United States
Department of
Agriculture

Forest
Service

Roads Analysis Report Supplement
2010 Travel Management Project
2010 MVUM Update

Chequamegon-Nicolet National Forest

Prepared By:
Michael Miller
March 2010

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Purpose of the 2010 Supplement to the 2008 Travel Management Roads Analysis Report

Roads analysis is a framework for periodic re-evaluation of road systems and road management strategies. Interdisciplinary teams may choose to revisit the analysis as new information becomes available; as management needs, ecological conditions, or social issues change; as major disturbances occur; as inventory, monitoring, or research results are revealed; or as regulatory requirements are changed. The interdisciplinary teams should compare actual outcomes against interpretations and effects estimates made in earlier iterations.

The September 22, 2008 Chequamegon-Nicolet National Forest Travel Management Project Decision Notice & Finding of No Significant Impact (2008 CNNF-TMP DN) states "We will update and re-publish the MVUM annually. My decision includes an adaptive management process to update the MVUM which will focus on engaging you about your access needs.

- We will continually accept public suggestions to add or remove specific roads/trails to the designated network.
- A window of evaluation/processing will occur to prepare for the MVUM update—comments received after this window will be considered for the next year's update.
- The Roads Analysis Process (RAP) will be used to evaluate each additional specific road suggestion, comparing resource risks versus public value for that specific road.
- I will issue a new decision, following the appropriate NEPA procedures, each year to add or remove specific roads to the updated MVUM."

This Roads Analysis is a result of the 2008 CNNF- TMP DN to provide an annual update to the Motor Vehicle Use Map (MVUM). It is a supplement to the April 2008 Roads Analysis Report for the Travel Management Plan Project for the Chequamegon- Nicolet National Forest (2008 TMP RA) which states "This report is a "living" document and reflects the conditions of the analysis area at the time of writing. The document can be updated as the need arises and conditions warrant." This supplemental report will provide maps and a matrix based on the issues identified in the 2008 TMP RA. The matrix will provide opportunities for each new road to the project, based on the risk\value analysis. The risk\value analysis is done using a set of criteria based on each risk or value. The following are the values that were provided from the 2008 TMP RA and were used for the supplement.

- Providing access to private in-holdings,
- providing access to hunting, recreation and/or gathering opportunities, and
- providing access for administrative purposes, including timber.

Likewise, each road was evaluated for the risk (high, moderate, low, or very low) it posed to:

- water resources (aquatic/water quality);
- the spread of NNIS;
- threatened, endangered, and sensitive wildlife species;
- threatened, endangered and sensitive plant species;

- soils;
- reference areas;
- heritage sites.

Road value and risk ratings (high, moderate, low, or very low) were assigned numeric equivalents (5, 3, 1, or 0, respectively). For each road, the value ratings (private access, recreation access, administrative access) were added up, to obtain a Total Value rating. Similarly, risk ratings for each road were summed to obtain a Total Risk rating.

The criteria used for this supplement were modified since the 2008 TMP RA. Each interdisciplinary (ID) team member was asked to review their subject area and make relevant changes to their respective criteria. The following criteria were changed:

- Public Access Value was change to Motorized Public Access Value. The ratings were changed to reflect the importance of the public comments that were received during the comment period.
- Reference Area ratings were changed to fall in line with the other risks. An example would be the high rating was changed from a 3 to a 5.
- The 2008 Aquatics Rating used examples from the Olympic National Forest. This rating was revised in 2009 with data from the Chequamegon-Nicolet National Forest which provided a more critical look at aquatics.
- The 2009 NNIS criteria actually identify the species in the criteria and rate the potential to spread to surrounding plant communities.
- The criteria for TES for wildlife and plants was reduced to limit the rating on roads that are opposite sides an existing road that already has an established motorized use.

2009 Values and Risks of the Current Road System

The protocols and available data utilized to assign values and risks to each road are described below. The complete road-by-road ratings are provided in Appendix I and II. In this section, as throughout this document, numbers and mileages are approximate.

Road Related Values

Motorized Public Access Value

This access factor is based on the extent of public use by passenger cars, motor homes, pickups, etc. (such as for recreation, berry picking, firewood cutting, forest products gathering, etc.) for road segments. Available data used during the evaluation of this category included:

- Motor Vehicle Use Map Road Request Forms,
- Road locations, and
- Analysis area reconnaissance notes from district staff.

Evaluation Criteria

High Value (5): Road was requested for open public access during the current comment period.

Moderate Value (3): Road was requested for open public access during the comment period, but after district field review or internal staff knowledge of the road, was reduced because of low public use.

Low Value (0): Road was requested for open public access during the comment period, but after district field review or internal staff knowledge of the road, was reduced because of existing closure such as a gate or berm.

Private Access Value

The road system provides access to many different types of landowners, power lines, rock sources, communication sites, and other special use permit sites. When the road provides access to other landowners, the Forest Service is obligated to provide for reasonable access if there are no other options. Because of the need to provide and manage this access, this factor is heavily weighed.

Available data used during the evaluation of this category included:

- Special use permits
- Road locations
- Land ownership

Evaluation Criteria

High Value (5): Road segment serves as the primary access to non-Forest Service managed land, and/or a special use permit site (power line, communication site, private rock source, etc).

Moderate Value (3): Road segment serves as an alternate access to non-Forest Service managed land, and/or a special use permit site (power line, communication site, private rock source, etc.)

Low Value (0): Road segment does not contribute in any way or provide access to non-Forest Service managed land, and/or a special use permit site (power line, communication site, private rock source, etc.).

Administrative Access Value

Roads with administrative value are based on the extent of Forest Service use for administrative needs which include: administrative sites, cultural sites, radio communication repeater sites, special use sites, weather stations, ecosystem management, and fire activities.

Available data used during the evaluation of this category included:

- Road Locations
- ID team knowledge of maintained sites

- Timber stand inventory
- Special Use Permits

Evaluation Criteria

High Value (5): Road segment serves as the primary access to Forest Service administrative sites, cultural sites, radio communication repeater sites, weather stations, fire activities, special use sites, or ecosystem management.

Moderate Value (2): Road segment serves as an alternate access to Forest Service administrative sites, cultural sites, radio communication repeater sites, weather stations, fire activities, special use sites, or ecosystem management.

Low Value (0): Road segment does not contribute, in any way, to access to Forest Service administrative sites, cultural sites, radio communication repeater sites, weather stations, fire activities, special uses, or ecosystem management.

Road Related Risks

Risk to Soils

This risk is based on the propensity for transportation corridors to facilitate compaction rutting and erosion. The potential impacts are dependent on the type of soils and slope class.

Available data used during the evaluation of this category included:

- Road Locations
- ELTP soil types

Evaluation Criteria

Low Risk (1): soil drainage class – well, somewhat excessive, excessive; and soil surface texture – fine sand, sand, loamy sand, loamy fine sand, sandy loam, gravelly sandy loam, very cobbly sandy loam, loam; and equipment use rating – slight compaction; and rutting risk – slight ; and slope class – 0-1, 0-2, 0-3, 0-4, 0-5, 0-6, 1-6, 2-6, 5-10, 6-12, 1-15, 4-15, 6-15.

Moderate Risk (3): soil drainage class – moderately well or well, and soil surface texture – fine sandy loam, very fine sandy loam, or silt loam; and equipment use rating – moderate; and compaction and rutting risk – moderate; and slope class – 0-18, 6-20, 10-20, 12-20, 15-24, 0-30, 4-30, 10-30, 15-30, 10-35, 15- 35, 18-35.

High Risk (5): soil drainage class - somewhat poor, poor, or very poor; and soil surface texture – any texture; and equipment use rating – severe; and compaction and rutting risk rating – severe; and slope class – 15-45, 20-45, 4-60; and all hydric soils.

Risk to Reference Areas

Reference area risk rankings were developed based on location of roads within reference areas or proximity to those areas.

Available data used during the evaluation of this category included:

- GIS Road Locations
- Reference Area Inventory

Evaluation Criteria

No Risk (0): Beyond 1 mile from a Management Area (MA) 8.

Low Risk (1): Between a ½ mile and 1 mile from a MA 8 and no motorized use road is between the Reference Area and the road under review.

Moderate Risk (3): Within ½ mile of a MA 8 and no motorized use road is between the Reference Area and the road under review.

High Risk (5): Located within MA 8

Risk to Aquatic/Water Quality

Aquatic and water quality risk rankings were developed based on procedures in FS-643, Roads Analysis: Informing Decisions about Managing the National Forest Transportation System, examples from western National Forests including the Olympic National Forest, prior aquatic risk ratings and road-aquatic data for the Chequamegon-Nicolet National Forest. A number of individual rankings were considered and combined to provide one ranking for aquatic species, water quality and hydrology. The percentage values for each rank were developed by looking at topographic maps for a few hours, making approximate measurements to get a feel for the ranges that are likely to occur across the Forest and by using professional judgment regarding the potential for impacts to aquatic ecosystems. The average number of road crossings, percent of roads in riparian management zones and percent of roads in wetlands were also used as a guide (see Table 1). The rationale for each item is provided below.

Stream Crossings: At each location where a road crosses a stream, there is the potential for impacts to the aquatic ecosystem. The potential impacts include sedimentation from road surfaces, ditches and culvert failure; upstream channel aggradations from culverts set too high; restricting the upstream movement of fish and other aquatic organisms because water in the culvert is too fast, too shallow or there is a drop at the outlet; and upstream channel down cutting from straightening of streams at crossings. As the number of stream crossings increase, the potential for aquatic impacts increases. In addition, stream crossings are costly to construct and maintain. The highest road-stream crossing densities on the Forest are probably in the range of 3-4 per mile of road. The Forest-wide average for all roads is just below 0.2 crossings per mile. This number is determined by identifying the number of crossings for each road (from road-stream crossing inventory, aerial photos or quad maps, or GIS intersects of roads and streams) and dividing by the road length (miles).

Riparian Zone: Roads located in riparian areas can be sources of sediment and, where they parallel streams, can permanently remove riparian vegetation and encroach on the floodplain. Wisconsin's Forestry Best Management Practices call for no roads or skid trails within riparian management zones (i.e., within 100 feet of perennial streams and lakes or 35 feet of intermittent streams; RMZs) except where they must cross a stream. Therefore, a road should only exist in a riparian area where it must cross a stream and the potential for adverse impacts to aquatic ecosystems increases any place where more than a small percentage of a road is in a riparian area. About 1.4 percent of all roads in the Forest are located in RMZs. If there were one stream

crossing per mile of road and the road crossed the RMZ at a right angle, there would be about 3.8 percent of the road in the RMZ. This percentage of road or trail in RMZ is determined by creating a GIS buffer of 100 feet around all perennial water bodies and 35 feet around intermittent streams and intersecting that layer with the road and trail layer to determine length of each road or trail in the RMZ. For each road or trail, the RMZ length is divided by the total length of road and multiplied by 100.

Wetland: Roads primarily affect wetlands by restricting cross drainage and changing the type of wetland that occurs above and below the road. They can also result in the direct loss of wetland where road fill is placed in the wetland. About 4.5 percent of all roads in the Forest are located in wetland. This percentage of road or trail in wetland is determined by intersecting the WI wetland layer with the road and trail layer to determine length of each road or trail in wetland. For each road or trail, the wetland length is divided by the total length of road and multiplied by 100.

Hydrologic Connection: Any road segment that during a runoff event has a continuous surface flow path between any part of the road prism and a natural stream channel or water body has a hydrologic connection. This measure identifies road segments that can accelerate runoff, deliver road-derived sediments and where road-associated spills or applied chemicals are likely to be delivered to streams or lakes. Hydrologic connection will tend to increase with increasing intensity of rainfall or snowmelt and with increasing antecedent soil moisture conditions. Hydrologic connectivity is best determined in the field but can be estimated from topographic and soil maps based on nearness to water bodies, slope and soil type. This factor will generally not be used because of limitations with GIS data to accurately determine connectivity. It may be used on a case-by-case basis.

Available data used during the evaluation of this category included:

- Road locations based on the most recent GIS layer,
- 24K Hydro layer with buffers as described above,
- WI Wetland layer,
- Topographic and soil maps, and
- Road/stream crossing inventory.

Evaluation Criteria

Very Low Risk (0): No stream crossings; or no length within riparian zone (within 100 ft of water body); or no length in wetland.

Low Risk (1): >0-0.25 stream crossings/mile; or >0-2% length within riparian zone (within 100 ft of water body); or >0-5% length in wetland.

Moderate Risk (3): >0.25-0.5 stream crossings/mile; or >2-4% length within riparian zone (within 100 ft of water body); or >5-10% in wetland.

High Risk (5): >0.5 stream crossings/mile; or >4% length within riparian zone (within 100 ft of water body); or >10% in wetland.

Table 1:

Background Information for Aquatic Risk Ratings for Roads
Chequamegon-Nicolet National Forest
September 16, 2009

Maint. Level	Length (mi)	Stream Crossings		RMZ		Wetland	
		#	#/mi	mi	%	mi	%
T/O	707	170	0.24	22	3.1	52	7.4
1	2,713	301	0.11	25	0.9	97	3.6
2	4,922	452	0.09	39	0.8	148	3.0
3	472	112	0.24	11	2.3	25	5.3
4	1,432	487	0.34	34	2.4	109	7.6
5	885	326	0.37	29	3.3	67	7.6
Total	11,131	1,848	0.17	160	1.4	498	4.5

Note: # of stream crossings is based on gis intersect is probably an over-estimate
Source of data: GIS analyses conducted for 2008/2009 TMR
Prepared by: Dale Higgins, Hydrologist

Non-Native Invasive Species (NNIS) Risk

This risk rating is based on the propensity for transportation corridors to facilitate the introduction and spread of non-native invasive plants (weeds) that may cause ecological impacts. The potential for impact is dependent on the type of weed species present and plant community of adjacent lands. In addition, roads with higher use levels tend to be at higher risk for introduction.

Risk rating for weeds will factor in the species of weed present in conjunction with the surrounding plant communities. The presence and spread of weeds along a road is not a risk to the road but the adjacent plant community. As an example, forested plant communities with roads through them harboring sun-loving weeds are at a lower risk than an open plant community (such as barrens) with a similarly infested road. This is because sun-loving weeds such as spotted knapweed will not move into the shade of a surrounding forest while they likely will into barrens.

Available data used during the evaluation of this category included:

- Road Locations
- NNIS location inventories
- FS type of adjacent land (if known)

Evaluation Criteria

Low Risk (1): No weeds present.

Moderate Risk (3): Weeds present. Limited ecological effects anticipated within existing clearing only. Surrounding area unlikely to support weed plants present (see Table 2).

High Risk (5): Weeds Present. Serious ecological threat beyond the road clearing. Surrounding area highly likely to be invaded by weed plants present (see table 2). *As an example, garlic mustard along a road through hardwood forest is a High Risk (5).*

Table 2:
Weed species Qualifiers for RAP -- weed risk analysis - 2009

	Species qualifiers			
NNIS A-List	Forest	Open	Wetland	Notes
Asiatic honeysuckles	5	5	1	grows in sun or shade
Buckthorn, Common	5	5	1	grows in sun or shade
Buckthorn, Glossy	5	3	5	prefers wet areas
Garlic mustard	5	3	1	grows in sun or shade
Japanese barberry	5	3	1	grows in sun or shade
Oriental bittersweet	5	3	1	grows in sun or shade
Brittle-stem hemp-nettle	5	1	1	prefers shade
Forget-me-not	5	3	3	grows in sun or shade
Siberian pea	3	3	1	not highly aggressive
NNIS adapted to sun				
European Marsh thistle	3	5 if wet	5	can persist under canopy
Autumn olive	1	5	1	prefers sun
Bull Thistle	1	5	1	disturbed, open
Canada Thistle	1	5	1	disturbed, open
Common Reed	1	1	3	wet, open
Japanese knotweed	1	5	3	prefers sun
Leafy Spurge	1	5	1	prefers sun
Purple Loosestrife	1	1	5 if open	wetlands, open
Reed canary grass	1	3	5 if open	prefers sun
Spotted knapweed	1	5	1	prefers sun
Wild parsnip	1	5	3	prefers sun
Common mullein	1	5	1	disturbed, open
(Curly Pondweed)				aquatic
(Eurasian water milfoil)				aquatic

Risk to Threatened, Endangered, and Sensitive (TES) Wildlife Species

Many scientific studies have documented impacts of roads on wildlife, including direct mortality, habitat loss and/or reduced available habitat due to road avoidance, habitat fragmentation, edge effects, increased competition and predation from edge-associated species, population isolation, nesting and rearing disturbances, and reduced habitat effectiveness. All of these impacts can adversely affect the viability and sustainability of wildlife populations.

Available data used during the evaluation of this category included:

- Road locations and inventory.
- Known, breeding, denning, and nesting site locations.

Evaluation Criteria

Very Low Risk (0): Road is not present within ½ mile of a nesting, denning, or breeding site for TES wildlife.

Low Risk (1): Road lies within ½ mile of a nesting, denning, or breeding site for TES wildlife or within 1320 feet, but a motorized road is between the occurrence and the road under review.

Moderate Risk (3): Road lies within 1320 feet of nesting, denning, or breeding site for TES wildlife or within 660 feet, but a motorized road is between the occurrence and the road under review.

High Risk (5): Road lies within 660 feet of a nesting, denning, or breeding site for TES wildlife and no motorized road lies between the road and the occurrence.

Risk to Threatened, Endangered, and Sensitive (TES) Plant Species

As with wildlife, many scientific studies have documented impacts of roads on TES plant life, including habitat loss and/or reduced available habitat due to habitat fragmentation, edge effects, increased competition from edge associated species, population isolation, and reduced habitat effectiveness. All of these impacts can adversely affect the viability and sustainability of TES plant populations.

Available data used during the evaluation of this category included:

- Road locations relative to known TES plant occurrences.

Evaluation Criteria

Very Low Risk (0): Road is not present within ½ mile of a documented TES plant occurrence.

Low Risk (1): Road lies within ½ mile of a documented TES plant occurrence or within 1320 feet, but a motorized road is between the occurrence and the road under review.

Moderate Risk (3): Road lies within 1320 feet of a documented TES plant occurrence or within 660 feet, but a motorized road is between the occurrence and the road under review.

High Risk (5): Road lies within 660 feet of a documented TES plant occurrence and no motorized road lies between the road and the occurrence.

Risk to Cultural Resources

For purpose of this analysis, ML 1 and 2 roads are considered “areas of potential effect,” and as stated in 36 CFR 800.16, “area of potential effect means the geographical area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist.” Simply stated, operation of a road through a recorded cultural resource site may likely render disturbance, that is, a direct effect. Further, operation of a road near a recorded cultural resource improves access and increases the possibility of looting or vandalism, and for this reason poses an indirect effect. Consequently, a ML 1 or ML 2 road’s distance from a recorded cultural resource is assumed to be the appropriate measure of risk factor.

Available data used during the evaluation of this category included:

- Road locations
- Known Cultural Sites

Evaluation Criteria

Very Low Risk (0): No cultural resource located within 400 meters of road.

Low Risk (1): Cultural resource located between 200 – 400 meters of road.

Moderate Risk (2): Cultural resource located between 100 – 200 meters of road

High Risk (3): Cultural resource located between 50 – 100 meters of road

Very High (4): Cultural resource located within 50 meters of road, bisected by a road, or road is a designated cultural resource.

Opportunities Based on This Analysis

Since the completion of the 2008 Roads Analysis, the Chequamegon-Nicolet National Forest has continued to receive comments to add roads to or remove roads from the Motor Vehicle Use Map (MVUM). The Forest set November 30, 2009 as the deadline for any public comments to be considered for the 2010 MVUM update. Based on the legal formal comment period notice to the public, the actual deadline for public comments was December 2, 2009. Due to the heavy amount of comments that the forest anticipated receiving, the Forest decided to divide the comment period into two analyses periods.

The Travel Management RAP Core Team was assembled in September 2009 to analyze the comments that had been received so far. 208 public comments, which produced 293 roads to analyze or review, were received during this comment period. Appendix I reflects the public motor vehicle designations determined as a result of the September 2009 RAP.

The RAP Team also met again in January 2010 to analyze the remaining comments. The comments received from the September analysis until the December deadline added another 309 comments which produced 242 new roads to analyze. Appendix II reflects the public motor vehicle designations determined as a result of the January 2010 RAP.

Additionally, in January 2010, as a result of the additional 309 comments, there were 170 roads that received comments that may have been contrary to previous decisions. These roads were again reviewed to consider any new information that may change a previously determined public motor vehicle designation. Several of the roads that were reviewed during the January 2010 review were roads that had public motor vehicle designations determined during the September 2009 analysis. The designations shown in Appendix I reflect the September 2009 designation. The September 2009 designations may have changed during the January 2010 review due to new information. These changed designations are reflected in Appendix III.

Based on the existing and desired condition for roads, key issues, the answers to questions contained in FS-643, Roads Analysis: Informing Decisions about Managing the National Forest Transportation System from the 2009 RA, and the Value/Risk analysis as displayed in Appendix I – September 2009 Road Matrix, Appendix II – January 2010 Road Matrix and Appendix III- January 2010 Road Review, the RAP Team has developed the following sets of opportunities.

Maintain at Current Level

This opportunity category was identified for National Forest system roads that comprise parts of the long-term transportation system. The analysis shows that benefits exist in retaining these roads and maintaining them at current maintenance levels. 111 roads were identified to remain open to highway legal vehicles yearlong, 5 were identified to remain open during the fall hunting season[1], 32 were identified with highway legal vehicles and vehicles 50”or less in width, and 49 roads will remain closed to public motorized use. Many of these roads may have had a request for additional use such as adding vehicles 50”or less in width to a road already open to highway legal vehicles or a request to close a road to public use. Through the analysis process the team determined that no change to the current use would be recommended.

Increase Use

This opportunity category was also identified for National Forest system roads that comprise parts of the long-term transportation system. The analysis shows that benefits exist to increase use on these roads from their current designation. 117 roads from the analysis had increased use designated on them. 80 roads were identified for increased use to highway legal vehicles and vehicles 50”or less in width, as well as an additional 19 roads that would provide access to highway legal vehicles and vehicles 50”or less in width during the fall hunting season. 17 roads were identified for highway legal vehicles only and 2 closed system roads added use for vehicles 50”or less in width.

Reduce Use

This opportunity category was identified for National Forest system roads that comprise parts of the long-term transportation system. The analysis shows that benefits exist in reducing the amount of use on these roads. 5 roads were reduced to fall use for highway legal vehicle or vehicles 50”or less in width from yearlong use, and 1 road was reduced to fall access for just highway legal vehicles. There were 2 roads that had use removed for vehicles 50”or less in width, reducing them to highway legal vehicles only, yearlong.

Eliminate Use

This opportunity category was identified for National Forest system roads that comprise parts of the long-term transportation system. The analysis shows that benefits exist in removing use on all or a portion of these roads. Opportunities for public motorized use would be eliminated on 30 roads throughout the forest as well as eliminated use on short segments of 6 other roads.

Add System Roads with Motorized Use

The analysis identified opportunities for adding existing roads to the National Forest System. These roads, formerly termed unclassified, are now by definition unauthorized roads. Approximately 127 roads in the analysis area currently fall in this category. Each of these roads could be retained and added to the Forest transportation system. Through the analysis process it was determined that many of these roads are of value to long-term management of the Forest. The analysis shows that benefits exist in adding 79 roads for highway legal vehicles use yearlong and 9 roads for fall access. 34 roads were indentified for highway legal vehicles and vehicles

---

[1] Fall access is from September 1st to December 31st.

50”or less in width use along with 4 roads with highway legal vehicle and vehicles 50”or less in width use in the fall only.

Do Not Add to System

The analysis identified opportunities for unauthorized roads that would not be added to the system. The primary reason for this is due to specific or aggregate risks identified during the analysis. Approximately 151 roads currently fall in this category.

Converted to Trail

The analysis identified opportunities for unauthorized roads that would be added to the trail system. 5 roads were identified and would only allow ATV use on them.

Interdisciplinary Team Members and Preparers

Travel Management RAP Core Team Members

Dave Campbell	Transportation Planner, Co-Team Leader
Mike Miller	Transportation Planner, Co-Team Leader
Joan Marburger	Travel Management Coordinator
Matt StPierre	Biologist
Jake Lubera	Recreation
Marjy Brzeskiwicz	Ecology/Botany
Jerry Petruzalek	GIS Specialist
Ingrid Mendoza	Cultural
Dave Hoppe	Soils
Dale Higgins	Watershed

APPENDIX I – SEPTEMBER 2009 ROAD MATRIX

APPENDIX II – JANUARY 2010 ROAD MATRIX

APPENDIX III – JANUARY 2010 ROAD REVIEW

APPENDIX IV – MAPS