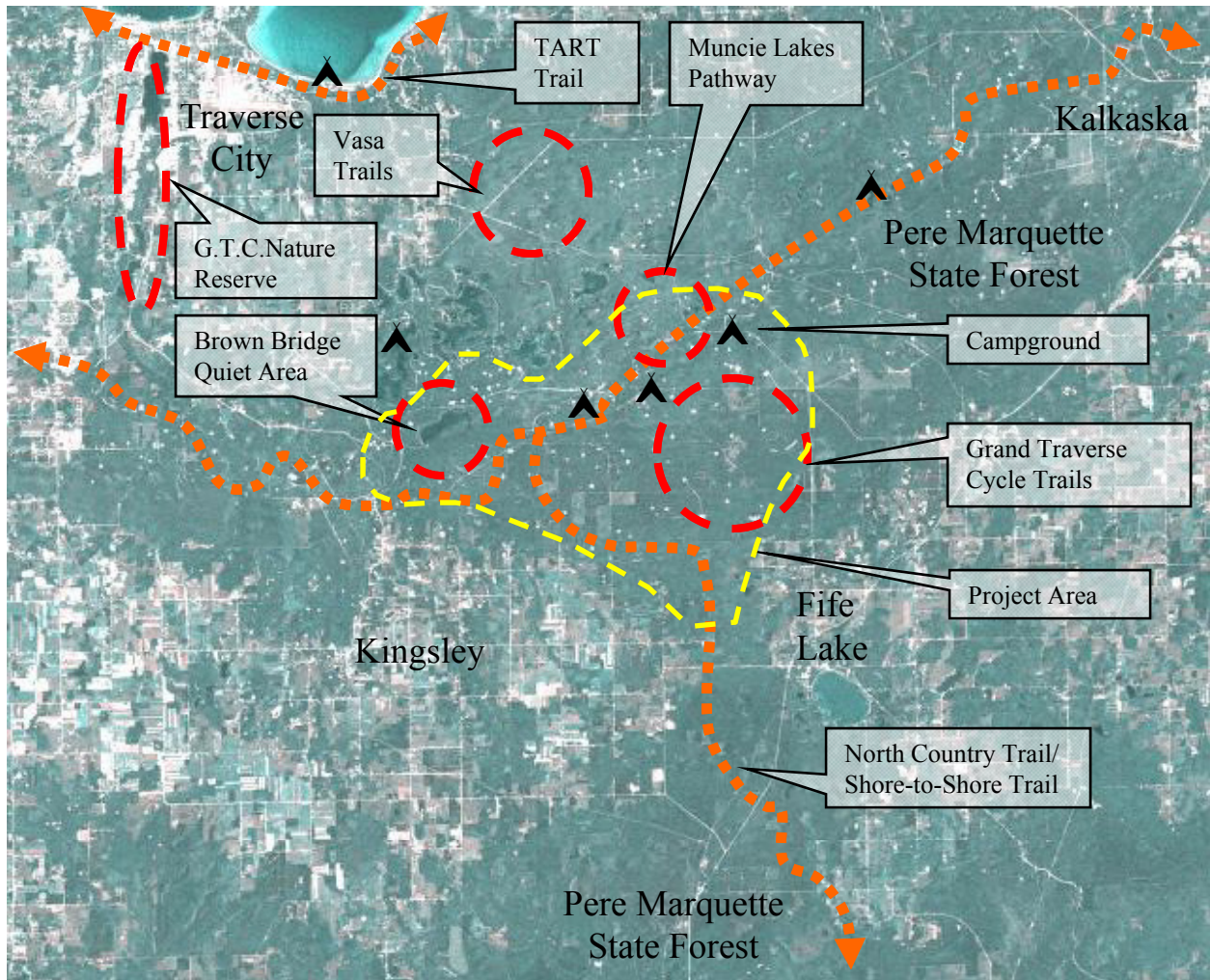
- Natural
- Recreational
- Transportation

Natural Context



This LANDSAT Color Infrared Composite image shows vegetation in shades of red. The extensive public and private conservation property in the area result in significant stretches of forested land. These natural areas provide significant habitat to a wide range of wildlife and allow for the free movement of animals from one area to another. There are a few areas, due to development and transportation facilities, where wildlife movement is constricted and could be endangered by future changes. These areas, indicated by the red circles on the periphery of the project area, should receive special attention to maintain wildlife movement options.

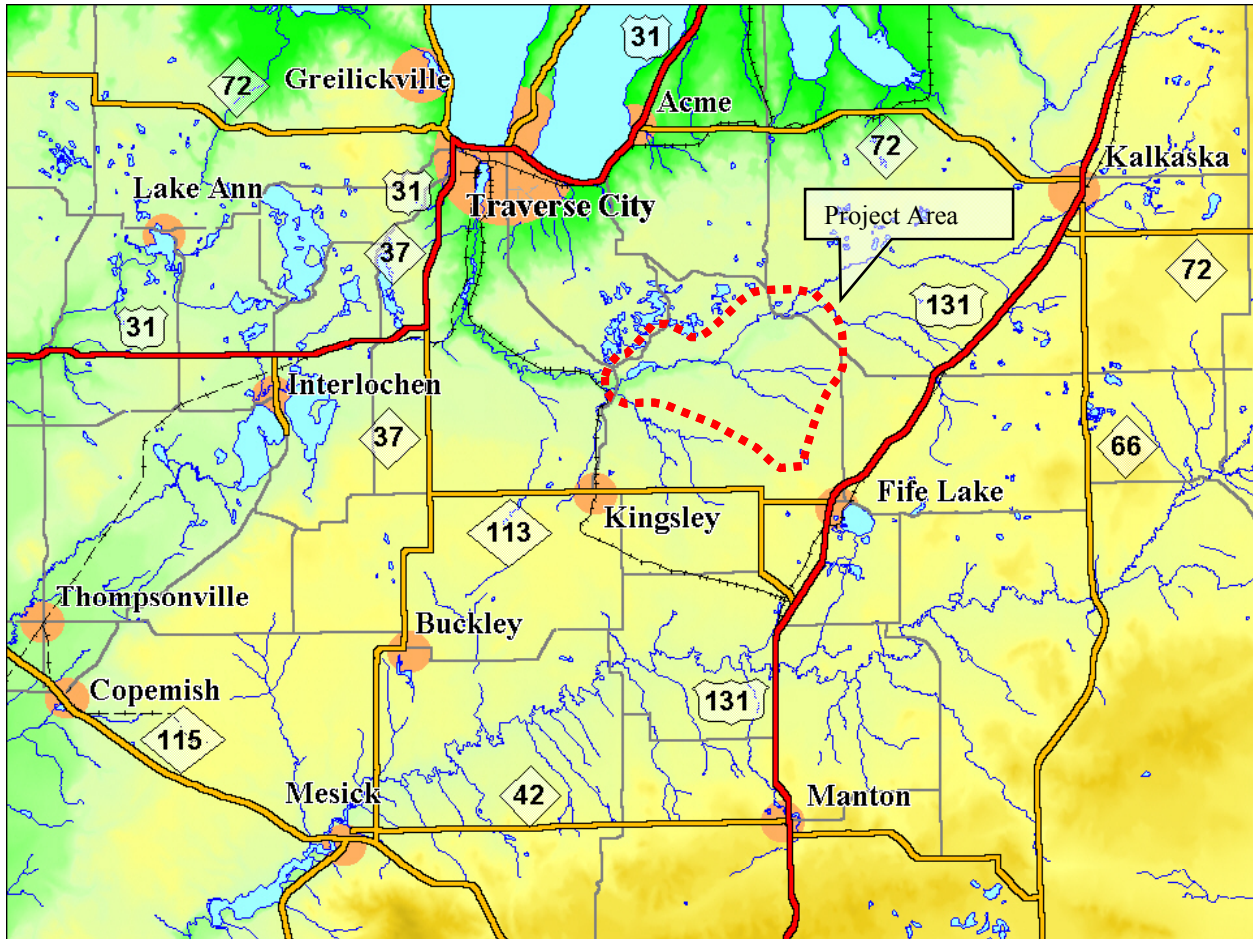
Recreational Context



The project area's proximity to Traverse City as well as its rich natural resources make it a recreation destination for residents throughout the State and from around the Midwest. The project area is also the juncture of a major multi-state trail system (The North Country Trail) and a cross state horse riding/hiking trail system (Shore-to-Shore Trail). Three other trail systems are in the project area (Grand Traverse Cycle Trail, Muncie Lakes Pathway, Boardman Valley Snowmobile Trail) as well as three State campgrounds (Schecks, Forks, Trail Camp).

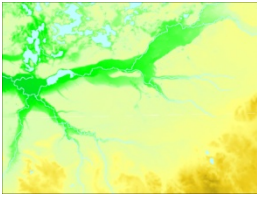
A brief description of each of these trail systems can be found in the Appendix.

Transportation Context



A lack of commerce and housing as well as steep slopes, wetlands, numerous rivers, streams, and lakes have traditionally discouraged development of any major transportation infrastructure through the project area. However, the project area is skirted by numerous major roads carrying traffic to and from the Traverse City area. Two potential road expansions have been of concern to residents. First, the extension of the US-131 expressway north of Manton and the negative impacts that the proposed route and the accompanying interchanges would have. Second, a possible east-west connection through the Boardman River Valley.

The US-131 extension north of Manton has recently been taken out of active planning as the existing traffic counts do not warrant the extension and the economic impact would be limited. Any east-west connectors currently being considered are north of the project area and the County Road Commission says that there is no need or plans for an east-west connection through the Valley.



Influences

- Issues and Alternatives Workshop
- Preliminary Alternatives Workshop
- Community Plans

Project Influences

The direction of the project was influenced by a number of factors including

- The project scope defined by Union Township.
- Guidance from numerous meetings with a citizen and agency based Steering Committee.
- Meetings with public agencies that have jurisdiction over the project area.
- Previously existing community plans.
- Input from two public workshops.

Project Scope of Work

Union Township solicited services to prepare a “Master plan foundation and suggested ordinances that would aid in retaining the rural, wild and recreational habitat that now exist in the Boardman River Valley.” The issues to be addressed included: suggested land uses, suggested densities, wildlife habitats and corridors, sensitive terrain and vegetation, trail system suggestions, river protection issues, road system suggestions, and connections between public and quasi-public owned properties.

Steering Committee

To help refine the direction of the project and help coordinate the public meetings a diverse Steering Committee was created. This group helped direct the public meeting approach, assisted with meeting notifications, and provided general guidance on interim products. The Steering Committee considered, reviewed, and edited proposed text for all drafts; and shall transmit its findings with the proposed master plan to all appropriate parties.

Agency Input

In addition to the project workshops a special meeting was held with the County Road Commission to review the project direction and to gather their insights.

Community Plans

Numerous community plans were reviewed including:

- Grand Traverse County Master Plan: Focus 2020
- Pere Marquette State Forest Management Plan
- Brown Bridge Quiet Area Management Plan
- Boardman River Watershed Report
- Rotary’s East Creek Reserve Management Plan
- East Bay Township Master Plan
- Paradise Township Land Use Plan
- Union Township Master Plan

Public Workshop Input

Two key public input meetings were held to gather information on general issues and specific resources. The first meeting focused on “hopes and concerns,” the second meeting focused on preliminary alternatives.

It should be noted that the first meeting included an incomplete representation of the landowners. Landowners without mailboxes in the Valley were not represented since notices were hand delivered. The second meeting included a more complete representation since notices were mailed. Though both meetings provided valuable information, the results should be weighed accordingly. The following summarizes the findings from these meetings.

Issues and Alternatives Workshop

The first public input meeting was held on December 9, 1999 to gather input on issues and alternatives for the project. Twenty-nine people attended the meeting. After a presentation of the inventory and analysis work, the meeting participants split into two smaller groups and were asked two questions:

What are your hopes and concerns for the future of this area?

- It could be a vision for the future or an immediate concern
- Things you think this project should address

What resources or places make this area special to you?

- Things you want to preserve, protect, or enhance

Each person in the group responded to the questions with the answers recorded on a flip chart. The participants then each cast five “votes” to help prioritize the input. The following summarizes their top priorities. The complete input can be found in the Appendix.

Group One’s Top Five Hopes and Concerns:

- Preservation of area’s wilderness aspect – 8 votes
- Leave State land as is (no selling) – 7 votes
- Roads (retain what we have now) – 6 votes
- Better maintained roads – 6 votes
- No pavement (maintain our gravel roads) – 5 votes

Group Two’s Top Five Hopes and Concerns

- Remove “primary road” status of Brown Bridge Road – 8 votes
- Valley remains the same – 6 votes
- Concerned that Valley not become a major artery – 6 votes
- Maintain quiet/natural area – 6 votes
- Maintain recreational access for future generations – 5 votes

Group One’s Top Five Resources and Places

- Brown Bridge Quiet Area – 7 votes
- Forest aspect – 6 votes
- Water – 5 votes
- Huge piece of public land – 4 votes
- Character of roads – 4 votes
- Better maintained roads – 4 votes

Group Two’s Top Five Resources and Places

- Scenic character of Brown Bridge Road – 9 votes
- Diverse recreation that Valley offers – 8
- Boardman River – 8
- Backdoor recreation – 7 votes
- Natural beauty – 6

Common elements were the desire to: improve maintenance of Ranch Rudolf/Brown Bridge gravel roads while maintaining their special character, preserve the beauty, public lands, natural state, and quiet character of the Valley, avoid a major east-west connection through the Valley, improve recreational opportunities and access and provide for additional use, and preserve the quality of the Boardman River.

Preliminary Alternatives Workshop

The second public input meeting was held on February 10, 2000 at Ranch Rudolf. The following items were discussed:

1. Review of site inventory and analysis information.
2. Discussion of the conservation design principals as promoted by Randall Arendt of the Natural Lands Trust.
3. Three general development scenarios were discussed with preliminary analysis of the development and transportation ramifications:

Alternative One – Do Nothing

Alternative Two – Conservation Zoning

Alternative Three – Conservation Zoning, Down Zoning, and Land Swaps

At the meeting, it was accepted that wetlands, existing natural feature buffers, steep slopes, and prime farmland were to be protected. The focus of the meeting was to determine what other features of the Valley should also be protected as well as what development scenarios were most preferable. The participants were asked two questions:

1. What are your top three secondary conservation areas?
2. What development scenario do you like the most and why?

The property owners in the Valley received stickers to distinguish their answers.

The input on the secondary conservation areas focused on three areas roads, trails/recreation, and scenic views. Other items mentioned were woodlands, the river, and wildlife. In addition, various comments were received regarding minimum lot sizes and protecting property rights. The entire results can be found in the Appendix.

The input on the development scenarios resulted with the minority casting three votes for Alternative One – Do Nothing. Alternative Two and Alternative Three tied with ten votes each. The property owners in the Valley had a slight leaning towards Alternative Two with 9 votes to 7 votes for Alternative Three. It was noted at the workshop that Alternative Three could include additional planning tools and the votes received reflected this understanding.

As with the previous input there was a significant concern regarding the scenic character of the roads and preservation/enhancement of the recreation and scenic qualities of the Valley. There was a consensus to preserve key natural features with land management principles utilizing new planning concepts such as clustered development, etc.. Reductions in densities had considerable support but a slight majority preferred no reduction or a slight reduction through conservation zoning.

Community Plans

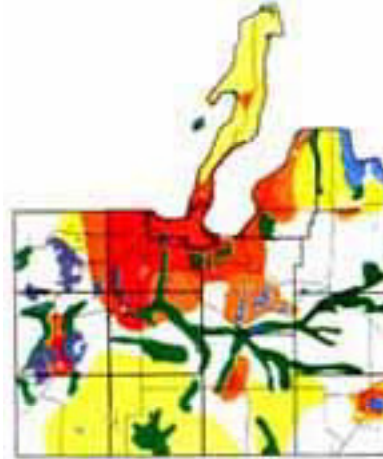
In addition to the public input numerous community plans were consulted including: Grand Traverse County Master Plan: Focus 2020, Pere Marquette State Forest Management Plan, Brown Bridge Quiet Area Management Plan, Rotary’s East Creek Reserve Management Plan, Boardman River Watershed Report, East Bay, Paradise, and Union Township’s Zoning and Master Plans.

The following summarizes key points from the plans:

Grand Traverse County Master Plan: Focus 2020

Defines five “levels” of growth management:
Level 1, Sensitive Environmental Areas and
Level 2, Rural preservation are the predominant policies in the study area.

Outlines numerous strategies to manage growth
Including Strategy 15, broaden efforts to enhance the aesthetic values of the existing and future road corridors is relevant to this study.



Pere Marquette State Forest Management Plan

Conservation Management for multiple purposes including:

- Oil, gas, and mineral exploration
- Forest products
- Recreation

“Traditional management activities will be tempered by a focus to maintain recreation values”.

Brown Bridge Quiet Area Management Plan

Vision Statement: “Restore, preserve and protect the integrity of the natural environment, including its inhabitants, yet allow managed public use for generations to come.”

Desired Future Condition: “Preserve the area in a natural state, while offering a quality, ‘quiet area’ recreational experience...A low profile place that delicately enhances the users knowledge and appreciation of the peace and beauty of nature; cautioning not to move too fast to ‘civilize’ any of the area.”

Boardman River Project

The Mission of the Boardman River Project is “To restore, protect, and maintain the ecological integrity of the Boardman River Watershed as a “Blue Ribbon” trout stream, a rural greenbelt, and as a recreational resource”. The project is a partnership of The Grand Traverse Conservation District and the Grand Traverse Regional Land Conservancy. The Conservation District repairs and restores eroded stream banks along the River while the Conservancy protects natural lands within the Watershed through voluntary conservation easements and land acquisition.

Community Plans

Rotary's East Creek Reserve Management Plan

A 560 acre "wilderness park" to be managed to protect, enhance, and promote public recreation, water quality, wildlife habitat, and ecological diversity. Issues include controlling motorized use on existing two track roads and relocation of the snowmobile trail and the State Shore-to-Shore horse riding and hiking trail.

East Bay Township Master Plan

Summary Goals:

Provide for and encourage appropriate growth of residential/commercial

- Consistent with Master Plan
- Provide appropriate growth management tools

For Study Area:

- Preservation of the "rural character" defined by clean lakes, streams, air, and native wildlife
- Rational growth management tools to help protect natural features
- Access to recreational opportunities as sustainable levels- balanced with goals to preserve and maintain natural features

Paradise Township Land Use Plan

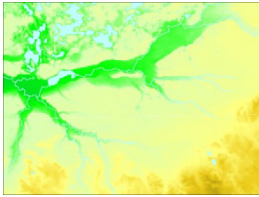
Goals:

- Establish a sound basis for effective and reasonable zoning
- Retain and protect streams, wetlands, Boardman River and ground water
- Control growth to protect the rural and natural character
- Protect and encourage the rural and natural character
- Plan for orderly growth
- Maintain rural "quality of life"
 - Preserve and enhance natural beauty and environment
 - Improve economic well being of residents
- Utilize Grand Traverse County Master Plan: Focus 2020 in maintaining Kingsley as service center

Union Township Master Plan

Objectives:

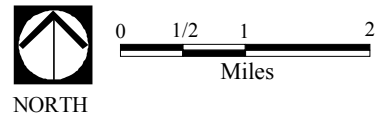
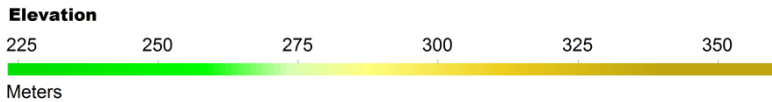
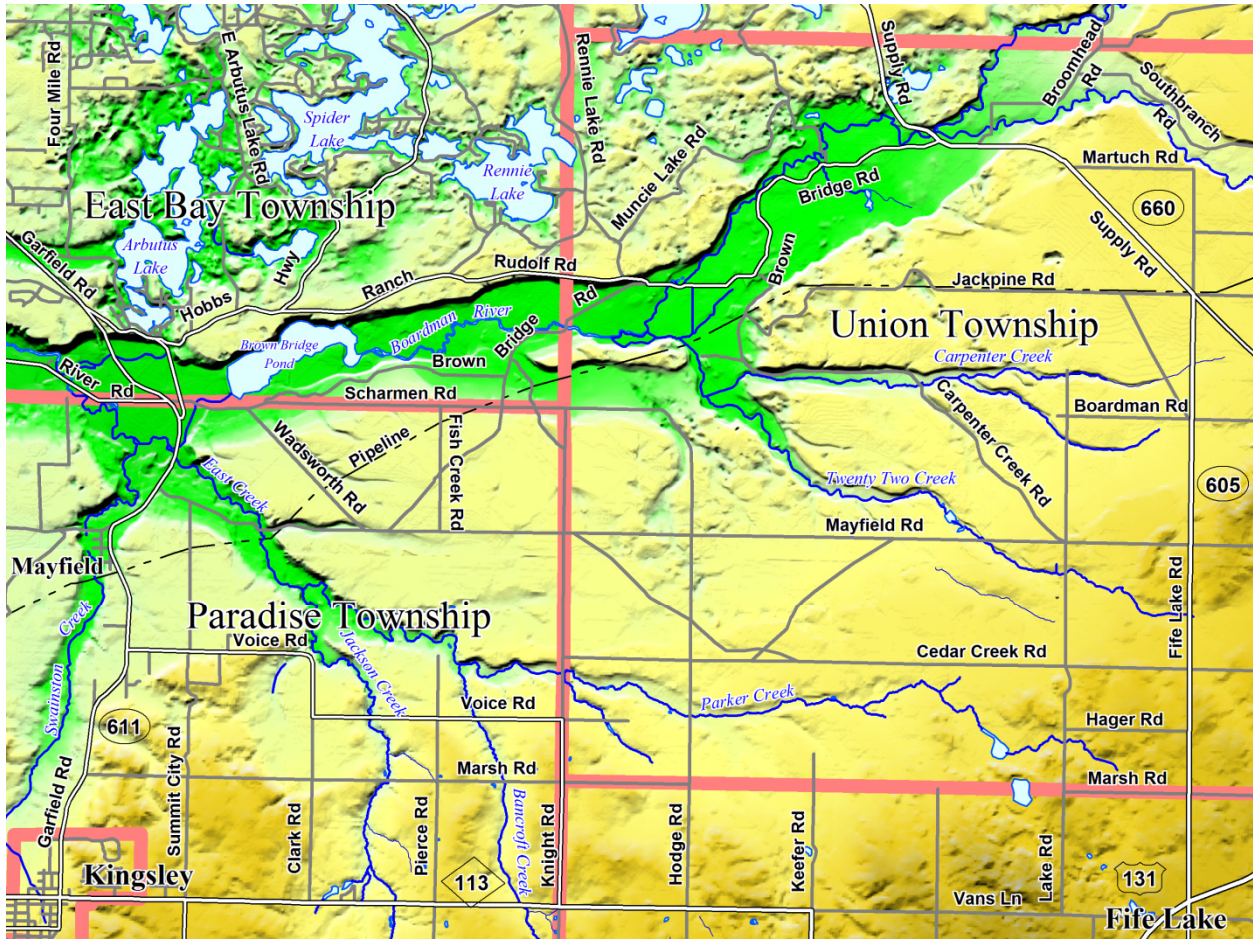
- Make the best use of lands for present and future development
- Protect the water quality of the Boardman River
- Maintain the high quality of recreational and forest lands
- Preserve the quiet, wooded nature of the environment
- Provide for careful review of industrial/commercial/urbanization for suitability for above



Site Inventory & Analysis

- Project Area
- Aerial Photo
- Land Use / Land Cover
- Ownership
- Oil and Gas Wells
- Recreation Resources
- Transportation Issues
- Wetlands
- Steep Slopes
- Prime Farmland
- Composite of Primary Natural Features
- Zoning Analysis
- Potential Development Analysis

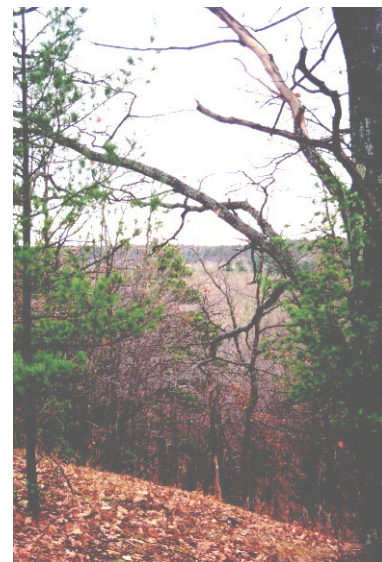
Project Area



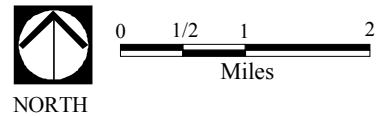
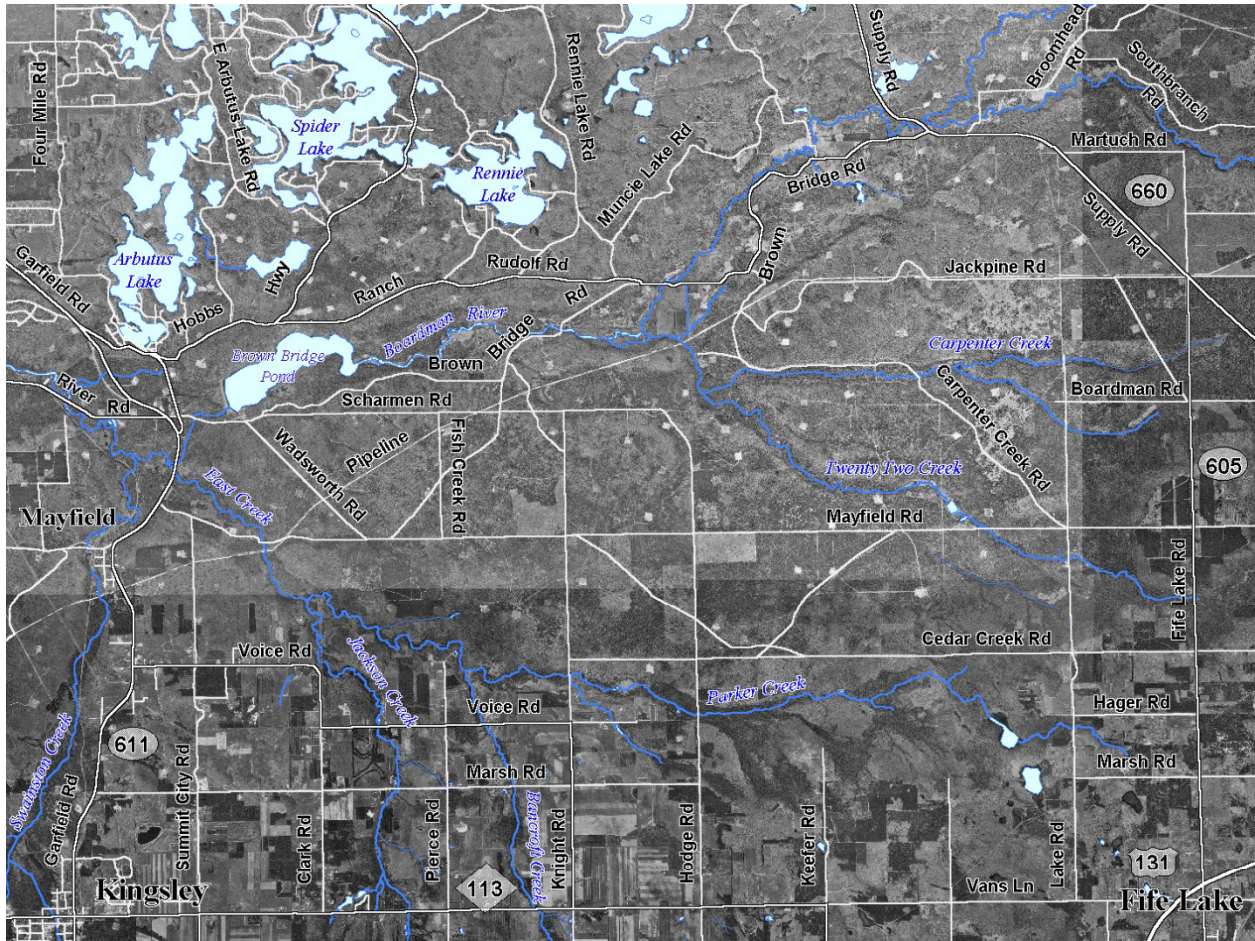
The project area is loosely defined as the Boardman River Valley between Garfield Road and Supply Road and the immediate area. The project area spans East Bay, Paradise, and Union Townships. The communities of Kingsley and Fife Lake are just to the south of the project area.

The Boardman River Valley is well defined in the project area, with steep side slopes and a wide/flat Valley floor. The map above illustrates the topography of the project area with the Valley highlighted in green.

The photograph to the right shows the view from an overlook just off Ranch Rudolf Road looking south over the Valley.



Aerial Photo

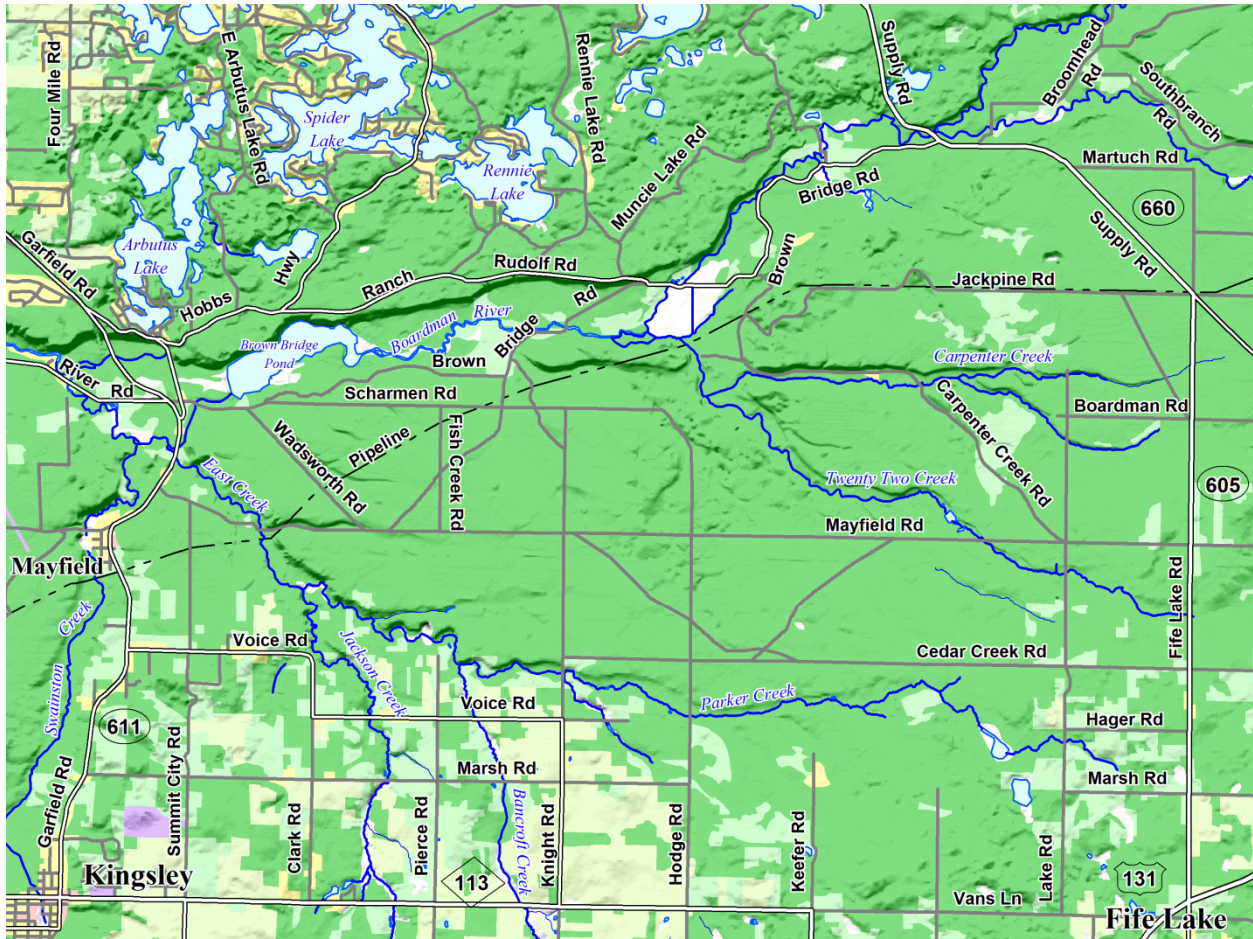


The air photo above highlights the roads, utility lines, and water features. The most distinguishable features from the air is the pipeline running east-west and the numerous oil and gas well extraction sites that show up as white dots.

The photograph to the right shows Bucks Landing in the Brown Bridge Quiet Area.



Existing Land Use / Land Cover

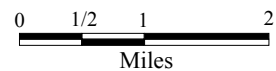


Legend

- Agricultural Land
- Forested Land
- Mixed Commercial
- Mixed Industrial
- Mixed Residential
- Open Land
- Public/Semi-Public



NORTH



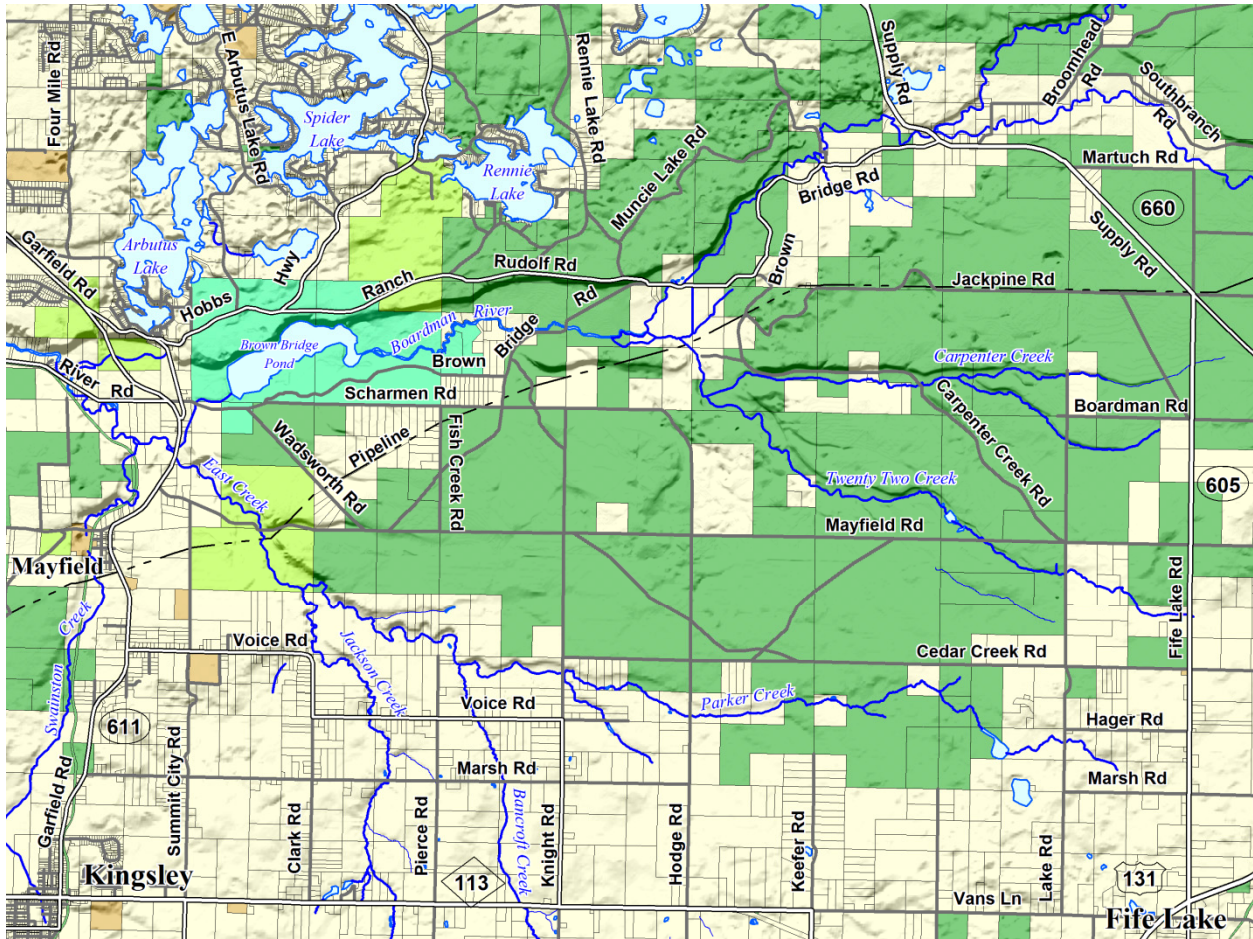
The project area is predominantly forested with some open old field/pasture areas along Brown Bridge Road. Kingsley and Fife Lake are the nearest commercial areas. Both are surrounded by rural residential areas and agricultural lands.

The forested land cover combines with highly permeable soils in the upland outside the Valley floor providing excellent ground water recharge areas.

The photograph at the right shows the Boardman River along Brown Bridge Road.



Ownership

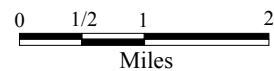


Legend

-  Parcel Lines
-  State of Michigan Property
-  Traverse City Property
-  Township Property
-  Rotary Camps and Services Property



NORTH

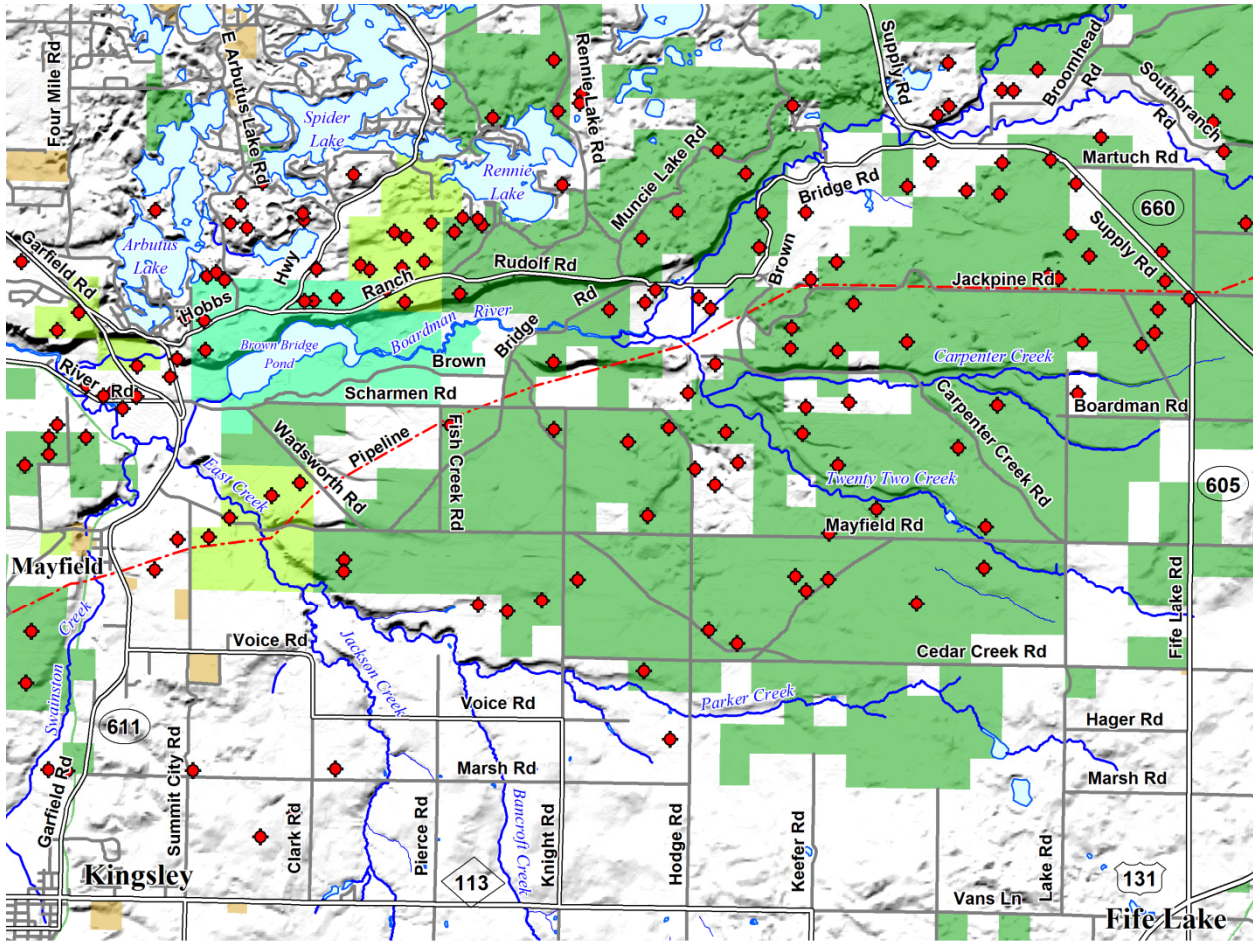


The most striking feature of the ownership map is the extent of public and quasi-public conservation oriented property. Michigan Department of Natural Resources owns the majority of land in the project area as a part of the Pere Marquette State Forest. Discussions with forest managers indicate that they do not plan to liquidate any of the core properties, although they are open to swapping fringe parcels for in-held parcels.

The City of Traverse City and the Rotary Camps and Services properties interweave with the State Forest Lands on the west side of the project area creating a significant block of conservation lands under three different management agencies.

Also quite noticeable is a corridor of private ownership running through the center of the project area.

Oil and Gas Wells

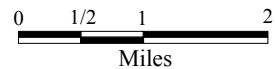


Legend

- ◆ Oil and Gas Wells
- Gas Transmission Line
- State of Michigan Property
- Traverse City Property
- Township Property



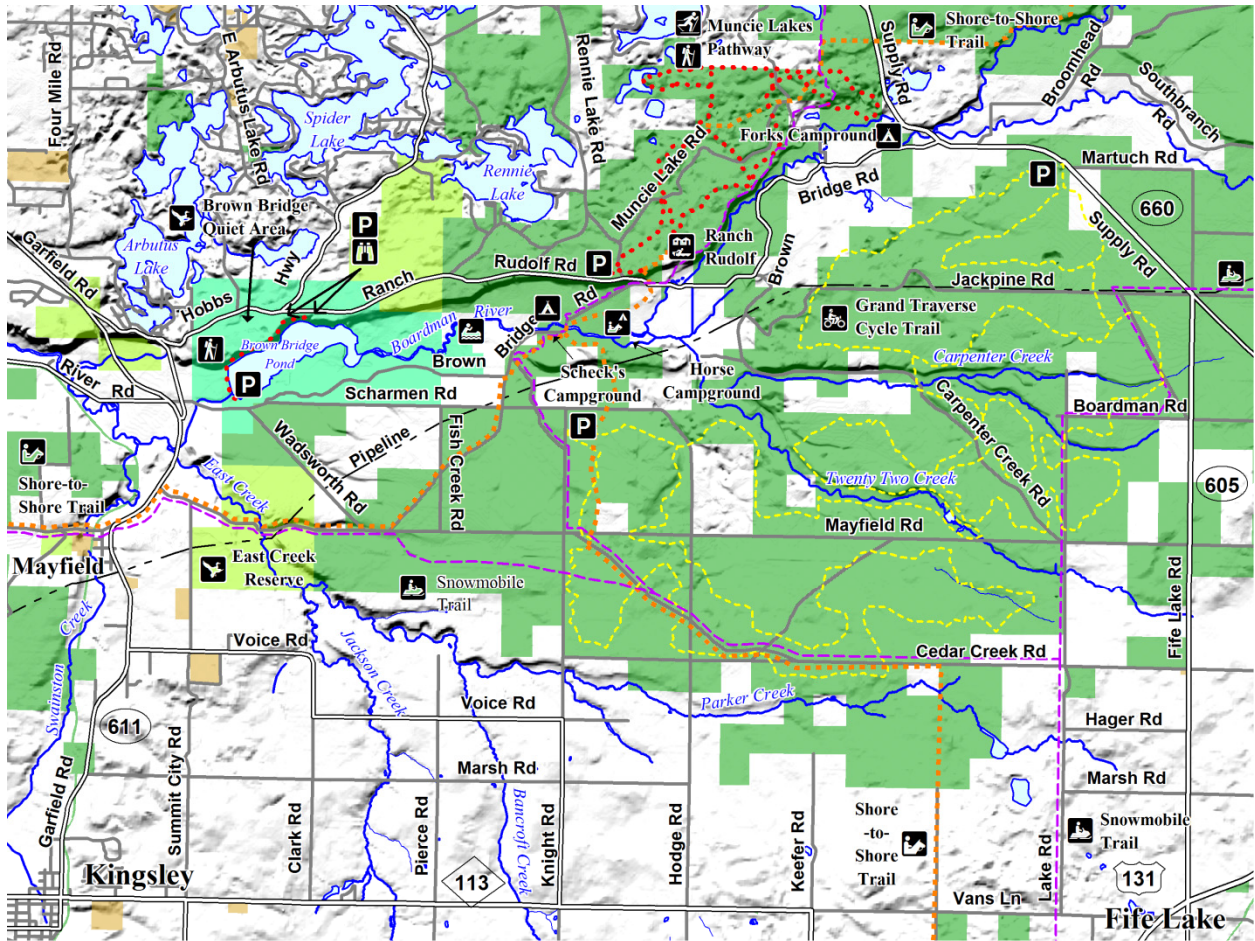
NORTH



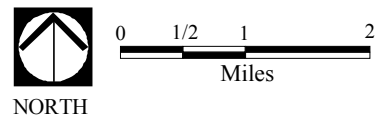
Oil and gas extraction has played a significant role in the Valley and the local economy. As an example, this report is made possible through oil and gas revenue from wells on the Rotary Camps and Services property. The infrastructure to support the oil and gas exploration and extraction is significant. Numerous roads cross the Valley providing access to the wells. In addition, a major transmission line runs east-west across the Valley. Note that in addition to the wells indicated on the above map, numerous others are not shown due to a lack of data. Recently, the wells have had decreasing production with many of the wells being capped or shut in.

The oil and gas wells are regulated by MDNR and MDEQ and are not specifically addressed in the management recommendations since the Townships have minimal influence in their regulation. The impact to wildlife in their current configuration seems to be minimal. Their primary impact is aesthetic – noise and visual appearance, and environmental – air and potential ground water pollution.

Recreation Resources



The project area is rich in recreation resources and offers the opportunity for a continuous, well coordinated trail network.



Where the potential exists, combining and linking trails should be investigated. The foot trail system at Brown Bridge Pond does not link with the Muncie Lakes Pathways just two miles to the east. Two of the long distance trail systems, the Shore-to-Shore Trail system and the Snowmobile Trail system, have the potential to share additional routes since their primary seasons do not overlap.

In addition, there are potential trail-use conflicts with numerous horse riding-hiking trail/ORV trail crossings in the south/central part of the project area.

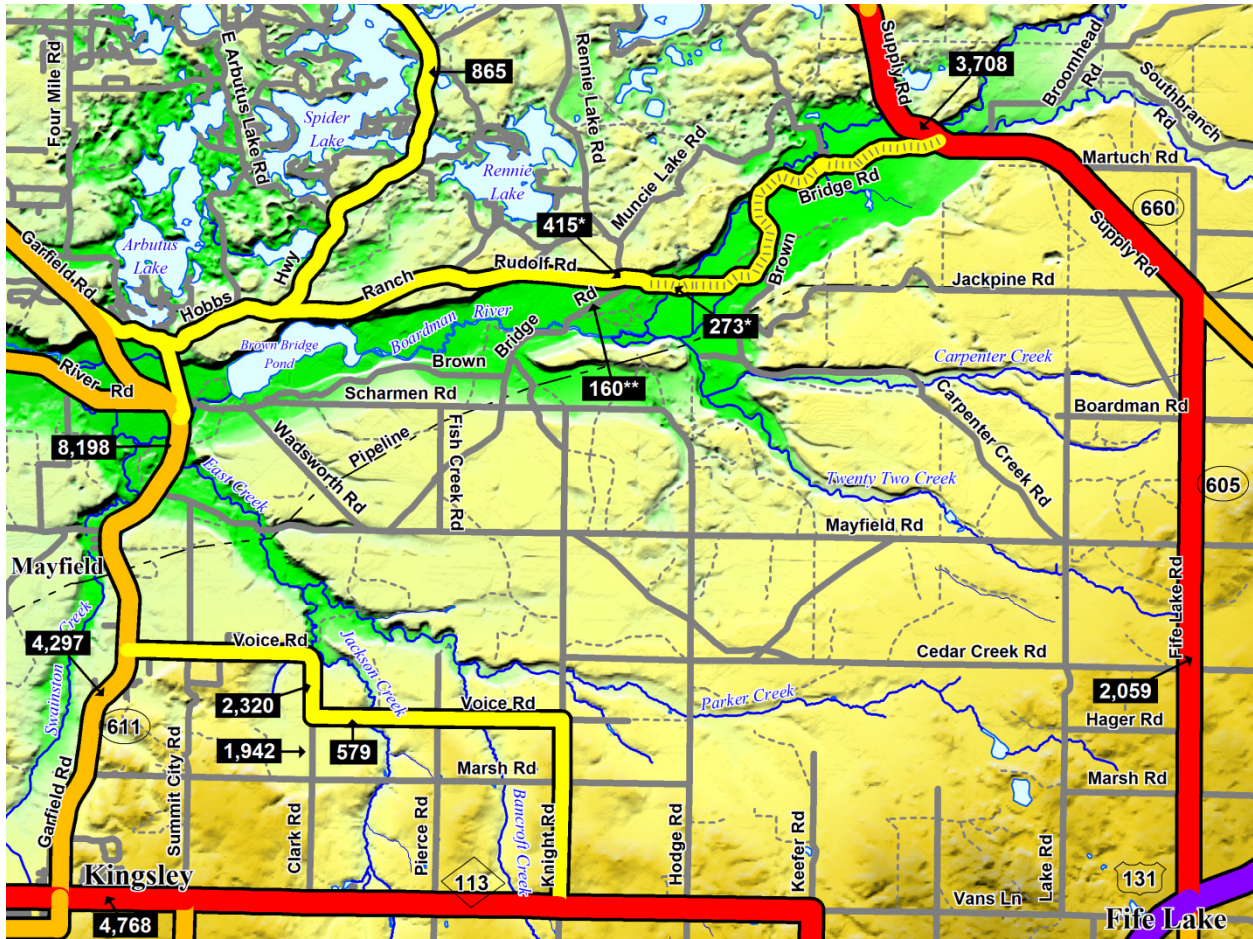
Trailheads can be found throughout the project area. Their locations must be evaluated on an individual basis to determine their ultimate disposition.

A comprehensive study and analysis is necessary to evaluate the entire trail system and identify opportunities for improvement.

Legend

- Hiking Trail
- - - - - ORV Trail
- - - - - Horse Trail
- - - - - Snowmobile Trail
- P** Parking
- Snowmobile Trail
- Campground
- Horse Trail
- Motorcross Trail
- Cross Country Skiing Trail
- Hiking Trail
- Resort/Lodge
- Horse Campground
- Canoeing/Kayaking
- Wildlife Management Area
- Overlook
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property

Transportation – Functional Classifications



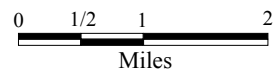
Legend

- Major Collector
- Minor Arterial
- Minor Collector
- Principal Arterial
- Local Roads
- - - - Unclassified Roads
- | | | | Unpaved Primary Road

Traffic Counts are shown in back boxes. Year-round traffic count information is not available on the main road of concern, Brown Bridge Road. Most counts are on the peak travel times such as mid-summer and holiday weekends. Specific information on the count is indicated with asterisks:
 * Average for a mid-July weekend
 ** Estimated avg. for summer mid-week



NORTH

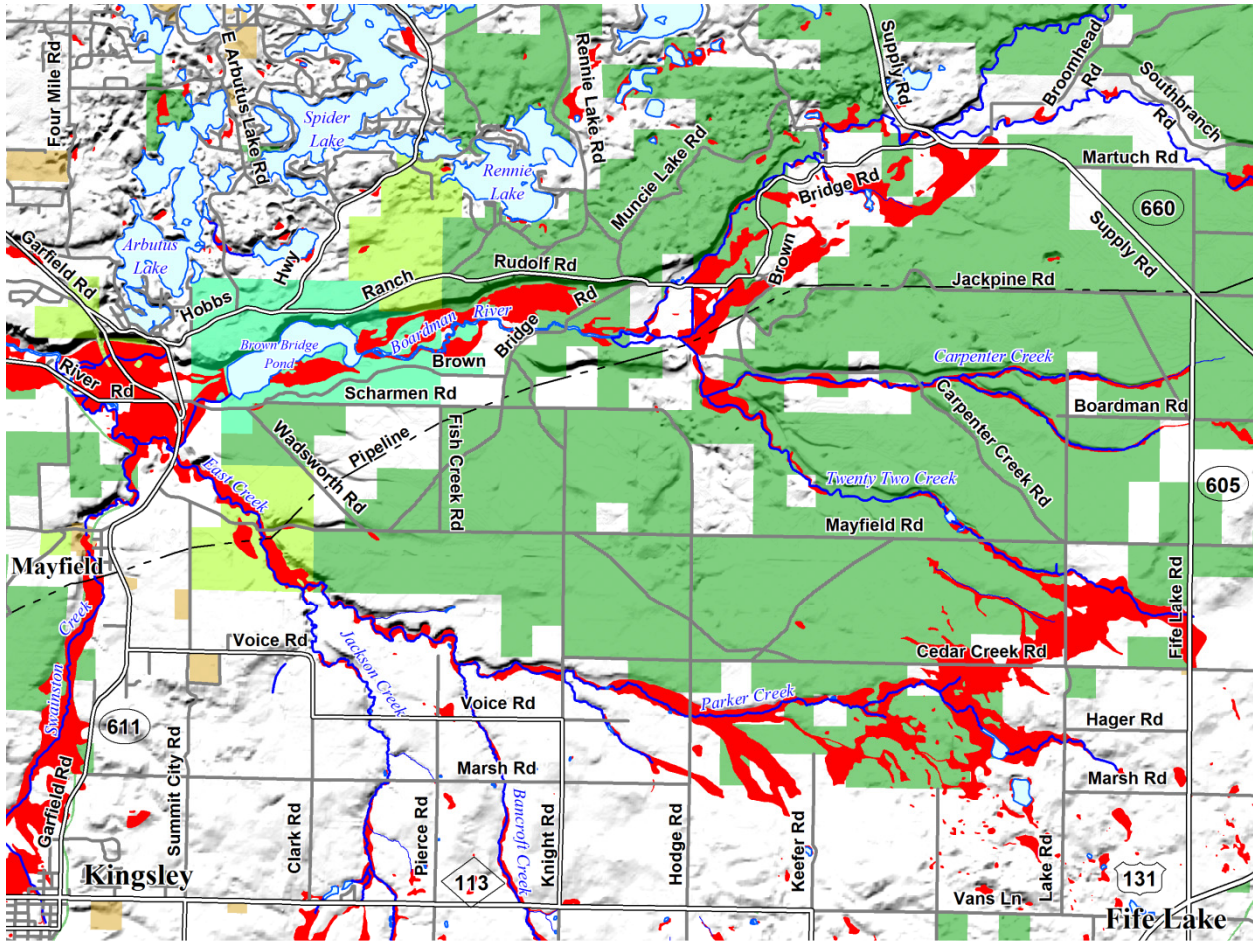


The roads shown above in color are all considered primary roads that qualify for Federal funding. The following describes the classification systems. **Principal arterials** generally carry long distance, through-travel movements. They also provide access to important traffic generators, such as major airports or regional shopping centers. **Minor arterials** are similar in function to principal arterials, except that they carry trips of shorter distance and to lesser traffic generators. **Collectors** tend to provide more access to property than do arterials. Collectors also funnel traffic from residential or rural areas to arterials. Local roads primarily provide access to property.

The eastern-half of Brown Bridge Road, shown in the photo to the right, is the only unpaved primary road in the county.



Wetlands

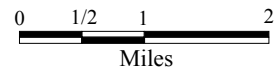


Legend

- Wetlands
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property



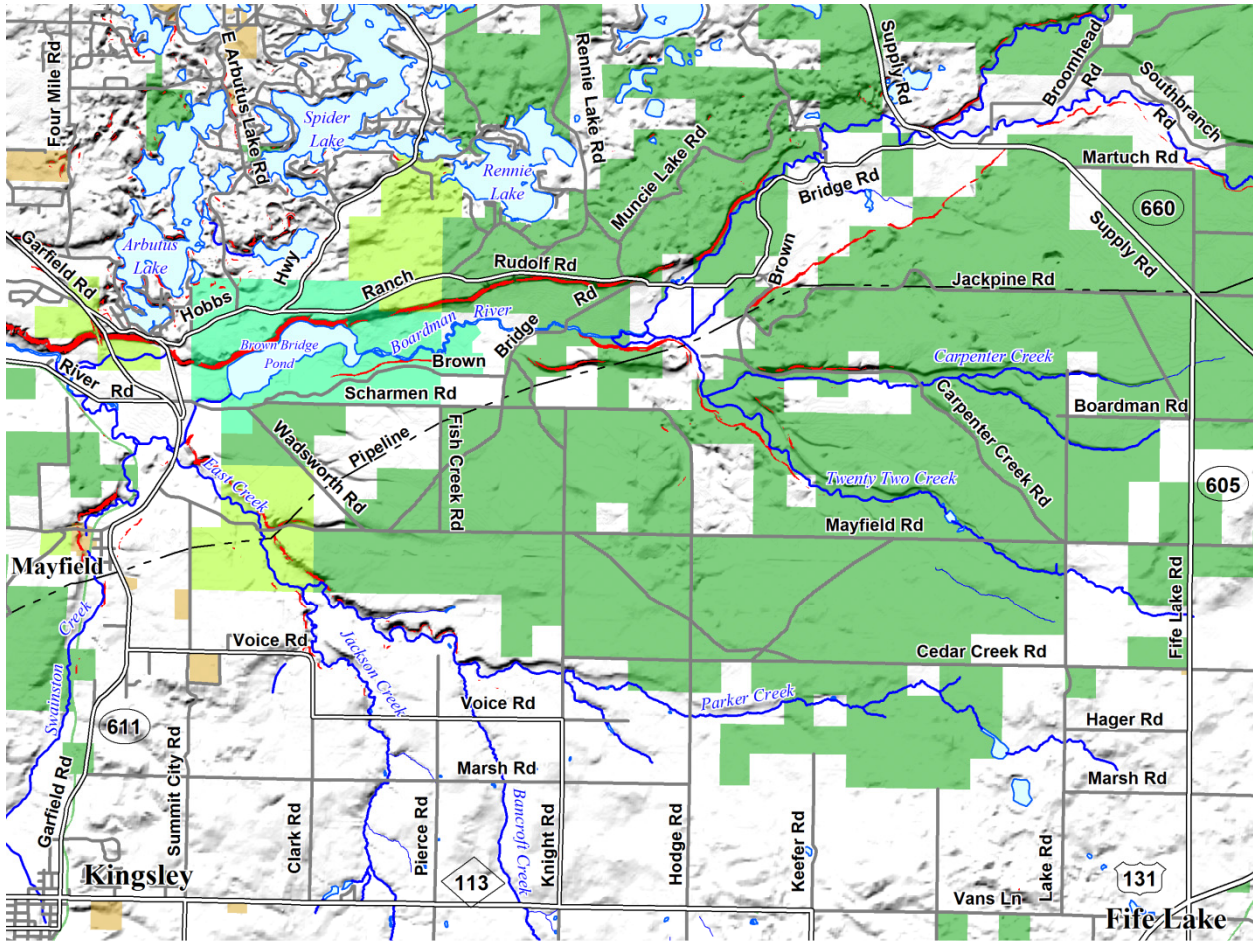
NORTH



This map shows all wetlands in red. The information from this map came from the National Wetland Inventory database. While not an exact location of the wetlands, this information serves as a foundation for further field determinations.

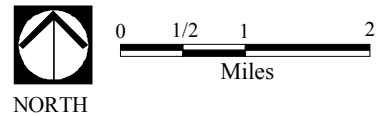
Many of the wetland resources shown presently receive some protection through existing legislation. Wetlands are considered regulated by Part 303 of the Natural Resource and Environmental Protection Act (P.A. 451 of 1994, as amended) if they are contiguous to, or within 500 feet of a lake, pond, or stream. Non-contiguous wetlands greater than five acres in size are regulated in counties with greater than 100,000 residents (at the present time this does not include Grand Traverse County, but this could change in the future). The local soil erosion and sedimentation control ordinance also imposes a 25 foot setback from regulated wetlands. This setback is regulated by the Grand Traverse County Drain Commissioners office.

Steep Slopes



Legend

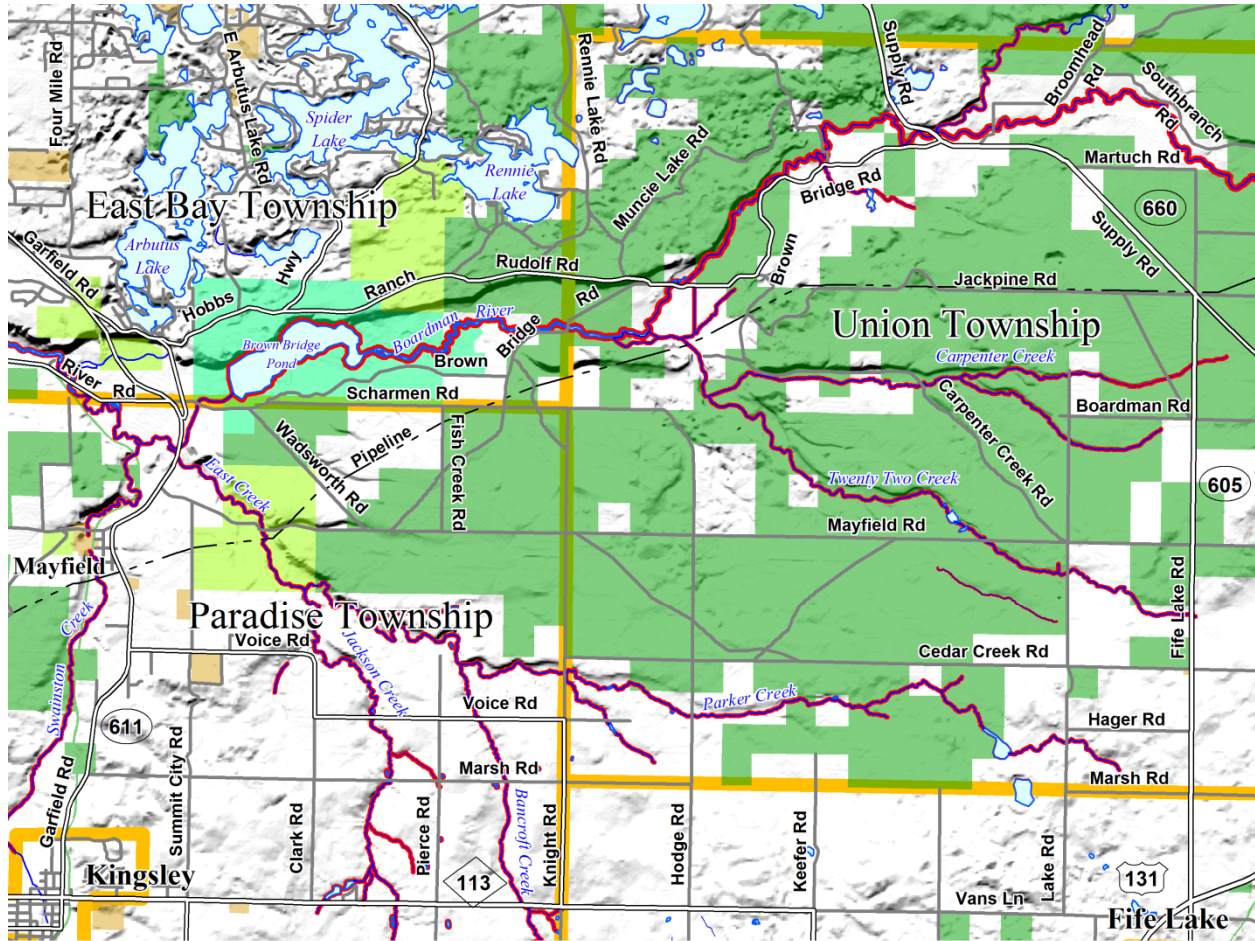
- █ Steep Slopes
- █ State of Michigan Property
- █ Traverse City Property
- █ Township Property
- █ Rotary Camps and Services Property



This map shows steep slopes (over 25% or 1 on 4) in red. These slopes were calculated using digital elevation data from the USGS. While not an exact location of these steep slopes, USGS information serves as useful guide for planning.

These slopes are generally the Valley walls. They are highly erodable if the vegetation is cleared and are therefore very sensitive to development. These slopes are highly visible and offer some of the most striking visual features of the Valley.

Existing Natural Feature Zoning

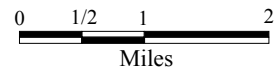


Legend

- █ Natural River Buffer
- █ State of Michigan Property
- █ Traverse City Property
- █ Township Property
- █ Rotary Camps and Services Property



NORTH

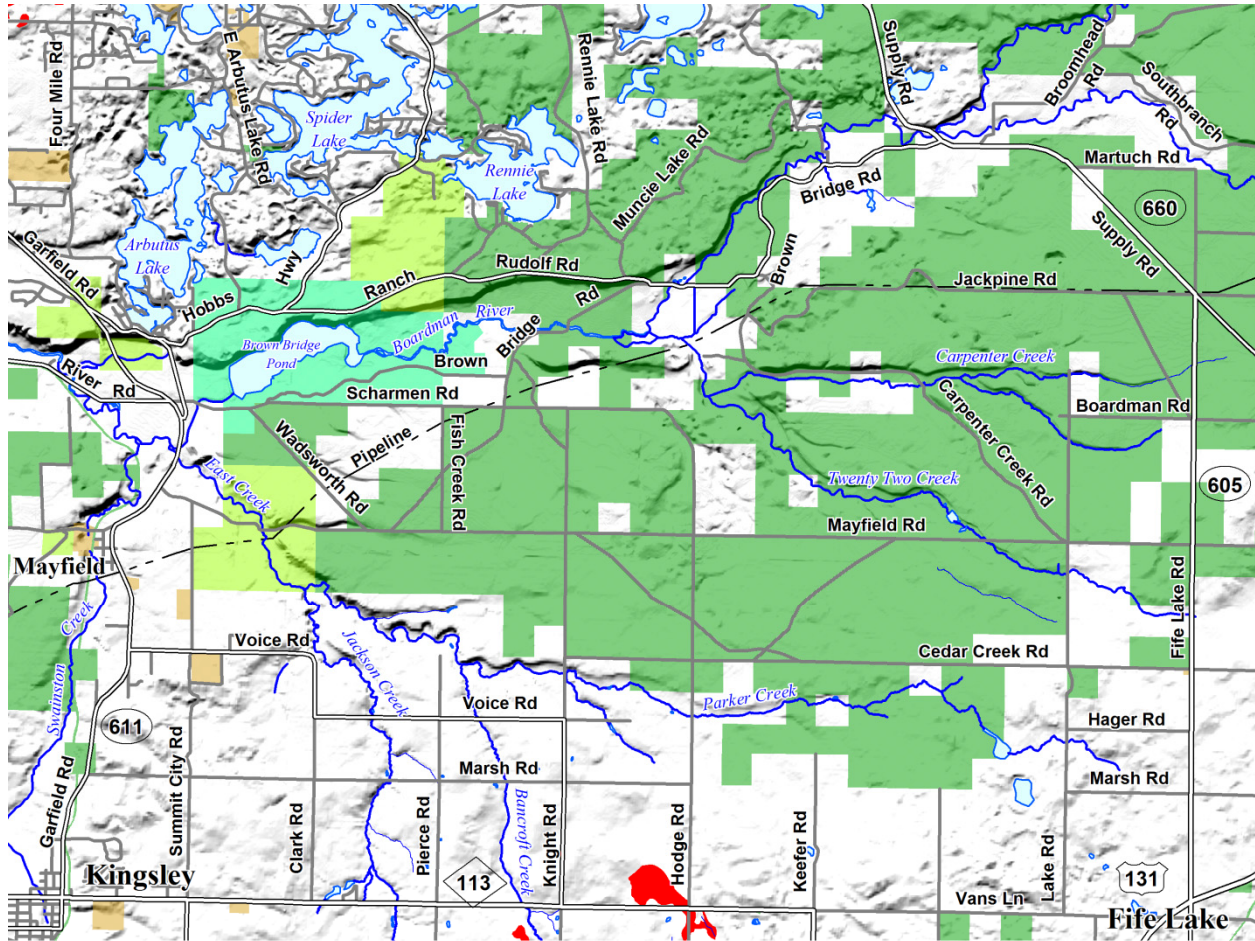


The Boardman River, as it transverses the project area, is a State designated Natural River. As such, guidelines are provided for building setbacks and vegetated strips. These guidelines are implemented through local zoning with State oversight.

The chart to the right shows how the three townships have addressed the natural river designation in their zoning. The protected zones are shown in red in the map.

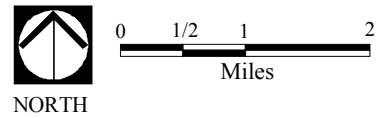
Community:	Building Setbacks:	Vegetated Strips:
East Bay Township	150' upstream of dam	75' upstream of dam
	100' downstream of dam	50' downstream of dam
	400' from commercial uses	
Paradise Township	100' from streams, lakes, and water bodies	50' from streams, lakes, and water bodies
Union Township	150' from Natural Rivers	75' from Natural Rivers
	100' from Natural Tributaries	50' from Natural Tributaries
	50' from streams, lakes, and water bodies	

Prime Farmland



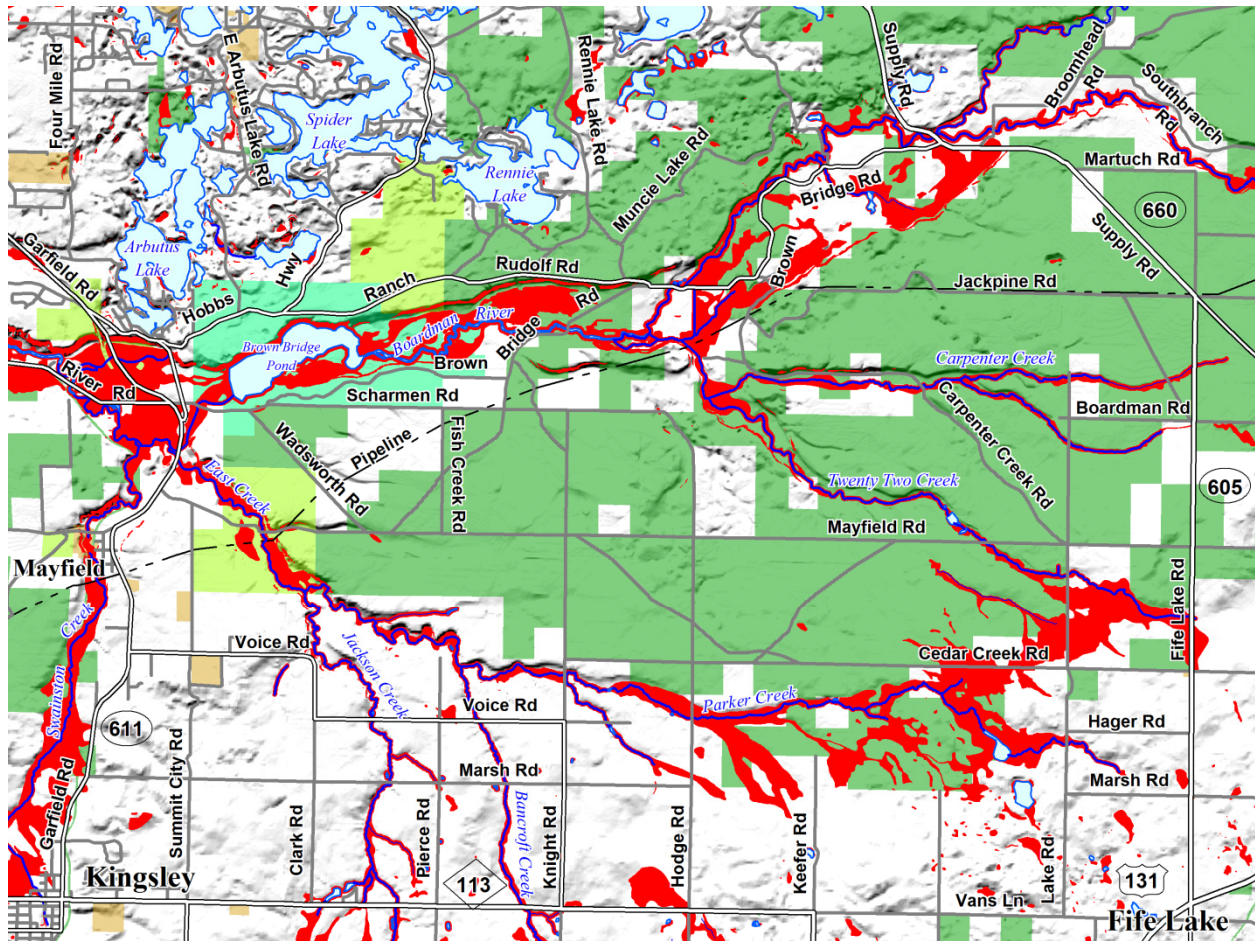
Legend

- Prime Farmland
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property



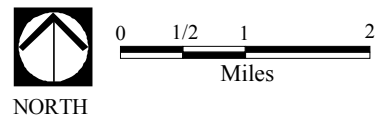
Prime farmland is indicated in red. The prime farmland information came from the USDA-NRCS Soils inventory and rating data. The preservation of prime farmland does not play a role in the preservation of the Valley. Most of the land is poorly suited for agriculture.

Composite of Priority Natural Features



Legend

- Priority Natural Feature Composit
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property

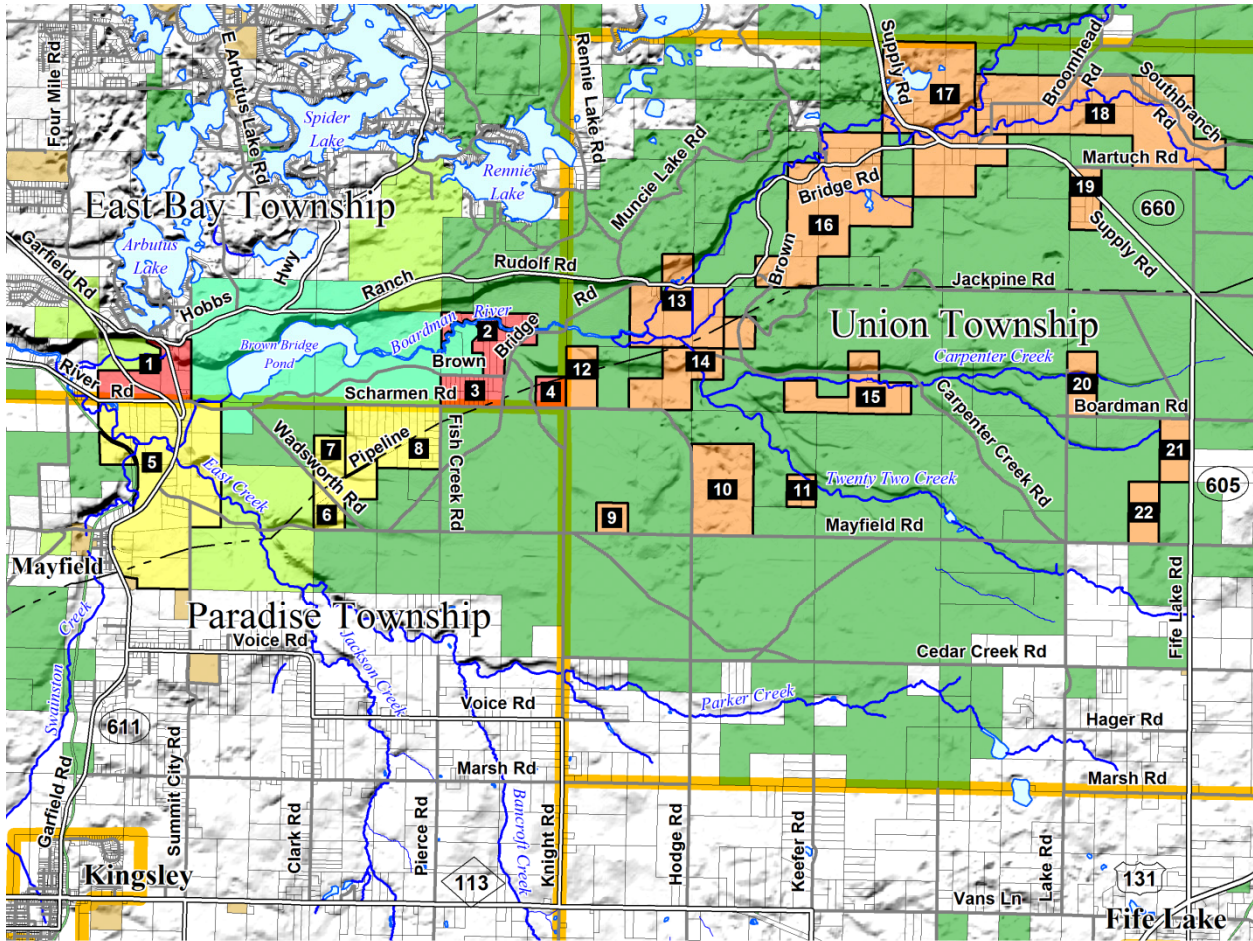


This map is a composite of the four preceding maps and shows all wetlands, natural feature setbacks, slopes over 25%, and prime farm land. It illustrates, in red, quantifiable natural resources worthy of protection. Some features, such as the natural feature buffers and some of the wetlands, are currently protected, others are not.

Information is not currently available on the extents of the flood plain. When this information becomes available this area should also be considered as a Priority Natural Feature. It is expected that there will be considerable overlap of the Composite of Priority Natural Features shown above and flood plain boundaries.

These resources may want to be preserved from development due to their ecologic and cultural significance. They can form the backbone of a conservation strategy.

Zoning Analysis



Legend

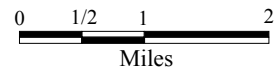
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property

Zoning:

- Forest Residential District - 2.5 DU/Acre
- FR-1 Forest Recreational - 2.5 DU/Acre
- S-1 Lake and River Environment .92 DU/Acre



NORTH



To analyze the zoning implications the key parcels in the project area were grouped into 22 analysis areas; these areas are shown in red, orange, and yellow on the map. The nature and degree to which these areas change over time will have a significant impact upon the character of the entire Valley. The chart on the following page illustrates the potential impact of the existing zoning. The following is a summary of the residential zoning classifications in the Valley:

East Bay Township, S-1 Lake and River Environment, 0.92 acre minimum lot size, 150' minimum lot depth, 30' minimum building setback from road, 10' minimum side yard setback, 35' minimum rear yard setback

Paradise Township, FR-1 Forest Recreational, 2.50 acre minimum lot size, 200' minimum lot depth, 200' minimum building setback from road, 15' minimum side yard setback, 15' minimum rear yard setback

Union Township, Forest Residential, 2.5 acre minimum lot size, 200' minimum lot depth, 34' minimum building setback from road, 50' minimum side yard setback, 50' minimum rear yard setback.

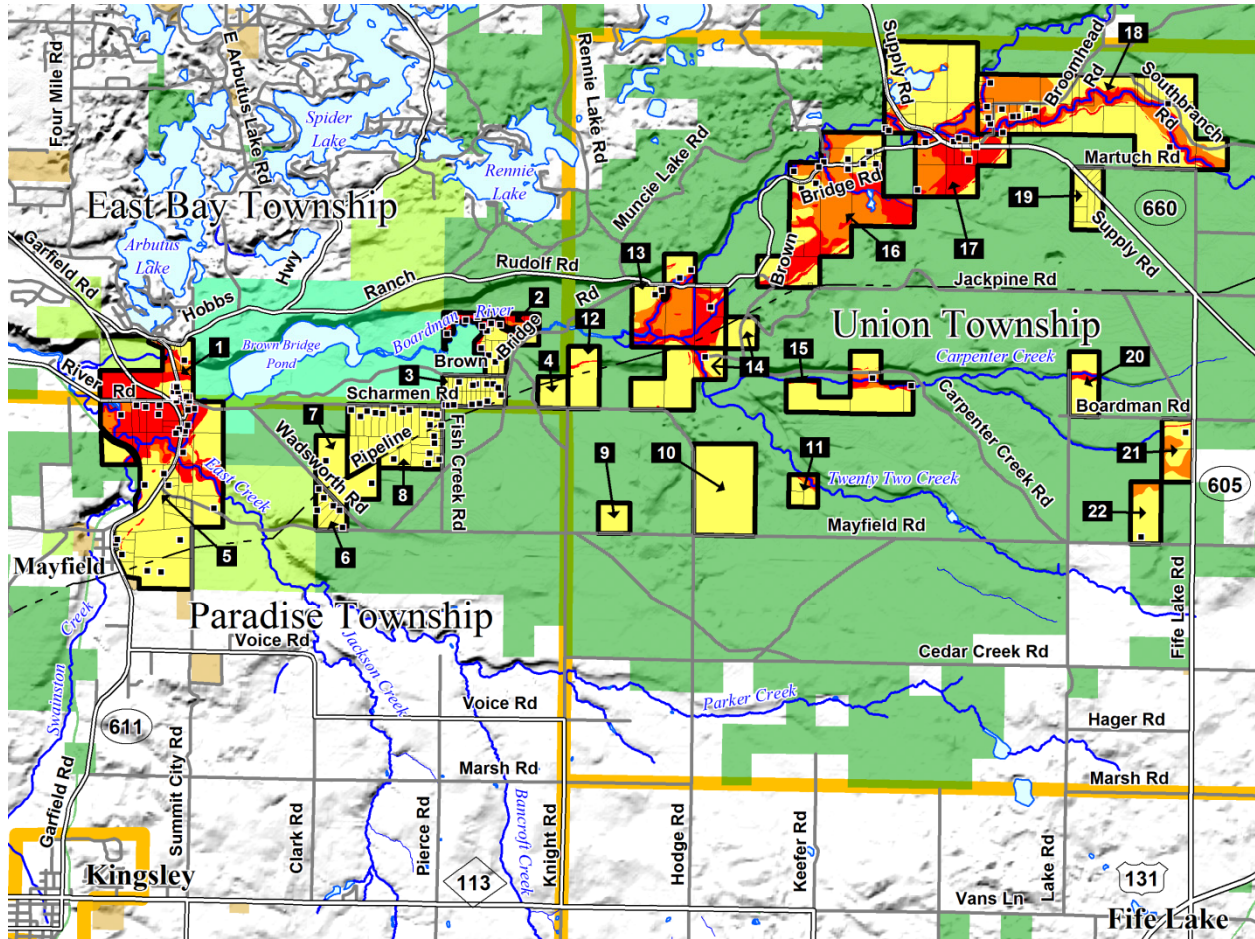
Zoning Analysis

	Analysis	Estimated	Homes	Additional	Trips From	Trips From
	Area in	Existing No.	Allowed by	Number of	Existing	Potential
ID	Acres	of Homes	Zoning	Homes	Homes	Addl. Homes
East Bay Township, S-1 Lake and River Environment, 0.92 acre minimum lot size						
1	155.1	21	168	147	200	1,396
2	121.7	12	132	120	114	1,140
3	79.8	13	86	73	124	693
4	38.7	0	42	42	0	399
Paradise Township, FR-1 Forest Recreational, 2.5 acre minimum lot size						
5	718.6	25	287	262	238	2,489
6	44.2	6	17	11	57	105
7	116.9	2	46	44	19	418
8	226.8	20	90	70	190	665
Union Township, Forest Residential, 2.5 acre minimum lot size						
9	39.7	0	15	15	0	143
10	231.7	0	92	92	0	874
11	38.1	0	15	15	0	143
12	79.7	0	31	31	0	295
13	278.9	5	111	106	48	1,007
14	198.8	1	79	78	10	741
15	182.8	2	73	71	19	675
16	517.3	11	206	195	105	1,853
17	548.8	9	219	210	86	1,995
18	657.9	14	263	249	133	2,366
19	80	0	32	32	0	304
20	78.3	0	31	31	0	295
21	81.4	1	32	31	10	295
22	77.1	1	30	29	10	276
	4,591.7	143	2,097	1,954	1,363	18,567
Notes:						
9.5 Trips per household used to generate estimated trips (this includes delivery and service trips).						
Calculations are based on acreage and do not account for restrictions based on site conditions.						
Refer to pg. 29 for further clarifications.						

Obviously, increasing the number of homes from 143 to 2,097 and the number of trips a day from 1,363 to 18,567 would result in a dramatic departure from the character of the Valley that the residents and previous planning documents so clearly indicated are desired. Although it is unlikely, considering the wetlands alone, that the maximum development indicated above could ever be achieved, an increase of any similar magnitude would have great impact.

There is also a disparity between some of townships' zoning ordinances despite the uniformity of the site conditions. East Bay Township allows a density that is 2.7 times the density allowed by Paradise and Union Township. The zoning also does not take into account proximity to existing transportation infrastructure or the the poor suitability of the soils in the Valley for septic systems. It is clear that current zoning does not match the communities' vision for the future of the Valley and it allows a level of development inappropriate for the conditions found in the Valley.

Potential Development Analysis



Legend

- Existing Structures
- ▭ Existing Property Lines
- Priority Natural Features
- Hydric Soils
- Few Development Restrictions
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property

Areas 2, 3, 6, and 8 have a **low** likelihood of development since they have already been subdivided into 2.5 to 10 acre lots and most are receiving some construction activity. These areas are unlikely to experience additional subdivision in the immediate future.

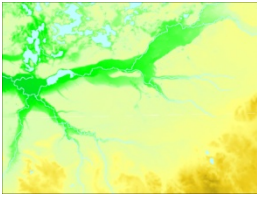
Areas 4, 9, 10, 11, 12, 14, 15, and 20 have a **moderate** likelihood of development. There are only a few constraints to development on the sites themselves but their location presents severe restrictions due to unimproved transportation infrastructure and undesirable adjacent land uses (ORV trail system, timber harvesting, etc.)

Areas 7, 13, 16 have a **moderate** likelihood of development because of their location relative to all-season roads and/or their configuration. Intense development will be much more likely if the adjacent roads are paved.

Areas 1, 5, 17, 18, 19, 21, and 22 have a **high** likelihood of development. They are located adjacent to or near all-season roads and a workable configuration of developable lands making them attractive for development in the immediate future.

Potential Development Analysis

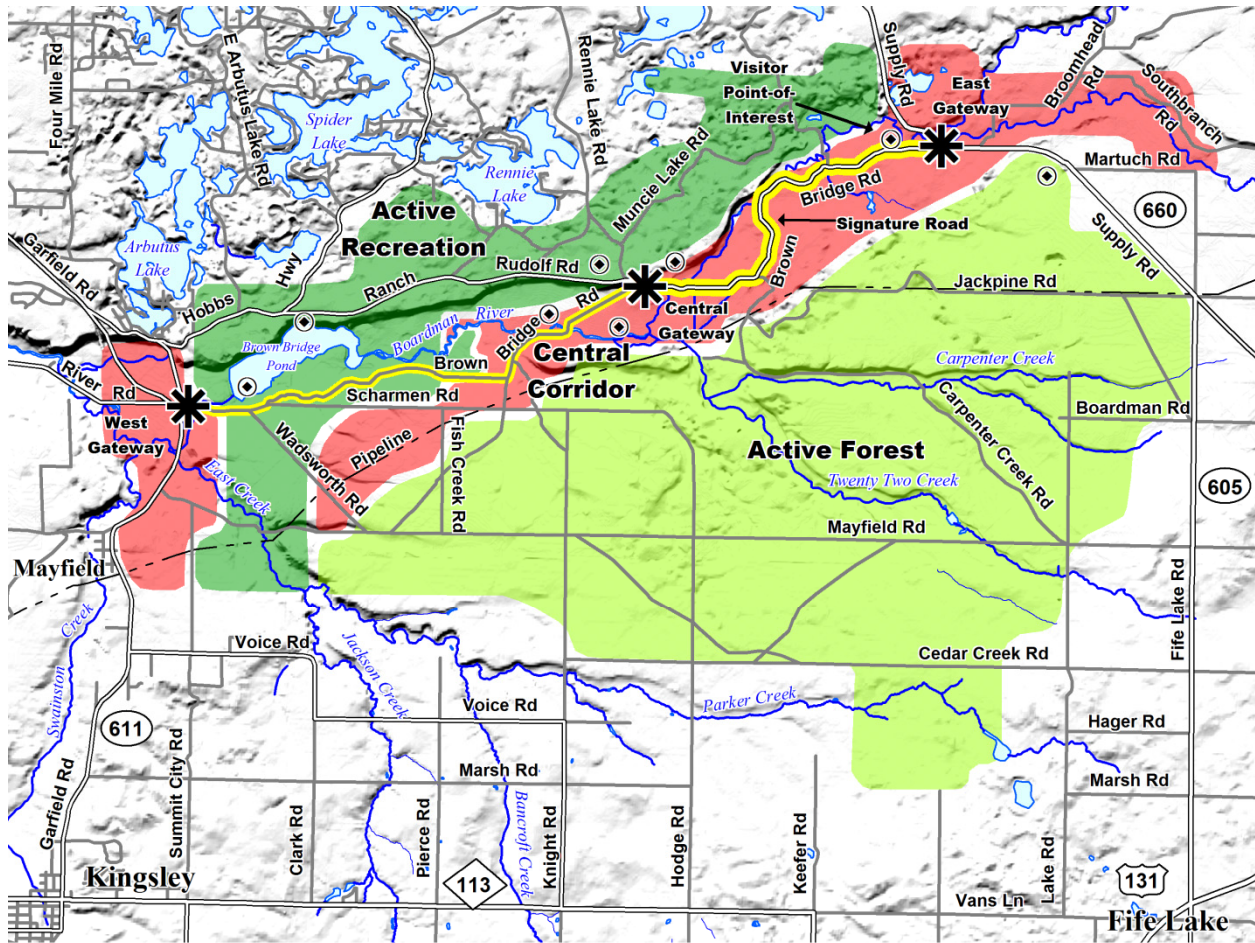
	Analysis	Area in Priority	Area in Hydric	Potential Acres That Could Be Developed	Potential Homes That Could Be Developed	Estimated Trips From Potential Addl. Homes	Relative Likelihood of Development
ID	Area in Acres	Natural Features	Soils				
East Bay Township, S-1 Lake and River Environment, 0.92 acre minimum lot size.							
1	155.1	93.0	18.7	43.4	47	447	High
2	121.7	53.9	8.7	59.1	64	608	Low
3	79.8	0.0	0.0	79.8	86	817	Low
4	38.7	0.0	0.0	38.7	42	399	Moderate
Paradise Township, FR-1 Forest Recreational, 2.5 acre minimum lot size.							
5	718.6	217.3	38.2	463.1	185	1,756	High
6	44.2	0.0	0.0	44.2	17	162	Low
7	116.9	0.0	0.0	116.9	46	437	Moderate
8	226.8	0.0	0.0	226.8	90	855	Low
Union Township, Forest Residential, 2.5 acre minimum lot size.							
9	39.7	0.0	0.0	39.7	15	143	Moderate
10	231.7	0.0	0.0	231.7	92	874	Moderate
11	38.1	4.9	4.8	28.4	11	105	Moderate
12	79.7	2.8	0.0	76.9	30	285	Moderate
13	278.9	129.3	71.9	77.7	31	295	Moderate
14	198.8	14.4	4.0	180.4	72	684	Low
15	182.8	23.3	13.3	146.2	58	551	Moderate
16	517.3	173.6	188.2	155.5	62	589	Moderate
17	548.8	183.7	86.8	278.3	111	1,055	High
18	657.9	123.7	153.5	380.7	152	1,444	High
19	80	0.0	0.0	80.0	32	304	High
20	78.3	9.7	0.1	68.5	27	257	Moderate
21	81.4	1.8	31.7	47.9	19	181	High
22	77.1	0.0	12.7	64.4	25	238	High
	4,591.7	1,031.4	632.6	2,928.3	1,314	12,486	
Potential units/trips with a high likelihood of development					571	5,425	
Potential units/trips with a moderate likelihood of development					414	3,640	
Potential units/trips with a low likelihood of development					329	3,126	
Notes:							
9.5 Trips per household used to generate estimated trips (this includes delivery and service trips)							
Calculations are based on acreage and do not account for restrictions based on site conditions							









Recommendations

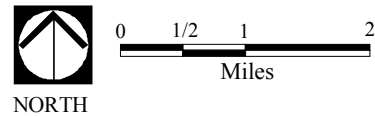
- Management Framework
- Conservation and Land Management
- Transportation
- Recreation

Management Framework



Legend

-  Gateway to the Valley
-  Visitor Point-of-Interest
-  Signature Road
-  Active Forest District
-  Central Corridor District
-  Active Recreation District

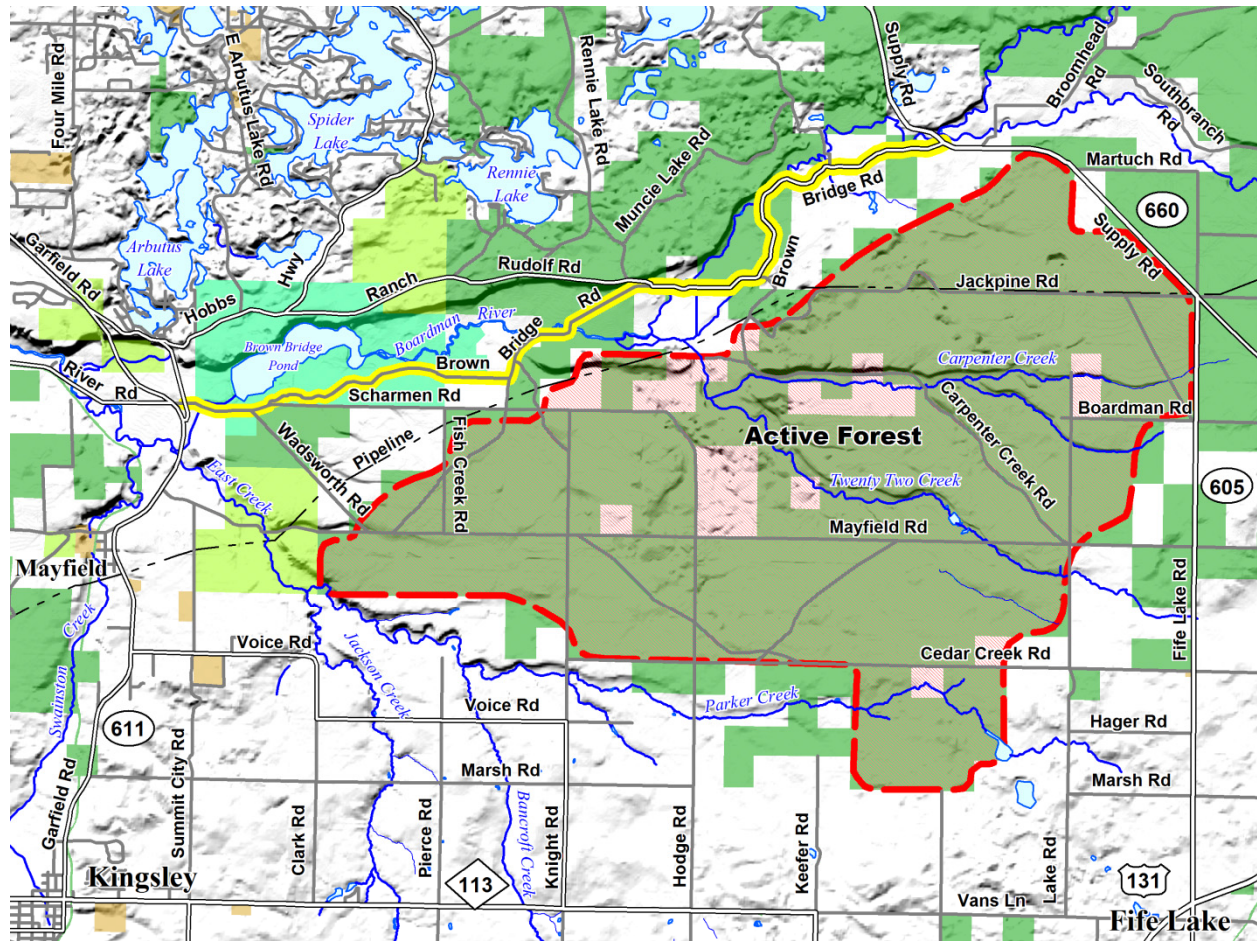


The goal behind the establishment of a management framework is to look beyond ownership boundaries to define logical land uses and management approaches to preserve the character of the Valley as well as to define the Valley as an unique resource. The proposed management structure divides the Valley into three unique districts: the Active Recreation District, the Central Corridor, and the Active Forest. The Active Recreation district is primarily an active and passive recreation zone, the Central Corridor district is where people live or stay in the Valley, and the Active Forest district provides a broad range of recreation activities and resource management functions.

This plan identifies Brown Bridge Road as the “Signature Road of the Valley” due to its scenic nature and to the fact that it connects most of the key recreational features of the Valley. It is the primary road used by visitors to the Valley. To identify and orientate users to the many recreational amenities located in the Valley, orientation signs should be placed in appropriate areas such as where Brown Bridge meets Garfield, Ranch Rudolf, and/or Supply Roads.

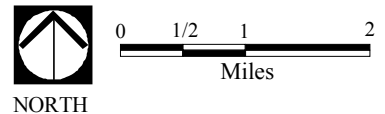
Each district is described in more detail in the following sections.

Active Recreation District



Legend

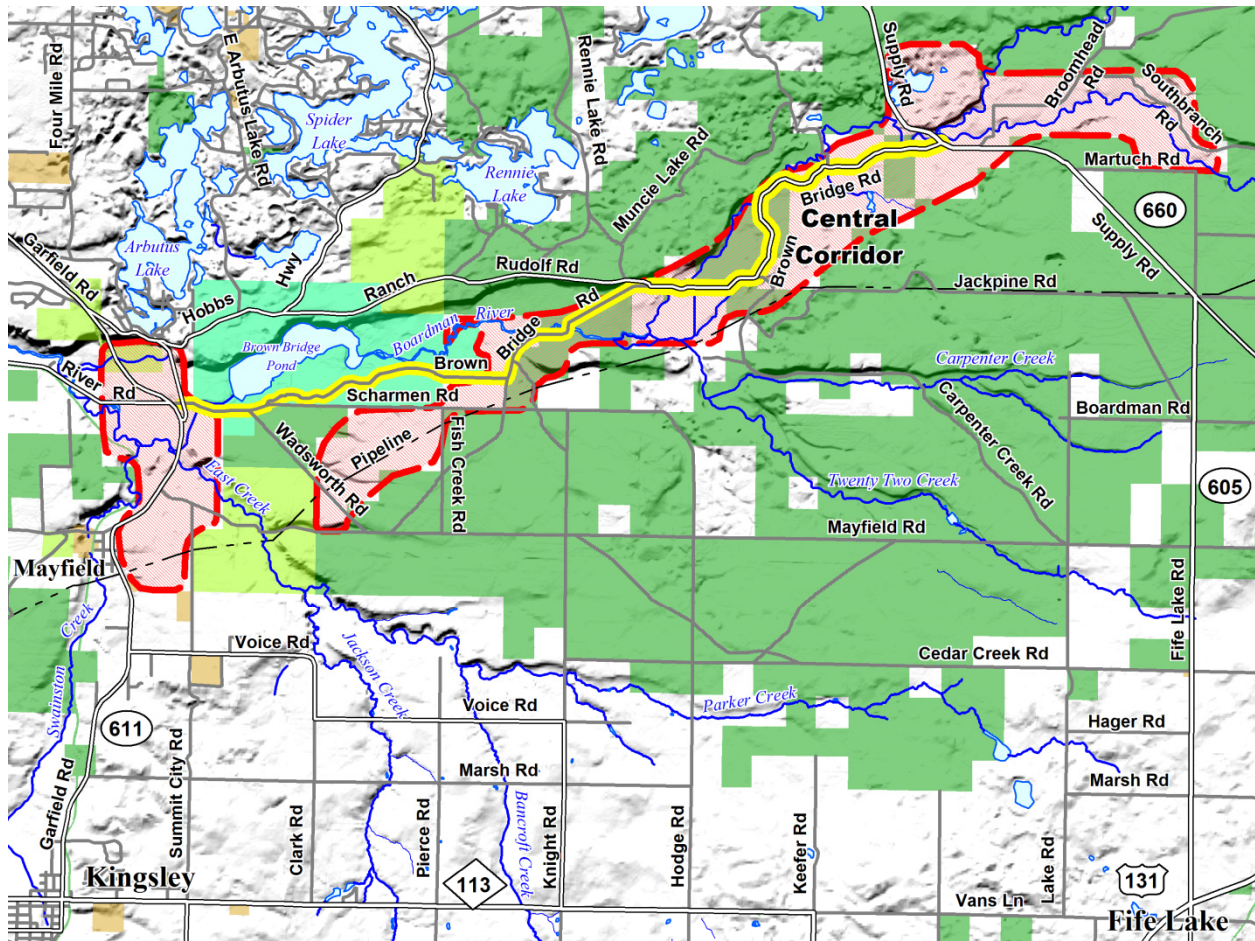
-  Active Forest District
-  State of Michigan Property
-  Traverse City Property
-  Township Property
-  Rotary Camps and Services Property



While the Active Recreation District includes a few privately held parcels, it primarily encompasses the Rotary Camps and Services Property, Traverse City’s Brown Bridge Quiet Area, and MDNR Muncie Lakes Pathways. The management goals of these three areas are similar and their goals and objectives should be coordinated. Recreation users are many times oblivious to the ownership of recreation lands and the property lines between public and private ownership. As such, great care needs to be taken in regards to identification, routing, rerouting, planning, maintenance, and management of the trails. If appropriate, combining and linking resources may allow for a unified trail system to be created and efficiently managed. A comprehensive study and analysis of the trails from a local, regional, and statewide basis needs to be conducted and a management and implementation program undertaken.

Passive recreational uses of the land include hiking, cross-country skiing, equestrian trails. Active uses include snowmobiles and some illegal ORV use. Further restrictions on ORV use in this area should be implemented.

Central Corridor District

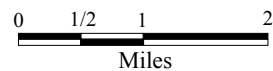


Legend

-  Central Corridor District
-  State of Michigan Property
-  Traverse City Property
-  Township Property
-  Rotary Camps and Services Property



NORTH

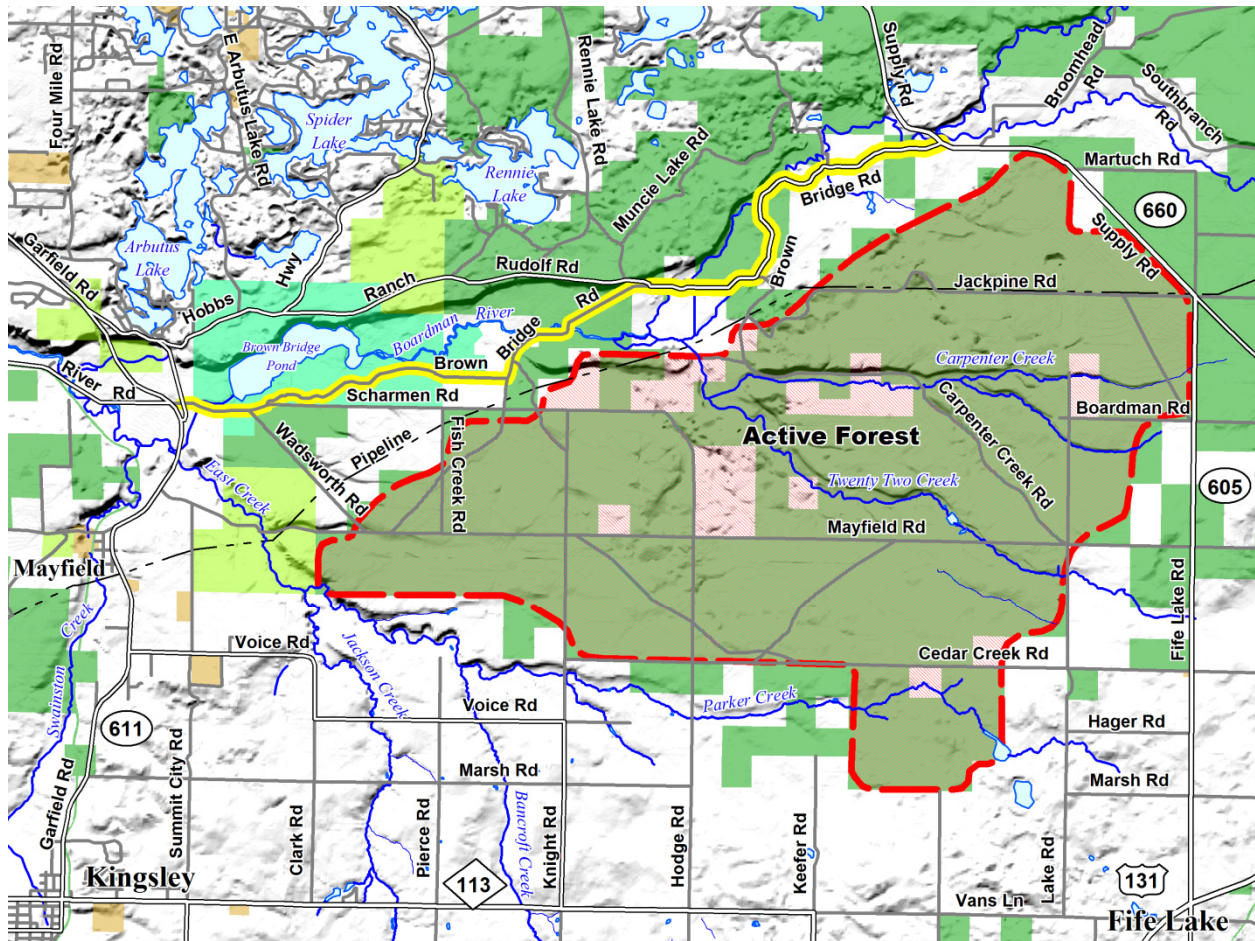


The Central Corridor District is the hub for visitors, serving the Active Recreation and the Active Forest Districts. It is also home for many of the Valley residents and/or private property owners. It provides public and private camping and lodging along Brown Bridge Road.



The interplay between the private residences and the public recreational facilities is important. While occasional views of homes and cottages will not distract from the recreational experience, a series of homes, close to the road, with suburban type landscaping will significantly reduce the quality of the experience. Therefore, steps should be taken to preserve/enhance the character of the road and the adjoining landscape.

Due to the proximity of the river, this area is also home to a large wildlife population. It is a known yarding area for deer and is used extensively by migrating birds. While growth is inevitable in this area, preservation of the existing wildlife corridors is critical.

Active Forest District

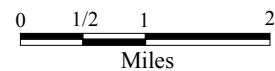


Legend

-  Active Forest District
-  State of Michigan Property
-  Traverse City Property
-  Township Property



NORTH

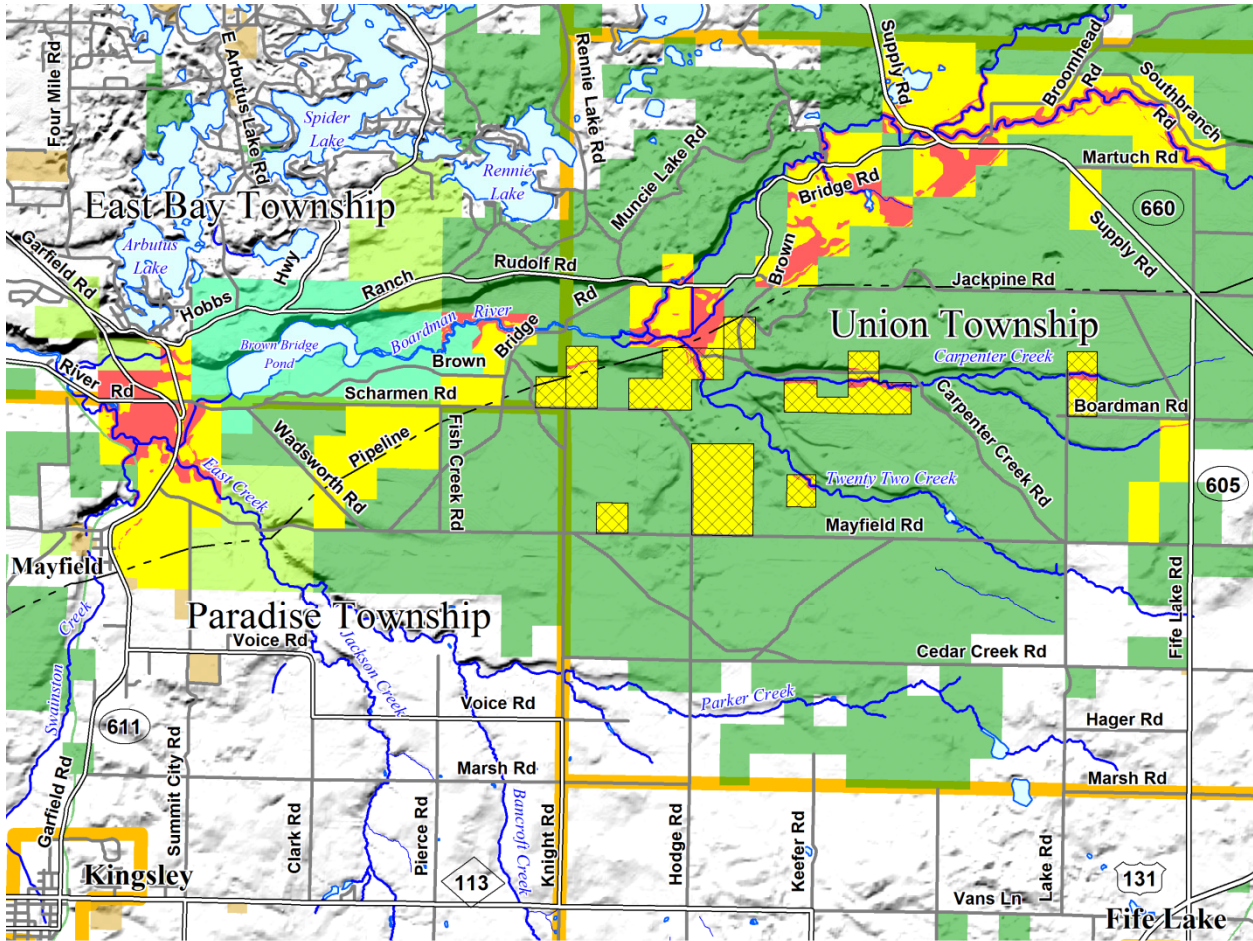


Although there are significant privately owned parcels, the Active Forest District consists primarily of public land with snowmobile and/or ORV trails to the east and horse trails to the west. Management of the trail systems is essential. To reduce traffic within the forest areas, it is desirable to have staging areas for these activities located at the edges. A complete analysis of these trails needs to be conducted and a management program implemented.

The roads through the Active Forest should be reserved for local and recreational travel with through-traffic discouraged since it conflicts with the trail uses. Many seasonal County roads serve forest lands only and should be considered for closure. In addition, the State is encouraged to evaluate their road system to identify non-critical roads.

It seems only prudent for all parties (government and other public agencies, conservancies, and private landowners) to work together to implement preferable land use/land management alternatives. Short of a change of ownership of the State lands in the district, the future of the large, privately held parcels holds the key to the future of the Valley. If these parcels are developed to their fullest potential, the impact on the Valley and its residents will be significant. Subdivision of these parcels and the introduction of some types of residential uses could result in increased pressures on the public infrastructure and, potentially, increased conflicts between residents and forest users.

Conservation and Land Management Strategies

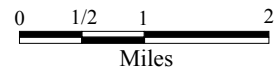


Legend

- | | | | |
|---|------------------------------------|---|---|
|  | State of Michigan Property |  | Proposed Conservation Residential District |
|  | Traverse City Property |  | Development Suspension to Pursue Public and Private Land Conservation |
|  | Township Property |  | Priority Natural Features Preserves |
|  | Rotary Camps and Services Property | | |



NORTH



Conservation recommendations have been formulated to meet three distinct goals:

1. To preserve the natural character of the Valley while maintaining the landowners ability to realize an economic return on their property investment.
2. To identify, reduce, and/or manage conflicts between public and private land uses.
3. To direct development toward areas with adequate public infrastructure to minimize isolated developments.

To achieve these goals, the following approaches are recommended:

- Community and State Forest Master Plans that reflect the goals and clearly communicate the vision.
- Zoning and planning that provides incentives for preserving the Priority Natural Features and the natural character of the public road corridors.
- Utilize alternative solutions and creative planning and development options to provide for and preserve the natural character of the Valley. Encourage the pursuit and utilization of various voluntary non-regulatory public and/or private land management and conservation options.

Conservation and Land Management Strategies

Community and State Forest Master Plans

The future of the Valley lies in the hands of the public agencies, private landowners, and the managers of public lands. To achieve the goals of this report, all of these land stewards must coordinate their efforts to realize the common vision. This vision needs to be articulated in community master plans of all three townships and in the State Forest Master Plan.

The Conservation and Land Management Strategies are closely tied to the transportation and recreation recommendations. For instance, the degree and nature of future land use in the Valley will have a direct impact upon the character of Brown Bridge Road. Therefore, each community must be encouraged to incorporate the interrelated conservation, transportation, and recreation recommendations into their official Master Plans.

Land Management

A wide range of methods and tools are available for use in achieving the goals of a community master plan. The public and private sectors can work together to utilize any number of, or combination of, these methods and tools. Good land management requires great foresight and vision in utilizing, for the best advantage of all parties, these ever-changing methods and tools. Although not all-inclusive, the following is a list of suggested strategies for implementing the plan recommendations.

- Land Purchase
- Land Exchange
- Easement Purchase
- Purchase of Development Rights
- Transfer of Development Rights
- State Reform of Taxation Formula and/or Rates
- Zoning, including, but not limited to, Planned Unit Developments (PUD), Planned Mixed Use (PMU), clustering, Overlay Districts, and other evolving planning concepts.

Land Purchase

Landowners donate or sell their land to a public entity or a private conservation organization. For donations, the donor may deduct the appraised value of the donation from income on federal income taxes over a period of years, and remove that value from amounts subject to capital gains and estate taxes. For bargain sales, the seller can deduct the sacrificed value from taxable income and exclude it from capital gains.

Land Exchanges

Conservation organizations should work with landowners within the proposed Forest District to pursue Land Exchanges for fringe and non-contiguous State Forest Land. This will help manage and/or reduce future conflicts between forest and residential land uses, as well as place development closer to existing all-season roads. Since Land Exchanges of this

Conservation and Land Management Strategies

nature would be beneficial to both parties, the MDNR is encouraged to give strong consideration to these requests. The location of the Land Exchanges must be carefully selected with consideration given to proximity to appropriate infrastructure and compatibility with County and Township Master Plans.

Easement Purchase

Specified land rights are purchased from the landowner. Easements may be established to permanently protect significant natural features and wildlife habitat in addition to those already protected as Priority Natural Features. Permanent Conservation Easements can be administered by: 1) condominium associations, 2) the Township, or 3) a third party, such as a land trust, agreeable to both the landowner and the Township. Assessment and property taxes are reduced in proportion to the reduction in land value due to the easement. It should be noted that easement purchases do not necessarily provide for public access to the easement.

Purchase of Development Rights

An easement may be purchased that disallows or limits further development of property.

Transfer of Development Rights

Specified development rights are transferred from one area to another. Currently, this is only allowed within a single jurisdiction; therefore a Township would have to provide an area within their boundaries where they would allow higher densities than current zoning permits

State Property Tax Reform

An initiative is designed and promoted to support and promote the preservation and conservation of identified lands. Such an initiative requires the participation of municipal and public/private land conservation organizations together with the landowners.

Zoning

Zoning ordinances and maps provide specifics on some of the means for implementing a community master plan. They address the controls placed on buildings and land development. The zoning recommendations may be worked into existing zoning ordinances or incorporated as an Overlay District. Considering the nature of the recommendations, rewriting the existing ordinances to incorporate the proposed districts may be the clearest way to communicate the intent of a master plan. As an alternative, an Overlay District may be created that encompasses all areas where private land is generally located within predominately public/quasi-public conservation oriented property.

An analysis of the management framework suggests that two different zoning districts be established, a Conservation Residential District for the Central Corridor, and a Forest District for the Active Forest area. In establishing these districts, respect must be paid to the existing zoning classifications and the legacies that they leave. The following outlines how these two districts could be defined:

Conservation and Land Management Strategies

- ***Conservation Residential District*** (within the Central Corridor)

The intent of this district is preserve the priority natural features and character of the Valley, as well as to preserve the rural scenic character of the public roads. Towards these ends, a lesser lot density than is currently allowed, with minimum lot sizes undefined, is recommended. Density calculations could be based upon the total land area, including or excluding the Priority Natural Features land. An increased number of lots would be possible with dedication of developable land to a Permanent Conservation Easement or other approved land protection approach. The allowable number of lots would be based upon a sliding scale with bonuses provided for increasing the amount of land placed in a Permanent Conservation Easement. Land in a Conservation Easement would be taxed as undeveloped land, providing a tax incentive. Density bonuses may only be available for lots not fronting on a public road. The preservation of a variable width buffer strip of natural vegetation along public roads wherever feasible is also recommended to preserve the natural character of the road. This buffer could measure from 25'-100' wide depending upon the site characteristics.
- ***Forest District*** (within the Active Forest)

The intent of this district is to eliminate potential conflicts between typical forest uses and residential development, as well as minimize expenditures of public infrastructure that serve isolated developments. Towards these ends, a further decreased maximum allowable density is recommended for this district, with density calculations based upon the size of the entire parcel. Development shall avoid the Priority Natural Features. The preservation of a 25'-100' variable width buffer strip of natural vegetation along property lines and public roads wherever feasible is also recommended to preserve the natural character of the road. The MDNR is asked to reciprocate, where policy allows, by instituting comparable setbacks in their management plans. In addition to residential use, other permitted uses would include timber harvesting, oil and gas exploration, recreation, and other uses typical of a State Forest.

The proposed Conservation Residential District allows for density at or near existing levels with the utilization of conservation design and permanent conservation easements. This approach attempts to strike a balance between the community goals and the individual landowners rights.

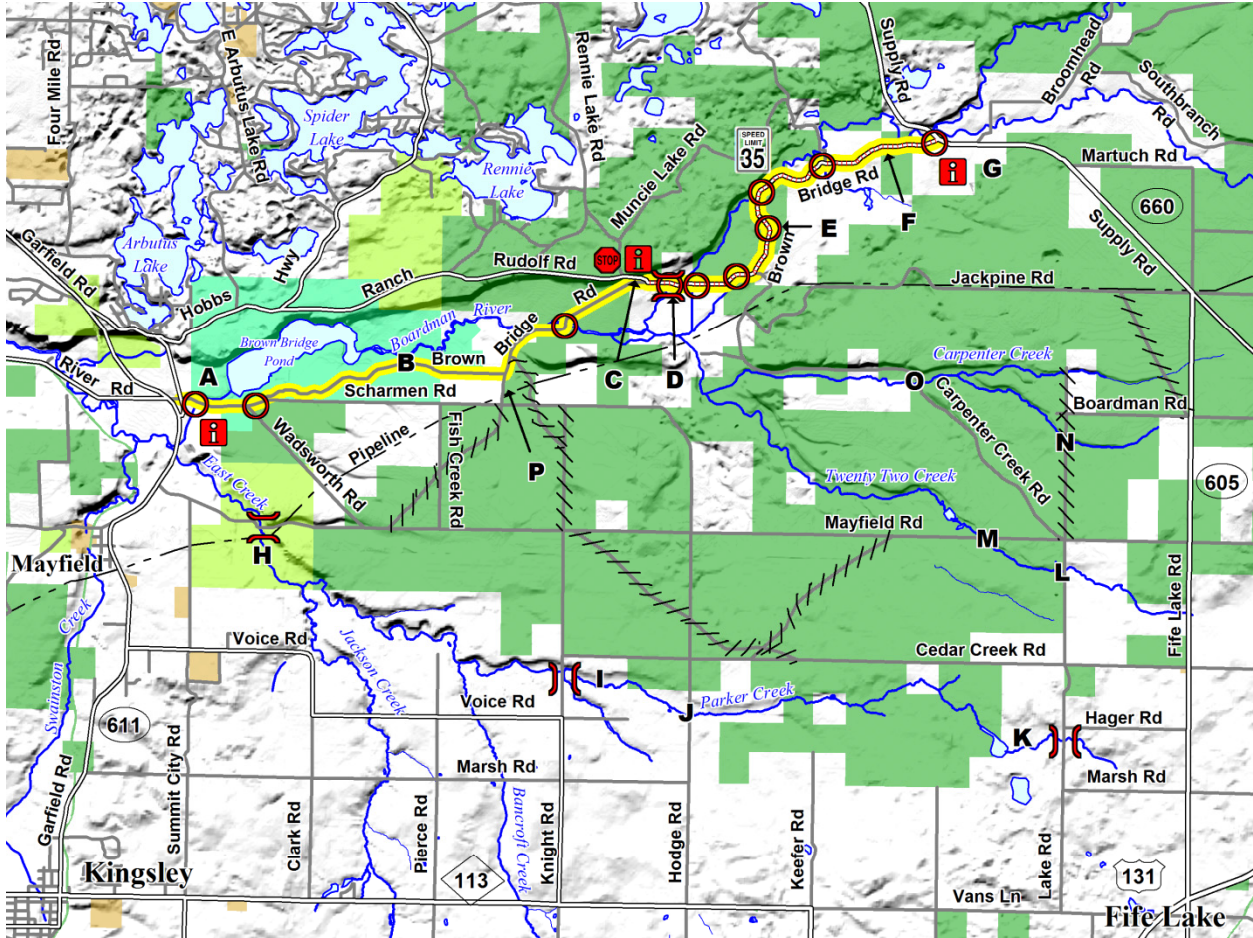
Conservation and Land Management Strategies

On the other hand, due to its location, the proposed Forest District calls for a more unique planning and management approach. While there is agreement that a different standard be applied to this district, there is also strong sentiment that any public and/or private conservation techniques that involve land valuation must at least be based on their current land values. *Since current land values will probably make it difficult to implement the Forest District zoning, it is recommended that, at the present time, the entire project area be zoned Conservation Residential.* To address the special situation of the private parcels located within the Active Forest, the other previously mentioned public and/or private land conservation and management methods and tools need to be employed to work towards an end similar to that outlined in the proposed Forest District zoning. To remove the burden from the private landowner and to provide greater leverage when negotiating with entities such as the State of Michigan, these efforts should be lead by the individual Townships.

Other Public and/or Private Land Conservation Initiatives

In addition to the areas within the Active Forest district, other sensitive areas exist where conservation organizations should work with private landowners to provide natural features protection. Securing a substantial wildlife corridor just north of Mayfield Road and preserving a wildlife corridor northwest of Fife Lake by linking two large contiguous tracts of State Forest Land, are two such initiatives.

Transportation Recommendations



A, C, & G – Place Boardman River Valley identity and orientation signs at the three main “gateways” to the Valley to orient drivers and indicate the scenic winding nature of the Brown Bridge Road.

B – Post as a scenic winding road. Consider closure.

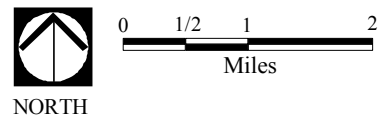
C – Maintain the Ranch Rudolf “T” intersection at Brown Bridge Road to slow traffic in this area.

D – Address soil erosion/stream sedimentation issues.










E & F – Make incremental cross section and alignment improvements to Brown Bridge Road paying special attention to the numerous wetlands and stream crossings.

H, I, J, K, L, M, N, & O – Address soil erosion/stream sedimentation issues at these stream crossings. Discourage through traffic by reducing the road cross-sections to minimum AASHTO standards.

P – If the connector road between Brown Bridge Road and Scharmen Road is built, it should be built to a lower design standard to maintain the existing winding, picturesque quality.



Legend

-  Maintain Stop Sign on Ranch Rudolf
-  Proposed Speed Limit
-  Valley "Gateway" Signage
-  Water Quality Oriented Stream Crossing Improvement
-  Water Quality Oriented Stream Crossing Improvement
-  Potential Environmental Impact Areas For Brown Bridge Road Improvements
-  Selected Alignment and Drainage Improvements
-  Maintain Brown Bridge Roads Scenic Qualities
-  Potential County Road Abandonments

Transportation Recommendations

A highway necessarily has wide-ranging effects beyond that of providing traffic service to users. It is essential that the highway be considered as an element of the total environment. Environment as used herein refers to the totality of humankind's surroundings: social, physical, natural, and synthetic. It includes human, plant, and animal communities and the forces that act on all three. The highway can and should be located and designed to complement its environment and serve as a catalyst to environmental improvement.

from A Policy on Geometric Design of Highways and Streets, AASHTO 1994

Brown Bridge Road:

Brown Bridge Road is the only unpaved Primary Road in Grand Traverse County. Because of this, and because of the difficulty in maintaining a road of this nature, paving the road has been discussed. The threshold normally used by the Road Commission to decide whether a road should be paved is 400-800 ADTs (Average Daily Trips). Recent traffic counts on Brown Bridge Road indicate that less than 300 vehicles use this road on a daily basis, even during peak travel times.

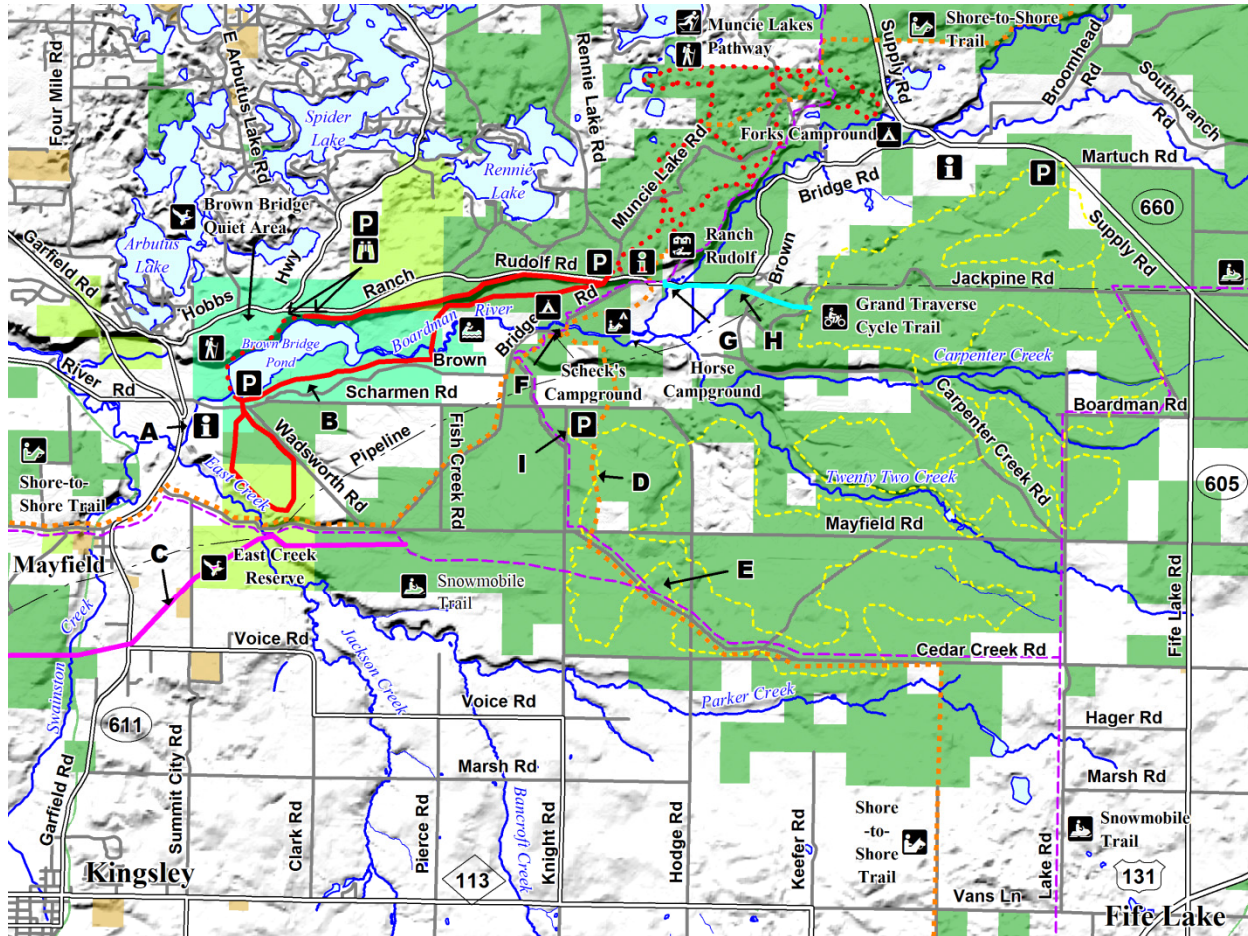
Since paving is not warranted by the use levels, an incremental approach to improvements is recommended. Initially, increased maintenance is necessary to control dust and erosion. As use levels increase, upgrading to a gravel surface with improved geometry and drainage will allow increased use without a corresponding increase in maintenance. It's important to note that, the fact that this road is classified as a Primary Road does not, in and of itself, require that it be paved.

The Geometric Design Guidelines for Federal/State Funded Local Agency Projects allows for a great deal of flexibility in the design of roadways. Strictly speaking, since 55 MPH is the statutory speed limit for gravel roads in Michigan, the redesign of Brown Bridge Road would require realignment for traffic traveling at this speed. However, Design Exceptions can be granted for unique situations. The high degree of shared use of the roadways in the Valley by pedestrians, bicyclists, horses, snowmobiles, and other recreational users; a concern for the safety of these users; the economic importance of maintaining the scenic character and the recreational uses that already exist in the Valley; and the success of the State owned recreation facilities in the Valley all provide support for the granting of a Design Exception to maintain the character of Brown Bridge Road. A maximum 35 MPH design speed is recommended for this road to reduce the degree of impact that redesign will have on nature of the roadway.

The Brown Bridge Quiet Area Management Plan recommends closure of Brown Bridge Road within the Quiet Area. This section of road, however, continues to provide access to the Quiet Area in much the manner that many State and National Park roads do. Consideration should be given to connecting Brown Bridge Road to Scharmen Road east of the Quiet Area to reduce regular use of this section of road by local traffic. When use levels do increase to a point where the character of the road and/or the Quiet Area is jeopardized, closing this section of road to motor vehicles is recommended.

If realignment of Brown Bridge Road is necessary to protect the natural character of the Boardman River, the existing geometry of the road should be preserved to maintain its winding, picturesque quality. To improve safety in the near term, selected clearing of underbrush at all corners and curves to improve sight lines for oncoming vehicles is recommended. Larger trees can be allowed to remain as long as clear vision is maintained.

Recreation Recommendations



A – Consider placing identity and orientation signs at the three main “gateways” to the Valley: Brown Bridge Road at Garfield Road, Brown Bridge Road at Ranch Rudolf Road, and Brown Bridge Road at Supply Road.

B – If further study warrants, consider extending the hiking/cross country skiing trail system around Brown Bridge Pond, with a loop down into the East Creek Reserve. To avoid redundancy, use the existing available parking lots for trailheads.

C – The Grand Traverse Snowmobile Council and Michigan Trail Riders Association should continue to work with property owners to obtain trail easements on an alternative route.

D – If user conflicts become a concern, relocate horse trail west to share trail route with existing snowmobile trail.

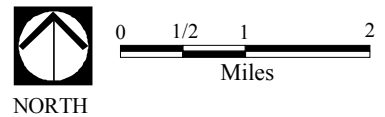
E – If user conflicts become a concern, separate trail systems.

F – Add a bridge to accommodate snowmobile and horse trails.

G – Accommodate ORV and non-motorized use on the new bridge.

H – Create an ORV link between Ranch Rudolf and Grand Traverse Cycle Trail.

I – Relocate trailhead to a more accessible location.



Legend

- Existing Hiking Trail
- — — Existing ORV Trail
- — — Existing Horse Trail
- — — Existing Snowmobile Trail
- — — Proposed Hiking Trail
- — — Proposed ORV Trail
- — — Proposed Horse/Snowmobile Trail
- P** Parking
- Snowmobile Trail
- Campground
- Horse Trail
- Motorcross Trail
- Cross Country Skiing Trail
- Hiking Trail
- Resort/Lodge
- Horse Campground
- Canoeing/Kayaking
- Wildlife Management Area
- Overlook
- Identity/Informational Signage
- State of Michigan Property
- Traverse City Property
- Township Property
- Rotary Camps and Services Property

Recreation Recommendations

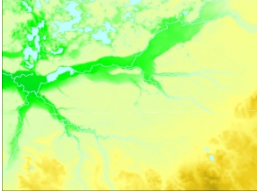
The recreational opportunities that exist within the study area are numerous and varied: hunting and fishing, canoeing and kayaking, hiking and horseback riding, mountain biking and cycling, motor biking and four-wheeling, snowmobiling and cross-country skiing. All are important and all must be addressed in a comprehensive recreational study. The intent of these recommendations is to enhance the recreational experiences and to decrease potential conflicts.

The major conflicts that seem to exist result from the shared use of public roads. In conjunction with the County and State, the entire roadway network should be examined to identify roads that, by their nature and use, might be closed to everyday vehicular travel and restricted to private and/or recreational trail uses. Primary emphasis should be placed on the roadways in the Active Recreation and Active Forest Districts.

Roads and trails that fall within the State Forest should be reviewed in concert with the State Forest Plan to assure that the tenets of the plan are respected. For roads that continue to be shared by a variety of users, separate paths and /or bridges should be considered in those areas where safety is an issue.

For the most part, the seasonal nature of many of the recreational trail uses results in minimal contact between conflicting activities. However, where horse trails, hiking trails, and ORV trails converge, consideration should be given to relocation of some of the trails. In the southwest corner of the Active Forest, near Knight and Cedar Creek Roads, potential problems could be alleviated by confining ORV use to the north and east of the horse trail (Letter E on the map) and by relocation the horse trail (Letter D) to the west.

Signage is recommended for consideration in select Valley entrance locations. It is recognized that the Brown Bridge Quiet Area Advisory Committee is not in favor of signage that brings additional attention to the Quiet Area. All language pertaining to the Quiet Area must be reviewed and approved by the Brown Bridge Quiet Area Advisory Committee.



Appendices

- Issues and Alternatives Workshop Results
- Preliminary Alternatives Workshop Results
- Recreational Trails
- Glossary

Issues and Alternatives Workshop

Public Input Meeting No. 1 - 12/9/99

Group 1

Q: What are your hopes and concerns for the future of this area?

A: (The number of votes per hope or concern is listed in parenthesis)

1. Preservation of area's wilderness aspect. (8)
2. Leave State land as is (no selling). (7)
3. Roads (retain what we have now). (6)
3. Better maintained roads. (6)
5. No pavement (maintain our gravel roads). (5)
6. Provide for increased recreational use of the area. (4)
6. Brown Bridge kept open for vehicles. (4)
6. Keep peace and quiet (no noise). (4)
6. Trails and rivers not diminished. (4)
10. Keep rivers clean and healthy for animals and fish. (3)
10. Keep dust down on gravel roads. (3)
12. Slow growth. (2)
13. Be able to ride horse wherever I want to. (1)
13. Stay the same. (1)
13. Better communication and organization between three townships in reference to roads. (1)
13. Alternative forms of transportation to minimize impact to environment. (1)
17. Fines for littering (enforcement). (0)
17. Imposing speed limits (lowering them). (0)
17. Road commissioner owns property on Scharmen Road. (0)

Issues and Alternatives Workshop

Public Input Meeting No. 1 - 12/9/99 (continued)

Q: What resources or places make this area special to you?

A: (The number of votes per resource or place is listed in parenthesis)

1. Brown Bridge Quiet Area. (7)
2. Forest aspect. (6)
3. Water. (5)
4. Huge piece of public land. (4)
4. Character of roads. (4)
4. Better maintained roads. (4)
7. Beauty. (3)
7. It's like living in U.P. but only 20 minutes from Traverse City. (3)
7. Quiet. (3)
10. Close to businesses. (2)
10. Snowmobile trails. (2)
12. Visual signs of history. (1)
12. Preservation of history. (1)
12. Own little community. (1)
12. Lots of good people live here. (1)
12. High banks of Boardman (from horseback). (1)
12. Bay. (1)
12. Tributaries to Boardman. (1)
19. Nearness to people. (0)
19. Sand Lakes Quiet Area. (0)
19. Cross-country ski trails. (0)
19. Forks of Boardman. (0)

Issues and Alternatives Workshop

Public Input Meeting No. 1 - 12/9/99 (continued)

Group 2

Q: What are your hopes and concerns for the future of this area?

A: (The number of votes per hope or concern is listed in parenthesis)

1. Remove "primary road" status of Brown Bridge road. (8)
2. Valley remains same. (6)
2. Concerned that Valley not become major artery. (6)
2. Maintain quiet/natural area. (6)
5. Maintain recreational access for future generations. (5)
6. Pavement without state criteria/respects unique natural character. (4)
6. Encourage visitors and appreciation of Valley. (4)
6. Educate recreational users. (4)
9. Road stays unpaved and in current alignment. (3)
9. Maintain property rights. (3)
11. Control population growth. (2)
11. Allow limited growth. (2)
11. Maintain recreational opportunities. (2)
14. Maintain Brown Bridge Road – better surface (unpaved). (1)
14. Maintain public recreation access and quality. (1)
14. Increase horse trails. (1)
14. Address efficient east/west movement for local residents. (1)
14. Improve safety to ensure co-existence of diverse traffic. (1)

Q: What resources or places make this area special to you?

A: (The number of votes per resource or place is listed in parenthesis)

1. Scenic character of Brown Bridge Road. (9)
2. Diverse recreation that Valley offers. (8)
2. Boardman River. (8)
4. Backdoor recreation. (7)
5. Natural beauty. (6)
6. Peacefulness of area. (5)
7. Valley = Home. (4)
7. Scenic beauty. (4)
9. Wildlife diversity. (3)
10. Land Values. (2)
10. Brown Bridge Quiet Area. (2)
11. Wild-wooded nature. (1)
11. Diversity of intact ecosystems. (1)
11. Sand Lakes Quiet Area. (1)

Preliminary Alternatives Workshop

Public Input Meeting No. 2 - 2/10/00

Q: What are your top three secondary conservation areas?

A: (Grouped by Topic)

Italics indicate answer was from a property owner

River

- *River – country roads.*
- *The river – protect, preserve.*
- *River/ wetlands.*
- *Natural river setbacks.*
- *Concern: if you invite more river use...who will clean it?*

Roads

- *Knight Road bridge not paved.*
- *Knight Road should not be paved.*
- *Meander roads.*
- *Character of the road.*
- *Wilderness feel to road – canopy on Scharman.*
- *Preservations – roadway character, winding, tree lined.*
- *Keep roads rural and scenic.*
- *Knight Road not paved.*
- *keep dirt roads; don't pave Knight Road!*
- *Keep roads as is; better maintenance; brine – gravel.*
- *Preserve the rustic roads & river views.*
- *Buffers along roadways.*
- *Brown Bridge Road from Ranch Rudolph Road to Supply.*
- *Pave Ranch Rudolf Road, keep the rest as is.*
- *Winding trail type roadways.*
- *Maintain character of road.*
- *No more paved roads, except in difficult to maintain areas – hills, low wet areas, etc.*
- *Keep roads as is.*
- *If east-west connector is considered, restrict it somewhat to limit commercial development and restrict residences.*
- *Trees along the road.*

Preliminary Alternatives Workshop

Public Input Meeting No. 2 - 2/10/00 (continued)

Views

- *View from Scharmen Road.*
- *Views along river.*
- *Views – homes should be 100' off road.*
- *View – nature of road, Brown Bridge Rd., Scharmen & Mayfield Roads.*
- *View of river from road.*
- *Scenic character and views from roads.*
- *Preserve views of Boardman River.*
- *Secondary protections 1) road R.O.W.'s views.*
- *Road/view.*
- *Preservations – natural, rural, roadways – scenic.*
- *View over Valley from Brown Bridge Road.*
- *View areas (open).*
- *Views in the Valley.*
- *Scenic vistas or unusual packets (swamp, bog, flowers) of vegetation.*
- *Sect 22: view down the Valley from Garfield.*
- *Views, quiet and stillness.*

Wildlife

- *Protect the wildlife.*
- *Maintain wild life preserves.*
- *Maintain wildlife habitat.*
- *Wildlife corridor.*

Woodlands

- *Natural Character.*
- *Forest left untouched (if there is no logging there are no 2 tracks).*
- *Natural forested character.*
- *Maintain woodland (tall pines).*
- *Woodland.*
- *No more cutting of trees.*
- *Keep trees.*
- *Preserve forest area; preserve trails and rural area; maintain clean water.r*
- *Wilderness feeling of the area.*

Preliminary Alternatives Workshop

Public Input Meeting No. 2 - 2/10/00 (continued)

Trails/Recreation

- Keep trails and two track roads open on State forest lands for wildlife habitat improvements and access to them for hunting.
- *Diverse Recreation.*
- *R.V. trail buffers, Scharman Road.*
- *Concerns: if you expand the trails...who will patrol them...who will maintain them?*
- *Preserve current recreational trails.*
- Expand recreational trail system to allow for greater use of public land.
- *Preservation: maintain trail ways and create an intro area to educate users*
- Interlocking trail systems specifically designated – not multiple user: Hiking only, Snowmobile only, Horses only, RV only (Soils are too fragile for multiple use and all need periods of rest).
- *Preservation of natural areas by marking trail and enforcing restrictions.*
- *Trail system.*
- *Preserving Mayfield Road as a seasonal road to protect the horse trail and Recnet trails.*
- *Preserve trails.*
- *Recreational trails.*
- *Preserve recreation/wilderness aspect.*
- Keep State lands open to public by leaving roads as they are.
- *Recreational access from adjoining residential areas to State land and trails for horseback riders.*
- Park areas.
- *Restrict off road vehicles.*

-

Private property

- *Allow the property owner to continue to own large parcels of property and not be taxed into dividing.*
- *Do not change zoning.*
- *Protect existing landowner rights – may require buying out existing development rights.*
- *Property ownership must be at least ten acres.*
- *Preservation: private property rights and enforce trespass laws.*
- Bigger parcels – for less dwelling units.
- *Supply Road should be zoned to ten acre lots.*
- *Union Township should have ten acre lots.*
- *Control the conservation easements.*
- *Preservation: private property integrity, marked trails.*
- *Growth? # of owners over 10 acres? # of owners under 10 acres?*

Miscellaneous

- *No neighbors.*
- Review in master plan DNR State land swaps.

Preliminary Alternatives Workshop

Public Input Meeting No. 2 - 2/10/00 (continued)

Q: What development scenario do you like most and why?

A: (Grouped by Topic)

Italics indicate answer was from a property owner

Alternative One – Do Nothing

3 total votes (all from Valley property owners), none with comments.

Alternative Two – Conservation Zoning

10 total votes (9 from Valley property owners) including the following comments:

- *Undecided, reluctant, just don't know.*
- Without restricting the number of houses per parcel, but using creative techniques to preserve views. (second choice = Alt. 1).
- *May downsize the size of unit of living at a later date.*
- *Planning – conservation – w/landowner – consent & plan.*
- *Reduce the secondary trails that lead to private property. Conservation area with preservation of private owner rights.*

Alternative Three – Conservation Zoning, Down Zoning, and Land Swaps

10 total votes (7 from Valley property owners) including the following comments:

- Preserves the greatest amount of land.
- Enables most protection.
- *Limits the amount of development.*
- *Creative limitation of densities; (second choice = Alt. 2).*
- *Down zoning.*
- *Conservation down-zoning, Sect. 22.*
- Offers most options to preserve area. (East bay sect 13 Scharman Rd).

Other Comments

- *The development scenario that least impacts this area.*

Recreational Trails

Joe Fields, MDNR, Forest Management Division

All recreation programs within the Michigan Department of Natural Resources are administered by specific divisions with the Department. The Forest Management Division is responsible for all of the recreation amenities, including the trails, found within the Boardman Valley study area. The following is a brief description of each of the trails including management goals established by the MDNR.

Grand Traverse Cycle Trail

This 50" wide trail is approximately 71 miles in length and occupies much of the study area. Administration of the ORV program is guided by the ORV Advisory Committee at the state level, which meets monthly to oversee the program and determine appropriate funding for various projects. This committee is made up of virtually all user groups as well as other users of the forest resource. Funding is through registration fees and a portion of the state gas tax and is paid on a per mile basis to the contractor maintaining the trail.

The local administration of the trail is with the Traverse City Forest Management Unit (TCFMU). In conjunction with an ORV technician in Cadillac, the trail is monitored and maintained under a contract with a local cycle group. Inspections occur on a regular basis with the ORV technician working directly with the contracting group.

Establishment and alteration of the system is controlled by a document known as a trail proposal, which involves all department divisions as well as the state trail coordinator. Any alteration or construction of new trail must have an approved proposal prior to any work.

Shore-to-Shore Riding Hiking Trail

This trail system traverses the entire northern Lower Peninsula. Much of the trail transects the study unit. Established in 1963, this trail is used primarily by the equestrian community, usually on large group rides. This system is maintained by the TCFMU in conjunction with the Michigan Trail Riders Association. This group is unpaid and performs virtually all maintenance of the trail at their cost. Any change, alteration or new trail is done through a trail proposal, as outlined above. Funding for this trail, which is minimal, comes from the Division's recreation budget. Inspections occur at least 4 times per season to clear trees and address erosion and sign problems.

Muncie Lakes Pathway

Created as the first cross-country ski trail in the state forest system, this trail is administered by the TCFMU and groomed twice per week in the winter months. The trail is very popular and receives heavy winter use. With very limited funds available, the trail maintenance program is limited to critical needs. Erosion problems and safety issues are the focus of this effort. The grooming during winter months is limited due to lack of funds. Maintenance of the trail is assisted by an agreement with the Grand Traverse Hiking Club.

Recreational Trails

Boardman Valley Snowmobile Trail

Similar to the Shore-to-Shore Trail, this trail system courses through the study area. Virtually all use occurs during the winter months and, during this period, it is groomed 2-3 times per week. The program is administered from Lansing in conjunction with a statewide advisory committee much like the ORV committee. Funds are distributed, based upon miles of trail, to local contractors who are responsible for grooming and maintenance. Funding of this program comes from registration fees and a small portion of the state gas tax.

Local administrative duties consist of inspections during the winter months and working with the contractor throughout the year. Efforts are currently being made to relocate the trail system away from existing roadway surfaces and to widen trails to 16'-20' for safety. Routing of the trail is done in conjunction with a trail specialist and user groups, again using a trail proposal to gain statewide concurrence.

North County Trail

This system is national in scope and administered by the MDNR through a joint agreement with the US Forest Service and National Park Service. A statewide volunteer group works with the state trail specialist to locate the system, and volunteers at the local level perform most of the work to establish and maintain the system. Trail locations, maintenance requirements, and type of use are dictated by national trail standards, regardless of owner. With increased mountain bike pressure, use is becoming a very controversial issue. A proposal is currently being considered to relocate the trail away from the riding hiking trail in the study area. National standards on width are the issue. Most of the riding hiking system is 3-4 times the desired trail width. Funding comes from the National Park Service and volunteer organizations.

It should be noted that there are policies and procedures mandating the direction of each trail program. For example, any new snowmobile trail proposal must be a "connector," rather than a circuitous, stand-alone system. Any new trail proposal must have a funding source in place prior to approval.

Glossary

Community Master Plan - A plan that guides the physical development of the community indicating the general location, character, and extent of the transportation infrastructure, recreation activities and facilities, and land use. Its purpose is to bring about coordinated and harmonious land use. It communicates the community's vision and is referenced by existing and potential landowners to understand the likely future use of private property and the surrounding lands.

Easement Purchase

Specified land rights are purchased from the landowner. Easements may be established to permanently protect significant natural features and wildlife habitat in addition to those already protected as Priority Natural Features. Permanent Conservation Easements can be administered by: 1) condominium associations, 2) the Township, or 3) a third party, such as a land trust, agreeable to both the landowner and the Township. Assessment and property taxes are reduced in proportion to the reduction in land value due to the easement. Easement purchases do not necessarily provide for public access to the easement.

Management Framework Districts:

- **Active Forest** – Primarily State Forest lands that provide a broad range of recreational activities and resource management functions.
- **Active Recreation** – Primarily an active and passive recreation zone located between the residential neighborhoods in the Arbutus/Spider/Rennie Lake area and those along Brown Bridge Road.
- **Central Corridor** – The zone in which people primarily live or stay in the Valley.

Overlay Zone - A zoning district that is “overlaid” over the existing zoning classifications. For the portion of the Boardman River Valley that is included in the study area, this zone covers all areas of private ownership that are generally enclosed by predominately public/quasi-public conservation oriented property. It includes two new classifications: Conservation Residential and Forest.

Permanent Conservation Easement - Easements that are established to permanently protect significant natural features and wildlife habitat in addition to those already protected as Priority Natural Features. They should, as much as possible, be contiguous so as to form wildlife corridors through the Valley. Permanent Conservation Easements should be administered by: A) a condominium association, B) the Township, or C) a third party, such as a land trust, agreeable to both the developer of the property and the Township.

Glossary

Priority Natural Features - Wetlands, natural feature setbacks, slopes over 25%, and prime farm land. Some features, such as the natural feature buffers and some of the wetlands, are currently protected, others are not. These resources are identified for protection from development due to their ecologic and cultural significance.

Purchase of Development Rights

An purchased easement that disallows or limits further development of property.

Road Construction (Financing) Classifications:

- **Primary Roads** – Roads that receive 80% State and 20% local funding for construction and maintenance.
- **Secondary Roads** - Roads that receive 50% State and 50% local funding for construction and maintenance.
- **Private Roads** - Roads that must utilize all private funding for construction and maintenance.

Road Functional (Usage) Classifications:

- **Principal Arterials** - Roads that generally carry long distance, through-travel movements. They also provide access to important traffic generators, such as major airports or regional shopping centers.
- **Minor Arterials** - Roads that are similar in function to principal arterials, except that they carry trips of shorter distance and to lesser traffic generators.
- **Collector Roads** – Roads that tend to provide more access to property than do arterials. Collectors also funnel traffic from residential or rural areas to arterials.
- **Local Roads** – Roads that primarily provide access to property.

Transfer of Development Rights

Specified development rights are transferred from one area to another. Currently, this is only allowed within a single jurisdiction; therefore a Township would have to provide an area within their boundaries where they would allow higher densities than current zoning permits