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# The North Fork Road:
# Possible Maintenance Alternatives and Landowner Opinions

## Introduction

The North Fork Road, also classified as Montana Secondary route 486 (S-486), originates in Columbia Falls and continues north to its end at the US-Canadian border. The North Fork Road is a two-lane scenic thoroughfare that bisects private and Forest Service lands, runs adjacent to the North Fork of the Flathead River, which is the westernmost boundary of Glacier National Park. There is an entrance to Glacier National Park at the Camas Junction. The road is mainly a rough gravel road with a few intermittent paved sections. The maintenance of the North Fork Road has been an issue of concern for many years. The suggestion to pave portions of the North Fork Road, especially to the Camas Junction, has met both support and opposition. Proponents and opponents have a variety of reasons for their positions on the issue.

Proponents of paving cite the large quantities of dust produced by the road as one of the reasons to seal the road's surface. Due to the gravel substrate of the North Fork Road, high levels of dust are produced in the drier months. The dust from the road impairs the vision of drivers effecting safety, negatively detracts from the scenic surroundings, adds sediment to the Flathead River possibly impacting endangered bull trout habitat, and frequently damages vehicles due to loose gravel. Paving to the Camas Junction would provide easier access to Glacier National Park for visitors. In addition, the cost of maintaining a quality gravel road seems much higher than maintaining a paved road. For many, paving the road is the only solution to these and other problems.

For opponents of paving, the issue focuses on maintaining the ecological integrity and rustic qualities of the North Fork. Presently, the North Fork of the Flathead is a healthy ecosystem capable of supporting a wide range of native species including large carnivores like the Grizzly bear and Gray wolf. Opponents believe paving the road will increase both tourist traffic and the flow of development into the North Fork. Over time, an increase in traffic and development will slowly erode the capacity for a variety of wildlife to exist in the North Fork due to loss of habitat and an increase in road kill due to higher speed traffic. Moreover, opponents fear that paving the North Fork Road will destroy the rustic character and solitude that can still be found in the North Fork.

The issue of paving the North Fork Road evokes a passionate response from individuals on both sides of the debate. Moreover, the decision over what to do with the road has been the source of headaches for decision makers for years, with no real solution in sight. Frustrated by the polarized debate and continuing degradation of the North Fork Road, the Montana Wilderness Association decided to investigate all possible maintenance alternatives for the

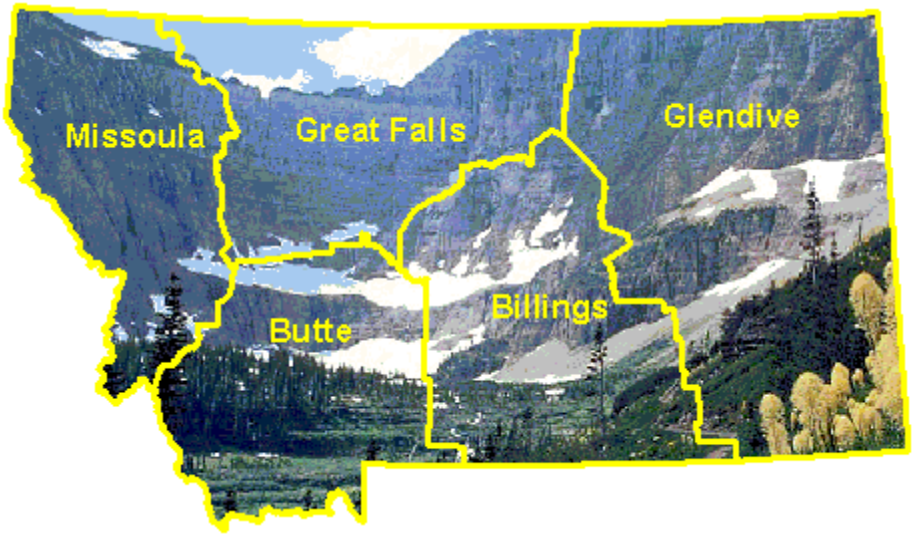
road, with the hopes that an alternative can be found that adequately meets the needs of all relevant stakeholders.

In the summer of 2002, the Montana Wilderness Association and the Environmental Studies Transboundary program at the University of Montana contributed office space, some materials, and a living stipend for one graduate student to research possible maintenance alternatives and conduct a survey of North Fork landowner opinions regarding the maintenance alternatives identified. The following is a report of this research.

## Looking for Alternatives

Part of the confusion over what to do with the North Fork Road is the result of a long history of changes in jurisdiction and maintenance responsibility of the road. At one time, the entire road was designated as a US Forest Service road, and thus ownership and maintenance responsibility was delegated to the federal government. Currently, federal designation as a secondary route still exists to the Camas Junction, thus making that section of the road eligible for federal funding (Brazda, 6/19/02). However, funds for federal secondary routes are to be used only for construction, not maintenance costs (Johnson, 6/20/02).

Two years ago, the Montana state legislature made decisions that greatly affect the maintenance possibilities for the North Fork Road. First, maintenance responsibility for the section of road north of the Camas Junction to the US-Canadian border was relegated to Flathead County (Brazda, 6/19/02). Second, regional districts across the state were created to allocate funding for county road departments. Before this decision, each county in the state received a percentage of funds through a certain formula (Brazda, 6/19/02). The county road department would receive funding from a variety of sources including property taxes, gas tax dollars, licensing fees, and at one time, timber receipts (Johnson, 6/20/02). Now, each district has a committee comprised of county commissioners from each county, engineers, and other representatives to determine how the funds for the district will be allocated to those counties within the district. Flathead County is apart of District 1, or the Missoula District, which also includes Missoula County and a large portion of western Montana (Brazda, 6/19/02). The following map is from the Montana Department of Transportation, it displays the boundaries of the districts within the state. (www.mdt.state.mt.us/travinfo/winter.html, accessed 1/24/03).




The Missoula district's budget for all secondary paved routes is 4.6 million dollars. Although large sections of the North Fork Road are unpaved, the road could be eligible for this funding source (Brazda, 6/19/02). However, 4.6 million dollars is a very small sum of money to maintain even a fraction of the paved secondary routes in District 1.

Therefore, the County has been ultimately responsible for the up keep of the North Fork Road. Charlie Johnson of Flathead County's Road and Bridge Department says that the county is doing the best they can with the funds they are allocated (Johnson, 6/20/02). With 1,100 miles of gravel road in Flathead County, priorities must be set (Johnson, 6/20/02). The county has been blading the road, as needed, usually a couple of times a year or more often depending on conditions (Johnson, 6/20/02).

Clearly, economics plays a powerful role in determining the frequency and type of maintenance for the North Fork Road. Charlie Johnson states that the money for adequate maintenance of the road is just simply not available from the state district (Johnson, 6/20/02). While economics and cost of a maintenance project must not be ignored, it is necessary to explore what all possible alternatives may be, as funds could be acquired through creative or non-traditional means. Therefore, the following is a brief description of possible maintenance technologies and costs, which could be applied to the North Fork Road.

<u>Maintenance Alternative #1: No-Action</u>

When looking at the range of alternatives that exist for maintaining the North Fork Road, one end of the spectrum is the "No-Action Alternative." With this alternative, the type and frequency of maintenance for the North Fork Road would continue, as it currently exists with the Flathead County Road and Bridge Department. Typical maintenance of the road includes periodic grading of the road surface and snow plowing in the winter. Maintenance is scheduled on an "as needed" basis (Johnson, 6/20/02).

Maintenance Alternative #2: Add Gravel

The second maintenance alternative aims to improve the road's condition with greater attention to maintaining the road's gravel surface. It is necessary for a gravel road to receive new gravel on a regular basis, as a large amount of gravel is displaced from the road's surface. Nearly one inch of gravel is lost from a road surface in one year with traffic levels as low as 200 ADT (average daily traffic) (Applecamp, 6/19/02). Maintaining the amount of gravel on the road improves the quality of the roadbed, water drainage, driver safety, and reduces erosion. The entire North Fork Road has not been graveled to the town of Polebridge since 1995-6 (Johnson, 6/20/02).

However, the task of gravelling the North Fork Road is a costly project due to its remoteness. Gravel must be hauled from Kalispell or Columbia Falls, at a cost of 10 to 12 dollars a ton (Johnson, 6/20/02). There are gravel pits on National Forest land in the North Fork and using these local sources would lower the cost to approximately 5 to 6 dollars a ton (Johnson, 6/20/02). However, crushing gravel on National Forest land would require an extensive National Environmental Policy Act (NEPA) assessment. The costs of such a study, plus the potential negative impact to the environment, are costs the county simply cannot cover (Johnson, 6/20/02). The cost to adequately add gravel to the road is approximately $20-25,000 per mile (Applecamp, 6/19/02).

Maintenance Alternative #3: Dust Abatement Technologies

Gravel roads are made up of gravel mixed with tiny particles, known as *fines* (Baxter, 2). The fines help hold the road together. When the dust is released into the air, the fines are lost, and the stability of the roadbed is reduced (Baxter, 2). Moreover, as dust is released into the air visibility and air quality is decreased.

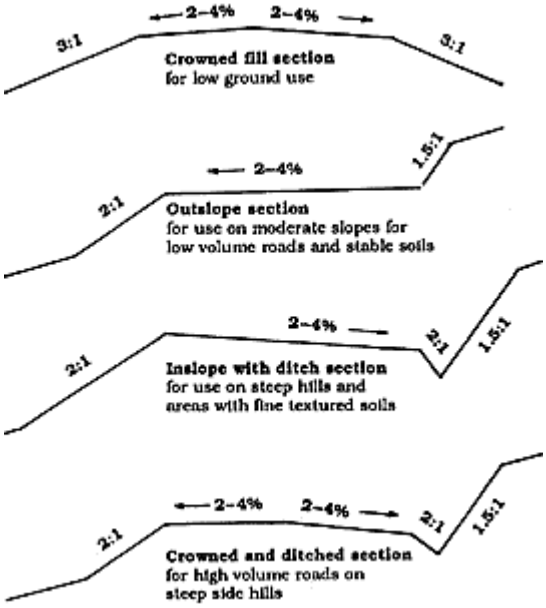
Controlling dust helps to keep the fines in place, holding the road together. Many applications exist for controlling dust on gravel roads, generally referred to as dust abatement technologies. When added to the road surface, these products help mitigate excessive road dust. A typical product used in Montana is Magnesium Chloride (MgCl). Magnesium Chloride is added to the roadbed in liquid form. This product absorbs water from the air and dissolves, forming a clear liquid that coats the gravel and fines and binds them together.

Using dust abatement can yield many positive results including improved visibility for drivers, reduced cleaning costs, reduced dust-related health problems, reduced impact on dust sensitive vegetation, and reduced sedimentation in water bodies (Sunley, 1992: 3). Despite the potential positives that could result from dust abatement application, there are also some noted drawbacks to the technology, especially for a road such as the North Fork Road. The North Fork Road has a relatively flat grade instead of the traditional crown that many gravel roads have. Thus, instead of shedding water with a crowned surface, the water just sits there (Applecamp, 6/19/02). This proves to be problematic when dust abatement technologies are applied.

MgCl and Lignin, another dust abatement product, both have an affinity for water (Brazda, 6/19/02). This proves to have a negative effect in the winter, when the product acts as a salt (Brazda, 6/19/02). The product does not allow the road to freeze (Brazda, 6/19/02). Therefore, the road surface becomes slushy and dangerous when water sits on road, which happens frequently to the North Fork road due to its design. Moreover, large potholes develop more quickly in turn increasing maintenance costs (Johnson, 6/20/02).
The Forest Service applied MgCl to the North Fork Road after Moose fire of 2001, and "the North Fork road is in the most deplorable condition because of it" (Johnson, 6/20/02). The Forest Service reported that $42,135.86 was spent on the materials for the 13 miles of road treated with dust palliatives for the Moose fire (Applecamp, 6/19/02).

Maintenance Alternative #4: Rebuild Crown

The majority of unpaved road surfaces are crowned, meaning the road surface slopes from the center to each side. The addition of a crown to a typical gravel road improves drainage as water flows to either side of the road. Crowned roads are normally designed for two-way traffic. They often require ditches and may need gravel or other surfacing material. Proper shaping reduces maintenance needed on a road. It limits erosion and extends the service life of the surface. The following is a schematic drawing of various methods of crowing a road surface due to a variety of conditions.




Re-crowing the North Fork Road would not only improve the condition of the roadbed, but would also more effectively drain standing water on the road, improving safety. In order to begin the process of rebuilding the road's surface to a good gravel like condition, the road must be surveyed to locate those areas of the roadbed are "most out of section" (i.e. alignment) and how much material should be displaced (Brazda, 6/19/02). Local experts concur that the road should be narrowed and crowned to improve its condition (Applecamp, 6/19/02

and Johnson 6/20/02). Moreover, ditches should also be defined at 24 feet (Applecamp, 6/19/02). Simply adding a crown to the road would cost approximately $60,000 per mile (Applecamp, 6/19/02). Most likely fresh gravel would also need to be added, thus increasing the cost to an estimated $80-85,000 per mile.

Maintenance Alternative #6: Pave Road Surface

There are various methods that could be used to pave the North Fork Road. Once a road is paved, it is a long-term commitment to maintain the condition of the paved road. One method that could be employed is called the "double shot." This method is described as transforming the road surface to somewhere between gravel and pavement while maintaining a sealed surface (Brazda, 6/19/02). This application looks like asphalt but is very thin and does not have the strength of typical pavement (Brazda, 6/19/02). A second method is to apply a "thin overlay." This is essentially a thin mix of hot mix asphalt that could be applied to road in its current state (Brazda, 6/19/02). This method has a 7-10 year life span and would cost approximately $100-$150,000 per mile (Brazda, 6/19/02). However, this cost does not include re-contouring the road. Finally, the road could be re-designed and fully paved. This method would cost at least $150,000 per mile, would have a longer lifespan, and may incur less maintenance costs over time (Applecamp, 6/19/02).

Finding a Long-term Solution

Local experts like Earl Applecamp from the US Forest Service and Charlie Johnson from the Flathead Road and Bridge Department both acknowledge the difficulties in finding a long-term solution for the North Fork Road. However, both agree that finding a long-term solution for the North Fork Road is necessary. Mr. Applecamp suggests looking beyond traditional alternatives for the road and offers what he calls a "100 year alternative." He suggests that the entire road could be redesigned with horizontal alignment and wide meandering curves (Applecamp, 6/19/02). The curves would keep speeds down and allow for tree growth and security for wildlife crossings (Applecamp, 6/19/02). Mr. Johnson recognizes the passionate opinions of individuals on both sides of the issue. He suggests an alternative funding source could be created through the energies of the various interest groups involved, while not increasing taxes (Johnson, 6/20/02). Moreover, he emphasizes that cooperation is imperative for long-term solution to be achieved (Johnson, 6/20/02).

Survey

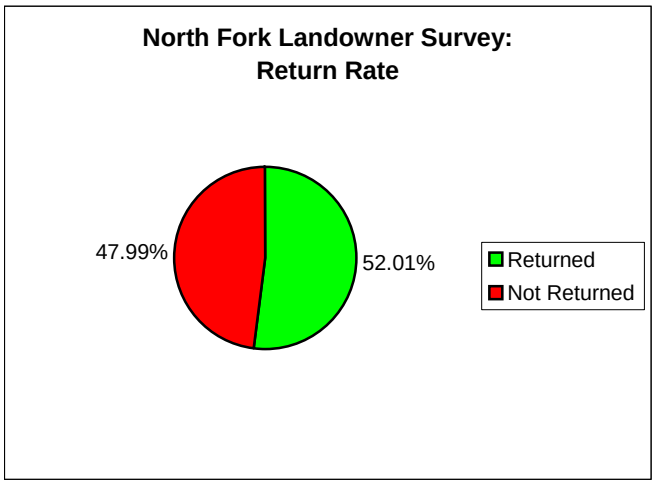
As the relevant maintenance alternatives for the North Fork Road have been identified, it is necessary to take the information gained and present it to the North Fork community for their opinion. In order to gain an understanding of the community's opinion of the possible maintenance alternatives for the North Fork Road, a survey was conducted of North Fork landowners by mail.

Methods

Landowner addresses were obtained from the Flathead County GIS department in Kalispell, MT. Using a spatial analyst program, staff from the GIS department queried addresses from the County's records of North Fork land ownership. This method of address collection while highly effective, but also presented certain challenges. For example for the landowners to be queried, the records were collected based on property lot number. Therefore, if one landowner owned multiple lots, their name and address appeared for all lots that they owned. Moreover, many families have created a trust for their land in the North Fork, so the query may find more than one name for each lot number. As a result, the original list of landowners was extremely lengthy with multiple duplications. The removal of the duplications had to be done by hand. In addition, two landowners with European addresses were left out of the survey due to the length of time to receive and return the survey and additional cost. The final list of landowners to be included in the survey was 553.

All 553 surveys were mailed on July 3, 2002. Approximately three weeks after the surveys were sent out, efforts were made to increase the number of responses. For example, surveys returned due to change of address were sent to the new address, plus local phone calls were made to individuals in the area that had not returned the survey to make sure they had received it and to remind them to fill it out and return it if they chose to.

8 surveys were returned as undeliverable with no forwarding address and 1 survey was returned due to death. On September 1, 2002, a total of 284 surveys had been returned. As surveys were returned it became clear that despite best efforts to remove all of the duplications in the original address list, a few individuals had received more than one survey. For example, a landowner was listed twice for the same property lot but with two different mailing addresses. I had originally decided to send the survey to both as it was unclear which address the landowner was using. In many cases the landowner returned one of the surveys but not the other. I decided to remove the other survey from the total number since the landowner for that lot had in fact returned one survey. Therefore, although 553 surveys were sent out, the removal of an additional 7 duplications makes the total number of surveys used for statistical analysis 546. The following is a detailed report of the results of those surveys returned.




Discussion of Results

The North Fork landowner survey was comprised of four sections, the first section focused on general demographics while the final three targeted a different issue associated with the North Fork Road and living in the North Fork. These sections included questions asking landowner opinions of current North Fork Road conditions, future maintenance alternatives, development in the North Fork, and reasons for owning property in the North Fork.

*Demographics:*
The first section asked the respondent five questions focusing on demographics. The first question asks, "How many years have you (or your family) owned property in the North Fork?" Due to the variety of possible answers to this question, results are coded into blocks of years, with a 9 representing no answer given by respondent.

Table 1. Years Owned Property in North Fork

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 0-14 | 111 | 39.1 | 39.1 |
| 15-29 | 89 | 31.3 | 70.4 |
| 30-44 | 41 | 14.4 | 84.9 |
| 45-59 | 11 | 3.9 | 88.7 |
| 60-74 | 5 | 1.8 | 90.5 |
| 75-89 | 11 | 3.9 | 94.4 |
| 90-104 | 3 | 1.1 | 95.4 |
| 105+ | 1 | .4 | 95.8 |
| 9 | 12 | 4.2 | 100.0 |
| Total | 284 | 100.0 | |

By looking at the results from this question it is apparent that a large percentage of those who responded, approximately 70%, have owned land in the North Fork for less than 30 years. Results also show that there are still landowners in the North Fork with century old land holdings.

The second question asks, “How many acres do you own in the North Fork?” Due to the wide range of possible answers to this question, I decided to code responses into blocks of acres. It must be noted that these categories are not equal in acreage, but instead displayed in a logarithmic style that highlights the vast majority of respondents, approximately 57%, who own parcels smaller than 20 acres.

Table 2. Acres Owned in the North Fork

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 0-5 | 78 | 27.5 | 27.5 |
| 6-10 | 33 | 11.6 | 39.1 |
| 11-20 | 51 | 18.0 | 57.0 |
| 21-40 | 50 | 17.6 | 74.6 |
| 41-80 | 15 | 5.3 | 79.9 |
| 81-160 | 24 | 8.5 | 88.4 |
| 161-320 | 12 | 4.2 | 92.6 |
| 320+ | 3 | 1.1 | 93.7 |
| 9 | 18 | 6.3 | 100.0 |
| Total | 284 | 100.0 | |

The third question asks, “Do you maintain a residence on your property in the North Fork?” Although designed to be a straightforward question, responses indicated differences in interpretation of what constitutes a “residence.” The term residence was intended to refer to a structure on a landowner’s property that could be classified as a dwelling place. However, some respondents marked “No” but in addition indicated that they did have a cabin. In retrospect, the definition of residence should have been more clearly articulated, or a different term could have been used to eliminate confusion. This question is coded 1,2, or 9. 1= Yes, 2= No, and 9= No answer given.

Table 3. Residence maintained in North Fork

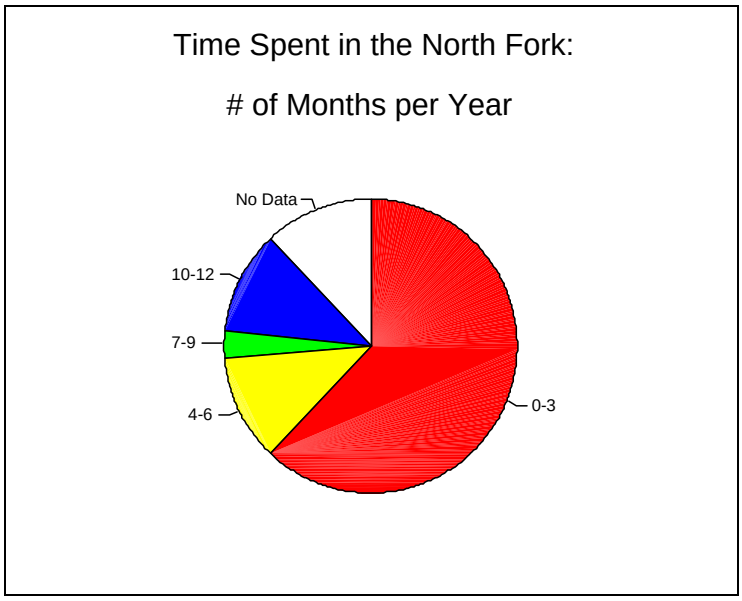
| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1 | 194 | 68.3 | 68.3 |
| 2 | 77 | 27.1 | 95.4 |
| 9 | 13 | 4.6 | 100.0 |
| Total | 284 | 100.0 | |

The fourth question asks, “How many months a year do you spend, on average, in the North Fork?” This question is coded 1-4, with 9 being no answer given.

1= 0-3 months
2= 4-6 months
3= 7-9 months
4= 10-12 months

Table 4. Months per Year Spent in the North Fork

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1 | 176 | 62.0 | 62.0 |
| 2 | 33 | 11.6 | 73.6 |
| 3 | 9 | 3.2 | 76.8 |
| 4 | 32 | 11.3 | 88.0 |
| 9 | 34 | 12.0 | 100.0 |
| Total | 284 | 100.0 | |




Results from this question show that a large number of respondents, 62%, spend less than 3 months in the North Fork per year. This suggests that many of the residences in the North Fork are second homes and places of retreat. Moreover, the time spent in the North Fork by these respondents may or may not be during all seasons of the year. Thus, they may never witness the dust in the summer or the icy conditions on the road in the winter. However, many individuals that own property in the North Fork also live in towns and cities nearby. They may visit the North Fork on weekends throughout the year, but never for a month or more at a time.

The fifth question asks, "On what segment of the North Fork Road does your property (residence) lie?" Respondents were directed to choose between:
1= Canyon Creek to Camas Bridge
2= Camas Bridge to Polebridge
3= Polebridge to Canadian Border

Results were coded similarly from 1-3 and 9 when no answer was given.

Table 5. Road Segment

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 2.0 | 42 | 14.8 | 14.8 |
| 3.0 | 229 | 80.6 | 95.4 |
| 9.0 | 13 | 4.6 | 100.0 |
| Total | 284 | 100.0 | |

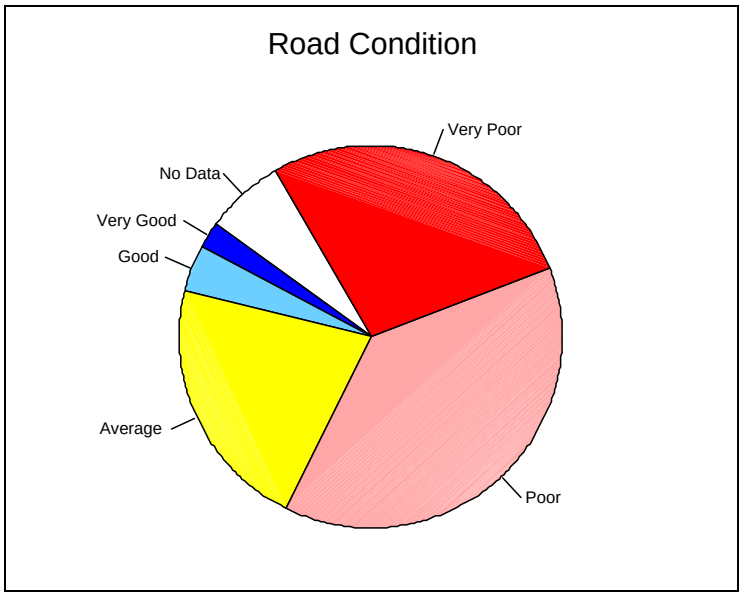
As the results show the majority of respondents, approximately 80%, live between Polebridge and the US-Canadian border. These individuals must travel a considerable distance along the North Fork Road to reach their property.

*North Fork Road Characteristics:*
The second section of questions in the survey focuses on the respondents' opinions regarding various characteristics of the North Fork Road itself. This section begins with the sixth question which asks, "How would you classify the average year round condition of the North Fork Road?" Respondents were asked to mark a box indicating their opinion of the road's year round condition. Results were coded according to the road condition classifications.

1= Very Poor
2= Poor
3= Average
4= Good
5= Very good
9= No answer given

Table 6. Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 78 | 27.5 | 27.5 |
| 2.0 | 108 | 38.0 | 65.5 |
| 3.0 | 62 | 21.8 | 87.3 |
| 4.0 | 11 | 3.9 | 91.2 |
| 5.0 | 6 | 2.1 | 93.3 |
| 9.0 | 19 | 6.7 | 100.0 |
| Total | 284 | 100.0 | |




Results show that a large percentage of respondents, 65.5%, classify the condition of the North Fork Road as poor or very poor. It is also important to note that only 6% of respondents classify the North Fork Road as good or very good.

The seventh question asks respondents to rank their satisfaction of various characteristics of the North Fork Road, by road section: a) Canyon Creek to Camas Bridge b) Camas Bridge to Polebridge and c) Polebridge to the Canadian Border. The characteristics of the road include: road condition in summer and winter, level of dust, frequency of maintenance, speed limit, and the amount of speed limit signage along the road. The following tables and graphs illustrate

the results of this section. Please note that results are grouped by road characteristic and not road segment, as to provide easier comparison between road segments within a given characteristic. Moreover, graphic representation of results is not supplied for all questions. Results are coded based on a scale of 1-5 and 9 when no answer was given.

1= Very Unsatisfied
2= Unsatisfied
3= Neutral
4= Satisfied
5= Very Satisfied
9= No Answer Given

**Summer and Winter Road Condition**

Table 7A1. Canyon-Camas: **Summer** Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 85 | 29.9 | 29.9 |
| 2.0 | 71 | 25.0 | 54.9 |
| 3.0 | 36 | 12.7 | 67.6 |
| 4.0 | 46 | 16.2 | 83.8 |
| 5.0 | 13 | 4.6 | 88.4 |
| 9.0 | 33 | 11.6 | 100.0 |
| Total | 284 | 100.0 | |

Table 7A2. Canyon-Camas: **Winter** Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 37 | 13.0 | 13.0 |
| 2.0 | 34 | 12.0 | 25.0 |
| 3.0 | 61 | 21.5 | 46.5 |
| 4.0 | 76 | 26.8 | 73.2 |
| 5.0 | 15 | 5.3 | 78.5 |
| 9.0 | 61 | 21.5 | 100.0 |
| Total | 284 | 100.0 | |

Table 7B1. Camas-Polebridge: **Summer** Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 79 | 27.8 | 27.8 |
| 2.0 | 86 | 30.3 | 58.1 |
| 3.0 | 41 | 14.4 | 72.5 |
| 4.0 | 42 | 14.8 | 87.3 |
| 5.0 | 10 | 3.5 | 90.8 |
| 9.0 | 26 | 9.2 | 100.0 |
| Total | 284 | 100.0 | |

Table 7B2. Camas-Polebridge: **Winter** Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 38 | 13.4 | 13.4 |
| 2.0 | 39 | 13.7 | 27.1 |
| 3.0 | 63 | 22.2 | 49.3 |
| 4.0 | 70 | 24.6 | 73.9 |
| 5.0 | 17 | 6.0 | 79.9 |
| 9.0 | 57 | 20.1 | 100.0 |
| Total | 284 | 100.0 | |

Table 7C1. Polebridge-Canada: **Summer** Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 101 | 35.6 | 35.6 |
| 2.0 | 51 | 18.0 | 53.5 |
| 3.0 | 43 | 15.1 | 68.7 |
| 4.0 | 44 | 15.5 | 84.2 |
| 5.0 | 10 | 3.5 | 87.7 |
| 9.0 | 35 | 12.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 7C2. Polebridge-Canada: **Winter** Road Condition

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 48 | 16.9 | 16.9 |
| 2.0 | 35 | 12.3 | 29.2 |
| 3.0 | 65 | 22.9 | 52.1 |
| 4.0 | 61 | 21.5 | 73.6 |
| 5.0 | 16 | 5.6 | 79.2 |
| 9.0 | 59 | 20.8 | 100.0 |
| Total | 284 | 100.0 | |

When observing the results from the seasonality questions, there is a notable difference between the responses to the summer and winter road condition questions. This may be due to the seasonality of landowner visits to the North Fork, or it may reflect very different conditions of the road at different points in the year. In the tables above certain values of importance have been highlighted. The differences between those who are dissatisfied with the road condition during the winter and summer should be noted. For the various road segments, the cumulative percentage values for those who responded as either "very unsatisfied" and "unsatisfied" for the summer were 54.9%, 58.1%, and 53.5% for each road segment respectively. On the other hand, cumulative percentage values for those who responded as either "very unsatisfied" and "unsatisfied" for the winter were 25.0%, 27.1%, and 29.2% for each road segment. Essentially, this data tells us that respondents were generally more dissatisfied with the condition of the road in the summer versus the winter.

If a landowner does not come to his/her property in the winter, they would not have the knowledge to answer the winter road condition question. For each road section there is a much greater number of respondents who did not respond to the winter condition question. In many cases, individuals wrote on their survey that they only come to the North Fork in the summer months and could not answer the winter condition question. Values are highlighted in the tables above detailing where the respondent left these questions blank. Again, there is a difference between responses to the summer and winter questions. The percentage of respondents who did not answer the summer road condition question is 11.6%, 9.2%, and 12.3% for each road segment respectively. The percentage of respondents who did not answer the winter road condition question is 21.5%, 20.1%, and 20.8% for each road segment respectively.

**Dust Level**

Table 7A3. Canyon-Camas: Level of Dust

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 114 | 40.1 | 40.1 |
| 2.0 | 57 | 20.1 | 60.2 |
| 3.0 | 36 | 12.7 | 72.9 |
| 4.0 | 33 | 11.6 | 84.5 |
| 5.0 | 8 | 2.8 | 87.3 |
| 9.0 | 36 | 12.7 | 100.0 |
| Total | 284 | 100.0 | |

Table 7B3. Camas-Polebridge: Level of Dust

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 118 | 41.5 | 41.5 |
| 2.0 | 62 | 21.8 | 63.4 |
| 3.0 | 42 | 14.8 | 78.2 |
| 4.0 | 27 | 9.5 | 87.7 |
| 5.0 | 8 | 2.8 | 90.5 |
| 9.0 | 27 | 9.5 | 100.0 |
| Total | 284 | 100.0 | |

Table 7C3. Polebridge-Canada: Level of Dust

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 112 | 39.4 | 39.4 |
| 2.0 | 59 | 20.8 | 60.2 |
| 3.0 | 46 | 16.2 | 76.4 |
| 4.0 | 24 | 8.5 | 84.9 |
| 5.0 | 8 | 2.8 | 87.7 |
| 9.0 | 35 | 12.3 | 100.0 |
| Total | 284 | 100.0 | |

Many respondents are dissatisfied with the level of dust along all sections of the road. For example, approximately 60% of respondents indicated that they were either “very unsatisfied” or “unsatisfied” with the level of dust for the three road segments. It is my assumption that those who indicated their dissatisfaction with the level of dust along the road are dissatisfied due to too much dust and would wish for there to be <u>less</u> dust.

**Maintenance Frequency**

Table 7A4. Canyon-Camas: Maintenance Frequency

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 81 | 28.5 | 28.5 |
| 2.0 | 81 | 28.5 | 57.0 |
| 3.0 | 40 | 14.1 | 71.1 |
| 4.0 | 31 | 10.9 | 82.0 |
| 5.0 | 11 | 3.9 | 85.9 |
| 9.0 | 40 | 14.1 | 100.0 |
| Total | 284 | 100.0 | |

Table 7B4. Camas-Polebridge: Maintenance Frequency

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 85 | 29.9 | 29.9 |
| 2.0 | 82 | 28.9 | 58.8 |
| 3.0 | 42 | 14.8 | 73.6 |
| 4.0 | 33 | 11.6 | 85.2 |
| 5.0 | 11 | 3.9 | 89.1 |
| 9.0 | 31 | 10.9 | 100.0 |
| Total | 284 | 100.0 | |

Table 7C4. Polebridge-Canada: Maintenance Frequency

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 99 | 34.9 | 34.9 |
| 2.0 | 68 | 23.9 | 58.8 |
| 3.0 | 39 | 13.7 | 72.5 |
| 4.0 | 31 | 10.9 | 83.5 |
| 5.0 | 8 | 2.8 | 86.3 |
| 9.0 | 39 | 13.7 | 100.0 |
| Total | 284 | 100.0 | |

Survey results show that most respondents are not satisfied with the frequency of maintenance on all sections of the road. For the three road sections many respondents indicated that they were “very unsatisfied” (28.5%, 29.9%, and 34.9%)or “unsatisfied” (28.5%, 28.9%, and 23.9%) with the frequency of maintenance.

**Speed Limit Issues**

Two questions in the survey focus on speed limit issues along the North Fork Road. They were included based on a continued mention of the high speed that travelers maintain along the road. However, results indicate that concern for speed control may not be as large of an issue for the respondents as originally thought. The two questions asked respondents to give their opinion on current the speed limit and amount of speed limit signage, by road section, along the North Fork Road.

Table 7A5. Canyon-Camas: Speed Limit

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 28 | 9.9 | 9.9 |
| 2.0 | 16 | 5.6 | 15.5 |
| 3.0 | 79 | 27.8 | 43.3 |
| 4.0 | 94 | 33.1 | 76.4 |
| 5.0 | 26 | 9.2 | 85.6 |
| 9.0 | 41 | 14.4 | 100.0 |
| Total | 284 | 100.0 | |

Table 7A6. Canyon-Camas: Speed Limit Signage

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 26 | 9.2 | 9.2 |
| 2.0 | 39 | 13.7 | 22.9 |
| 3.0 | 95 | 33.5 | 56.3 |
| 4.0 | 67 | 23.6 | 79.9 |
| 5.0 | 16 | 5.6 | 85.6 |
| 9.0 | 41 | 14.4 | 100.0 |
| Total | 284 | 100.0 | |

Table 7B5. Camas-Polebridge: Speed Limit

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 30 | 10.6 | 10.6 |
| 2.0 | 23 | 8.1 | 18.7 |
| 3.0 | 82 | 28.9 | 47.5 |
| 4.0 | 92 | 32.4 | 79.9 |
| 5.0 | 26 | 9.2 | 89.1 |
| 9.0 | 31 | 10.9 | 100.0 |
| Total | 284 | 100.0 | |

Table 7B6. Camas-Polebridge: Speed Limit Signage

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 30 | 10.6 | 10.6 |
| 2.0 | 43 | 15.1 | 25.7 |
| 3.0 | 98 | 34.5 | 60.2 |
| 4.0 | 64 | 22.5 | 82.7 |
| 5.0 | 17 | 6.0 | 88.7 |
| 9.0 | 32 | 11.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 7C5. Polebridge-Canada: Speed Limit

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 30 | 10.6 | 10.6 |
| 2.0 | 17 | 6.0 | 16.5 |
| 3.0 | 85 | 29.9 | 46.5 |
| 4.0 | 87 | 30.6 | 77.1 |
| 5.0 | 26 | 9.2 | 86.3 |
| 9.0 | 39 | 13.7 | 100.0 |
| Total | 284 | 100.0 | |

Table 7C6. Polebridge-Canada: Speed Limit Signage

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 32 | 11.3 | 11.3 |
| 2.0 | 34 | 12.0 | 23.2 |
| 3.0 | 99 | 34.9 | 58.1 |
| 4.0 | 61 | 21.5 | 79.6 |
| 5.0 | 18 | 6.3 | 85.9 |
| 9.0 | 40 | 14.1 | 100.0 |
| Total | 284 | 100.0 | |

For both speed limit questions many respondents indicated their neutrality. For each road segment, 27.8%, 28.9%, and 29.9% of respondents respectively indicated "neutral" for their opinion on the speed limit along the North Fork Road. For the speed limit signage question, over 30% responded "neutral" for each road section.

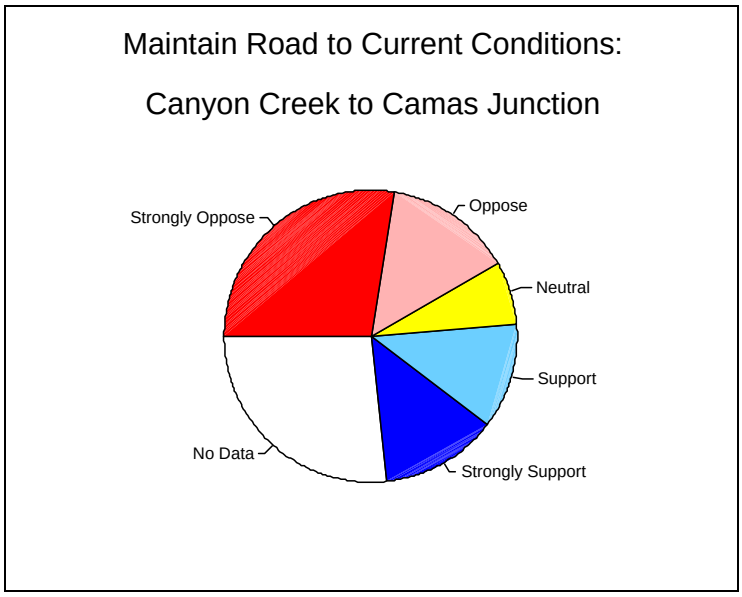
*Maintenance Alternatives:*
The eighth question asks respondents to indicate their level of support for various maintenance alternatives for the North Fork Road. Again this was separated by road section: a) Canyon Creek to Camas Bridge b) Camas Bridge to Polebridge and c) Polebridge to the US-Canadian Border. The maintenance alternatives for the North Fork Road include: maintaining the road to its current conditions, adding gravel more frequently, adding gravel and applying dust control agents, adding gravel and rebuilding the road's crown, adding gravel/rebuilding the crown/applying dust control agents, and paving the road's surface. The following tables and graphs illustrate the results of this section, divided by road maintenance alternative. Results were coded based on a scale of 1-5 and 9 when no answer was given.

| | |
|---|---|
| 1= Strongly Oppose | 4= Support |
| 2= Oppose | 5= Strongly Support |
| 3= Neutral | 9= No Answer Given |

**Maintain Road to Current Conditions:**

Table 8A1. Canyon-Camas: Maintain Conditions

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 78 | 27.5 | 27.5 |
| 2.0 | 40 | 14.1 | 41.5 |
| 3.0 | 20 | 7.0 | 48.6 |
| 4.0 | 33 | 11.6 | 60.2 |
| 5.0 | 37 | 13.0 | 73.2 |
| 9.0 | 76 | 26.8 | 100.0 |
| Total | 284 | 100.0 | |




The Canyon Creek to Camas Junction is often the most hotly debated section of the road due to the Glacier Park entrance at the Camas Junction. Results from this question show that many respondents (41.5%) either "strongly oppose" or "oppose" maintaining the current conditions of this section of road. However, it must be noted that a large number of respondents (26.8%) did not respond to this question.

Table 8B1. Camas-Polebridge: Maintain Conditions

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 70 | 24.6 | 24.6 |
| 2.0 | 42 | 14.8 | 39.4 |
| 3.0 | 24 | 8.5 | 47.9 |
| 4.0 | 34 | 12.0 | 59.9 |
| 5.0 | 39 | 13.7 | 73.6 |
| 9.0 | 75 | 26.4 | 100.0 |
| Total | 284 | 100.0 | |

Table 8C1. Polebridge-Canada: Maintain Conditions

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 72 | 25.4 | 25.4 |
| 2.0 | 31 | 10.9 | 36.3 |
| 3.0 | 33 | 11.6 | 47.9 |
| 4.0 | 36 | 12.7 | 60.6 |
| 5.0 | 39 | 13.7 | 74.3 |
| 9.0 | 73 | 25.7 | 100.0 |
| Total | 284 | 100.0 | |

With the remaining sections of the road, many individuals are also opposed to maintaining current conditions here as well. However, results are not as high as the Canyon to Camas section, while still many individuals (26.4% and 25.7%) chose not to complete these questions.

**Add Gravel More Frequently:**

Table 8A2. Canyon-Camas: Add Gravel

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 28 | 9.9 | 9.9 |
| 2.0 | 20 | 7.0 | 16.9 |
| 3.0 | 55 | 19.4 | 36.3 |
| 4.0 | 55 | 19.4 | 55.6 |
| 5.0 | 39 | 13.7 | 69.4 |
| 9.0 | 87 | 30.6 | 100.0 |
| Total | 284 | 100.0 | |

Table 8B2. Camas-Polebridge: Add Gravel

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 23 | 8.1 | 8.1 |
| 2.0 | 17 | 6.0 | 14.1 |
| 3.0 | 53 | 18.7 | 32.7 |
| 4.0 | 60 | 21.1 | 53.9 |
| 5.0 | 44 | 15.5 | 69.4 |
| 9.0 | 87 | 30.6 | 100.0 |
| Total | 284 | 100.0 | |

Table 8C2. Polebridge-Canada: Add Gravel

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 21 | 7.4 | 7.4 |
| 2.0 | 13 | 4.6 | 12.0 |
| 3.0 | 56 | 19.7 | 31.7 |
| 4.0 | 55 | 19.4 | 51.1 |
| 5.0 | 53 | 18.7 | 69.7 |
| 9.0 | 86 | 30.3 | 100.0 |
| Total | 284 | 100.0 | |

Results show that many respondents either “support” or “strongly support” adding gravel to the three sections of the North Fork Road. However, it must be noted that a very large percentage of respondents, approximately 30%, chose not to complete this section of the survey

**Add Gravel and Dust Control:**

Table 8A3. Canyon-Camas: Add Gravel/Dust Control

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 28 | 9.9 | 9.9 |
| 2.0 | 22 | 7.7 | 17.6 |
| 3.0 | 37 | 13.0 | 30.6 |
| 4.0 | 66 | 23.2 | 53.9 |
| 5.0 | 46 | 16.2 | 70.1 |
| 9.0 | 85 | 29.9 | 100.0 |
| Total | 284 | 100.0 | |

Table 8B3. Camas-Polebridge: Add Gravel/Dust Control

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 23 | 8.1 | 8.1 |
| 2.0 | 21 | 7.4 | 15.5 |
| 3.0 | 37 | 13.0 | 28.5 |
| 4.0 | 71 | 25.0 | 53.5 |
| 5.0 | 48 | 16.9 | 70.4 |
| 9.0 | 84 | 29.6 | 100.0 |
| Total | 284 | 100.0 | |

Table 8C3. Polebridge-Canada: Add Gravel/Dust Control

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 21 | 7.4 | 7.4 |
| 2.0 | 16 | 5.6 | 13.0 |
| 3.0 | 50 | 17.6 | 30.6 |
| 4.0 | 71 | 25.0 | 55.6 |
| 5.0 | 44 | 15.5 | 71.1 |
| 9.0 | 82 | 28.9 | 100.0 |
| Total | 284 | 100.0 | |

Results show that many respondents either “support” (23.2%, 25.0%, and 25.0%)or “strongly support” (16.2%, 16.9%, and 15.5%) adding gravel and dust control to the three sections of the North Fork Road. However, it must be noted that a very large percentage of respondents, approximately 29%, chose not to complete this question for the various road segments.

**Add Gravel and Rebuild Crown:**

Table 8A4. Canyon-Camas: Add Gravel/Rebuild Crown

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 25 | 8.8 | 8.8 |
| 2.0 | 28 | 9.9 | 18.7 |
| 3.0 | 44 | 15.5 | 34.2 |
| 4.0 | 50 | 17.6 | 51.8 |
| 5.0 | 48 | 16.9 | 68.7 |
| 9.0 | 89 | 31.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 8B4. Camas-Polebridge: Add Gravel/Rebuild Crown

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 17 | 6.0 | 6.0 |
| 2.0 | 22 | 7.7 | 13.7 |
| 3.0 | 43 | 15.1 | 28.9 |
| 4.0 | 61 | 21.5 | 50.4 |
| 5.0 | 55 | 19.4 | 69.7 |
| 9.0 | 86 | 30.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 8C4. Polebridge-Canada: Add Gravel/Rebuild Crown

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 15 | 5.3 | 5.3 |
| 2.0 | 21 | 7.4 | 12.7 |
| 3.0 | 47 | 16.5 | 29.2 |
| 4.0 | 51 | 18.0 | 47.2 |
| 5.0 | 64 | 22.5 | 69.7 |
| 9.0 | 86 | 30.3 | 100.0 |
| Total | 284 | 100.0 | |

Results show that many respondents either "support" (17.6%, 21.5%, and 18.0%)or "strongly support" (16.9%, 19.4%, and 22.5%) adding gravel and dust control to the three sections of the North Fork Road. However, it must be noted that a very large percentage of respondents (31.3%, 30.3%, and 30.3%) chose not to complete this question for the three road segments.

**Add Gravel, Dust Control and Rebuild Crown:**

Table 8A5. Canyon-Camas: Add Gravel/Crown/Dust Control

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 21 | 7.4 | 7.4 |
| 2.0 | 23 | 8.1 | 15.5 |
| 3.0 | 35 | 12.3 | 27.8 |
| 4.0 | 69 | 24.3 | 52.1 |
| 5.0 | 53 | 18.7 | 70.8 |
| 9.0 | 83 | 29.2 | 100.0 |
| Total | 284 | 100.0 | |

Table 8B5. Camas-Polebridge: Add Gravel/Rebuild Crown/Dust Control

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 16 | 5.6 | 5.6 |
| 2.0 | 23 | 8.1 | 13.7 |
| 3.0 | 38 | 13.4 | 27.1 |
| 4.0 | 68 | 23.9 | 51.1 |
| 5.0 | 66 | 23.2 | 74.3 |
| 9.0 | 73 | 25.7 | 100.0 |
| Total | 284 | 100.0 | |

Table 8C5. Polebridge-Canada: Add Gravel/Rebuild Crown/Dust Control

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 15 | 5.3 | 5.3 |
| 2.0 | 25 | 8.8 | 14.1 |
| 3.0 | 49 | 17.3 | 31.3 |
| 4.0 | 55 | 19.4 | 50.7 |
| 5.0 | 66 | 23.2 | 73.9 |
| 9.0 | 74 | 26.1 | 100.0 |
| Total | 284 | 100.0 | |

Results show that more respondents either "support" or "strongly support" the addition of gravel, dust control, and rebuilding the road's crown, compared to

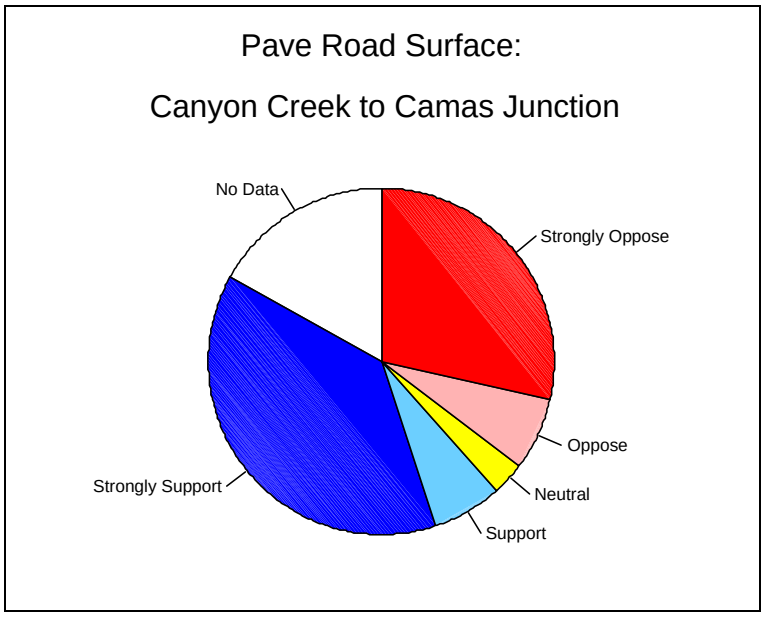
those who “oppose” or “strongly oppose”. 15.5%, 13.7%, and 14.1% of respondents, for each road segment respectively, either “oppose” or “strongly oppose” this alternative. Conversely, 43%, 47.1%, and 42.6% of respondents, for each road segment respectively, either “support” or “strongly support” this alternative. Again, it must be recognized that numerous respondents chose not to respond to these questions (29.2%, 25.7%, and 26.1%) for the three road segments.

**Pave Road Surface:**

Although the survey was intended to garner landowner opinions concerning all possible maintenance alternatives for the North Fork Road, results show that many North Forkers still see the issue as a pave or not pave proposition. Results show that more respondents chose to answer the paving alternative question than the other maintenance alternatives. Moreover, results show that despite many who did not answer this question, the issue of paving the North Fork Road is still very polarized.

Table 8A6. Canyon-Camas: Pave Road Surface

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 81 | 28.5 | 28.5 |
| 2.0 | 19 | 6.7 | 35.2 |
| 3.0 | 9 | 3.2 | 38.4 |
| 4.0 | 19 | 6.7 | 45.1 |
| 5.0 | 108 | 38.0 | 83.1 |
| 9.0 | 48 | 16.9 | 100.0 |
| Total | 284 | 100.0 | |

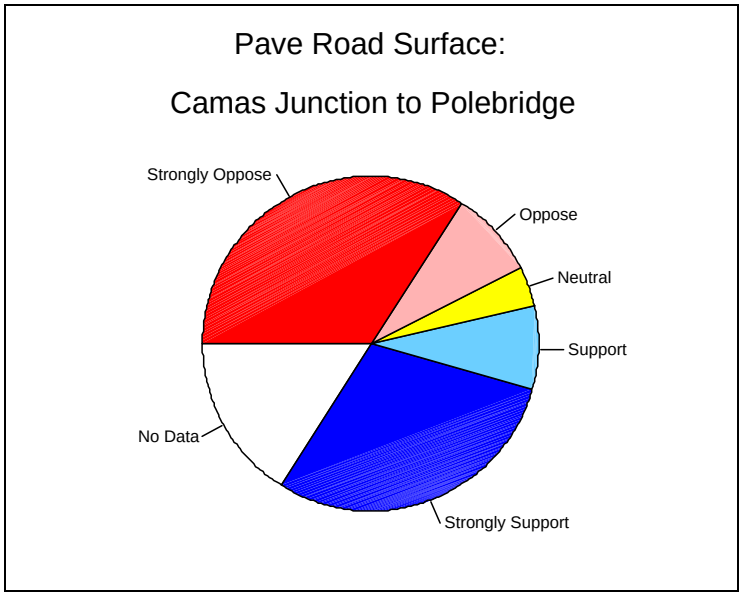



Again, how to maintain the Canyon to Camas section of the road reveals strong opinions. 35.2% of respondents either “strongly oppose” or “oppose” paving this section, while 44.7% of respondents either “strongly support” or “support”

paving this section. It must be noted that 16.9% of respondents chose not to answer this question.

Table 8B6. Camas-Polebridge: Pave Road Surface

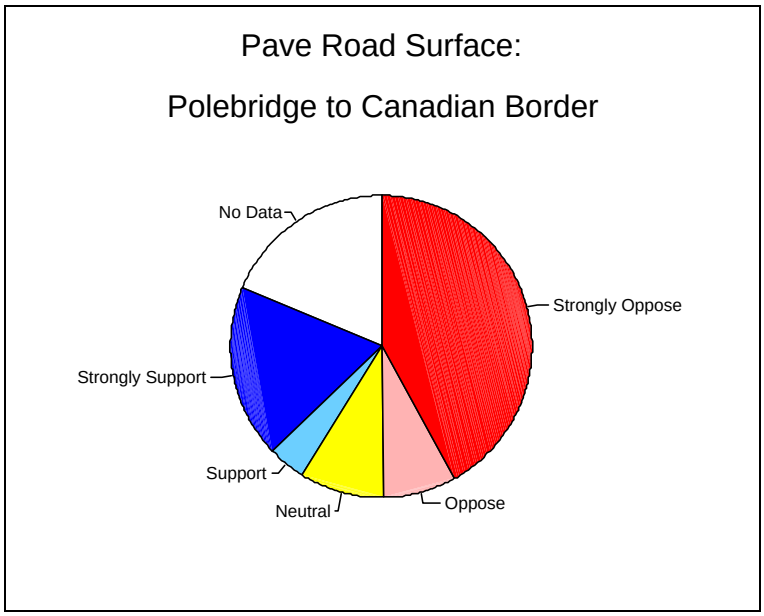
| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 97 | 34.2 | 34.2 |
| 2.0 | 24 | 8.5 | 42.6 |
| 3.0 | 11 | 3.9 | 46.5 |
| 4.0 | 23 | 8.1 | 54.6 |
| 5.0 | 83 | 29.2 | 83.8 |
| 9.0 | 46 | 16.2 | 100.0 |
| Total | 284 | 100.0 | |




42.6% of respondents either “strongly oppose” or “oppose” paving this section, while 37.3% of respondents either “strongly support” or “support” paving this section. It must be noted that 16.2% of respondents chose not to answer this question.

Table 8C6. Polebridge-Canada: Pave Road Surface

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 119 | 41.9 | 41.9 |
| 2.0 | 22 | 7.7 | 49.6 |
| 3.0 | 26 | 9.2 | 58.8 |
| 4.0 | 11 | 3.9 | 62.7 |
| 5.0 | 53 | 18.7 | 81.3 |
| 9.0 | 53 | 18.7 | 100.0 |
| Total | 284 | 100.0 | |




These results overwhelmingly indicate that many respondents are either "strongly opposed" (41.9%) or "opposed" (7.7%) to paving the section of road from Polebridge to the US-Canadian border. Again, a large number of individuals (18.7%) chose not to answer this question.

*Development in the North Fork:*
The third section of the survey focuses on landowner opinions regarding development in the North Fork. The issue of development in the North Fork is often linked to the current and future condition of the North Fork Road. Therefore, it is helpful to ask specific questions regarding this often mentioned connection between the road and development. The ninth question is separated into four sub-questions. For each sub-question, the respondent is asked to indicate the degree to which they agree with the following statements regarding development in the North Fork.

Q9A: I am satisfied with the current rate of development in the North Fork
Q9B: I would like to see the rate of development increase in the North Fork
Q9C: The current condition of the NF road affects the rate of development in the North Fork
Q9D: The future condition of the NF road will affect the rate of development in the North Fork

Respondents were asked to indicate their degree of agreement with a scale from 1-5. Results were coded accordingly with a 9 supplied when no answer was given.

| | |
|---|---|
| 1=Strongly Disagree | 4=Agree |
| 2=Disagree | 5= Strongly Agree |
| 3=Neutral | 9= No Answer Given |

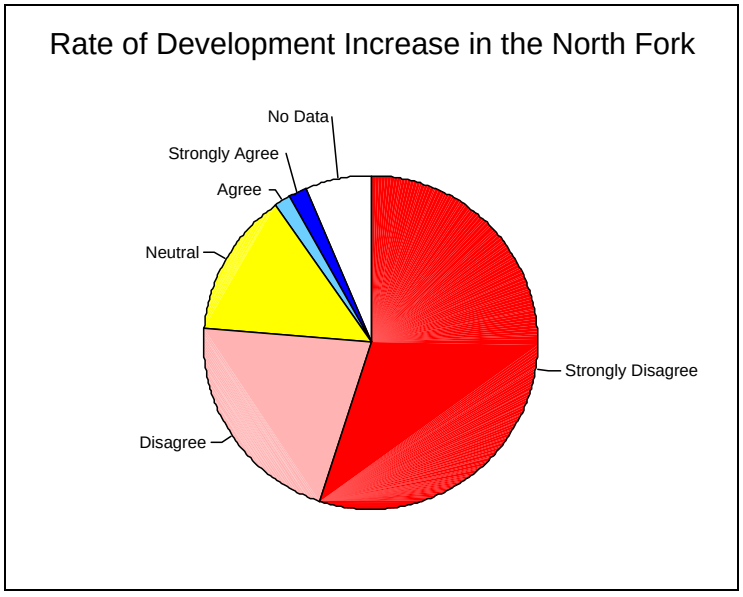
Table 9A. Satisfaction w/ Current Rate of Development in NF

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 34 | 12.0 | 12.0 |
| 2.0 | 38 | 13.4 | 25.4 |
| 3.0 | 81 | 28.5 | 53.9 |
| 4.0 | 83 | 29.2 | 83.1 |
| 5.0 | 26 | 9.2 | 92.3 |
| 9.0 | 22 | 7.7 | 100.0 |
| Total | 284 | 100.0 | |

This question could be construed as poorly worded when viewed alone, since it is unclear whether those in agreement with the current rate of development think the rate is slow or rapid. This is why the second question on development is so important. This question asks whether the respondent would like to see the rate of development increase in the North Fork. The second question asks whether respondents would prefer an increased rate of development in the North Fork.

Table 9B. Prefer Increase Rate of Development in NF

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 156 | 54.9 | 54.9 |
| 2.0 | 61 | 21.5 | 76.4 |
| 3.0 | 39 | 13.7 | 90.1 |
| 4.0 | 5 | 1.8 | 91.9 |
| 5.0 | 5 | 1.8 | 93.7 |
| 9.0 | 18 | 6.3 | 100.0 |
| Total | 284 | 100.0 | |




Results from this question show that many respondents “strongly disagree” (54.9%) or “disagree” (21.5%), an overwhelming total of (76.4%), with an increase in the rate of development in the North Fork.

The next two questions focused on whether landowners thought that the current and future condition of the North Fork Road affected the rate of development in the North Fork.

Table 9C. Current NFR Condition Affects Rate of Development

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 24 | 8.5 | 8.5 |
| 2.0 | 49 | 17.3 | 25.7 |
| 3.0 | 35 | 12.3 | 38.0 |
| 4.0 | 93 | 32.7 | 70.8 |
| 5.0 | 66 | 23.2 | 94.0 |
| 9.0 | 17 | 6.0 | 100.0 |
| Total | 284 | 100.0 | |

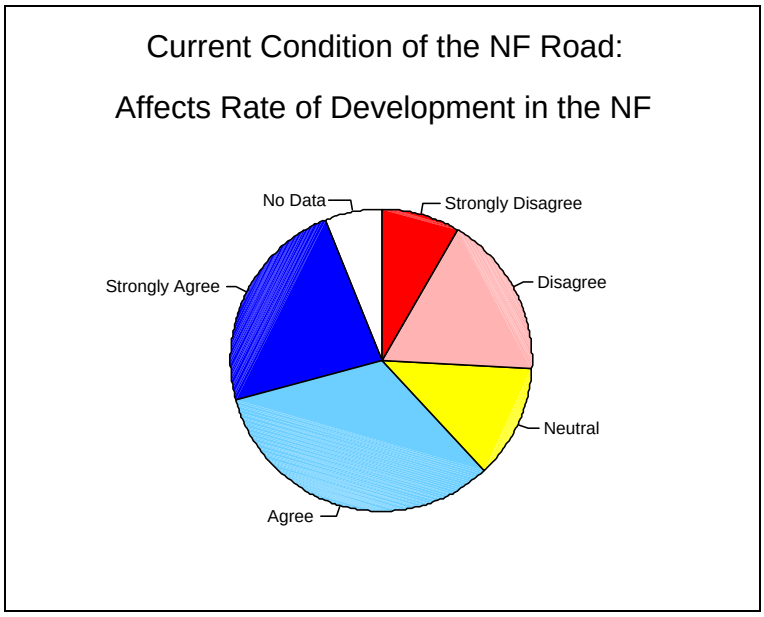
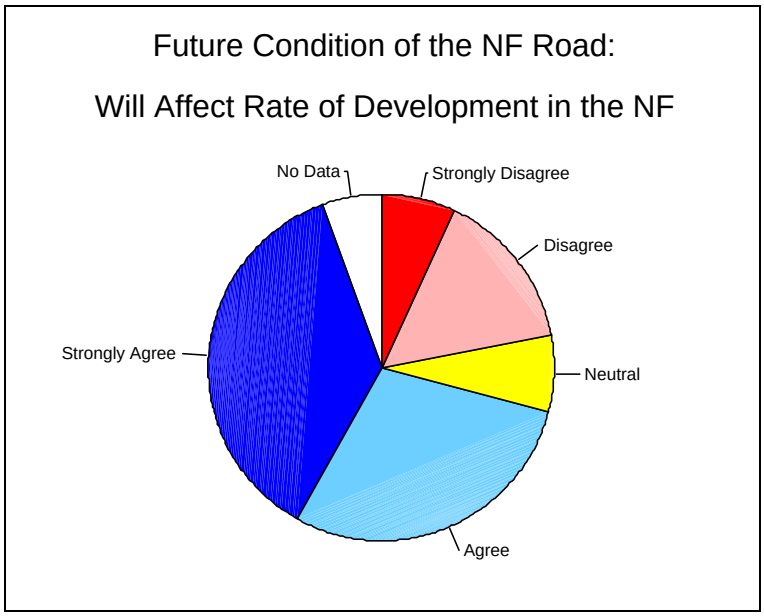



Table 9D. Future NFR Condition Will Affect Rate of Development

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 20 | 7.0 | 7.0 |
| 2.0 | 42 | 14.8 | 21.8 |
| 3.0 | 21 | 7.4 | 29.2 |
| 4.0 | 82 | 28.9 | 58.1 |
| 5.0 | 103 | 36.3 | 94.4 |
| 9.0 | 16 | 5.6 | 100.0 |
| Total | 284 | 100.0 | |




Results show that the percentage of respondents that either "strongly agree" or "agree" that the current (55.9%) and future condition (65.2%) of the North Fork Road affects the rate of development in the North Fork is quite significant. Moreover, very few respondents chose not to answer this section, 7.7%, 6.3%, 6.0%, and 5.6% for each sub-question respectively.

*Reasons to Own Property in the North Fork:*
The fourth section of the survey focused on reasons landowners choose to own property in the North Fork. Respondents were directed to: "rank all the reasons that apply to you, a 1 indicates the most important reasons. Place a zero next to those reasons that do not apply to you." It became clear once surveys began to be returned that this section was a poorly worded and generally confusing for some people. Due to the various interpretations of how to rank the reasons for owning property, results are coded as follows:
1= Respondent marked this reason as something of importance
2= Respondent did not mark this reason
3= Respondent marked a zero (0) for this reason indicating it did not apply to them.
9= No answer was given; no portion of this section was completed.

Table 10A. Ancestral Home

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 42 | 14.8 | 14.8 |
| 2.0 | 53 | 18.7 | 33.5 |
| 3.0 | 174 | 61.3 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

A large number of respondents (61.3%) indicated that the "ancestral home" reason did not apply to them. This could be due to the large number relatively new landowners, who have owned property for less than thirty years.

Table 10B. Cottage Industry

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 22 | 7.7 | 7.7 |
| 2.0 | 53 | 18.7 | 26.4 |
| 3.0 | 194 | 68.3 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

Many respondents (68.3%) indicated that the “cottage industry” reason did not apply to them.

Table 10C. Fishing Opportunities

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 158 | 55.6 | 55.6 |
| 2.0 | 41 | 14.4 | 70.1 |
| 3.0 | 70 | 24.6 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 10D. Hunting Opportunities

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 129 | 45.4 | 45.4 |
| 2.0 | 40 | 14.1 | 59.5 |
| 3.0 | 100 | 35.2 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

Fishing and hunting opportunities where common reasons included for why landowners own property in the North Fork, 55.6% of respondents marked fishing opportunities and 45.4% indicated hunting opportunities.

Table 10E. Investment

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 114 | 40.1 | 40.1 |
| 2.0 | 46 | 16.2 | 56.3 |
| 3.0 | 109 | 38.4 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

While many respondents (40.1%) indicated that “investment” was a reason for owning property in the North Fork, a similar amount (38.4%) indicated that this reason did not apply to them.

Table 10F. Rustic Lifestyle

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 225 | 79.2 | 79.2 |
| 2.0 | 28 | 9.9 | 89.1 |
| 3.0 | 16 | 5.6 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

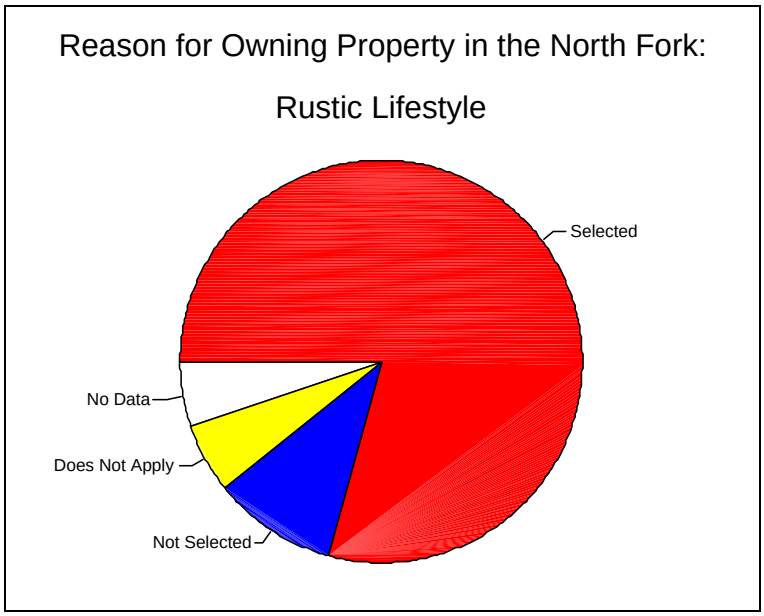



Table 10G. Scenic Qualities

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 255 | 89.8 | 89.8 |
| 2.0 | 11 | 3.9 | 93.7 |
| 3.0 | 3 | 1.1 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

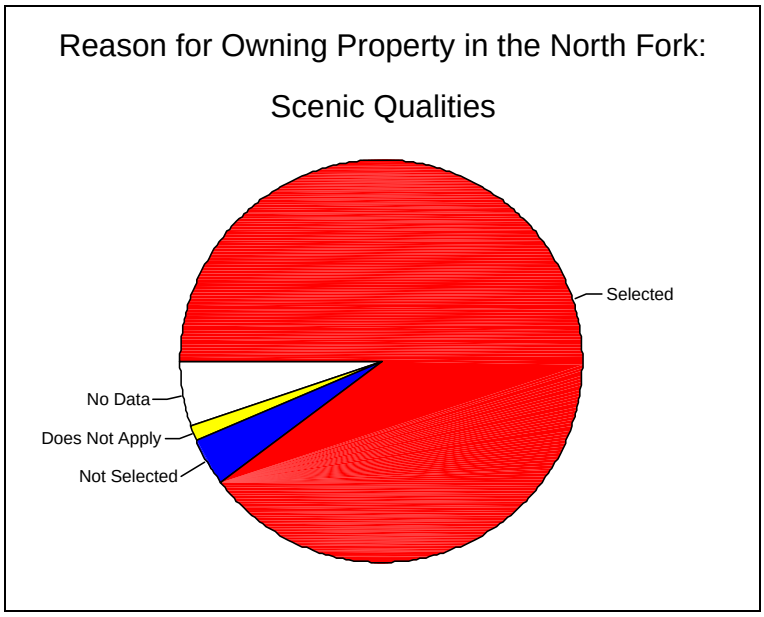
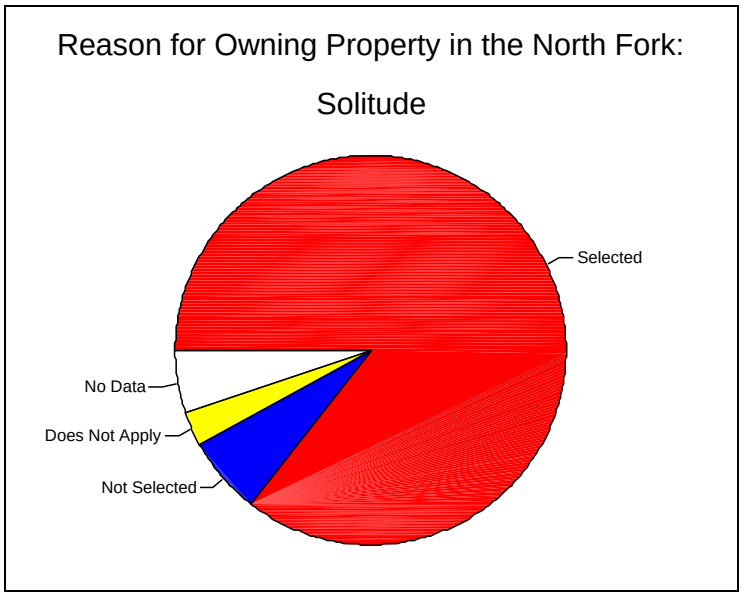


Table 10H. Solitude

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 243 | 85.6 | 85.6 |
| 2.0 | 18 | 6.3 | 91.9 |
| 3.0 | 8 | 2.8 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |




A very large percentage of respondents selected “rustic lifestyle” (79.2%), “scenic qualities” (89.8%), and “solitude” (85.6%) as reasons why they own property in the North Fork.

Table 10I. Vacation

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 187 | 65.8 | 65.8 |
| 2.0 | 30 | 10.6 | 76.4 |
| 3.0 | 52 | 18.3 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 10J. Wildlife Viewing

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 241 | 84.9 | 84.9 |
| 2.0 | 23 | 8.1 | 93.0 |
| 3.0 | 5 | 1.8 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

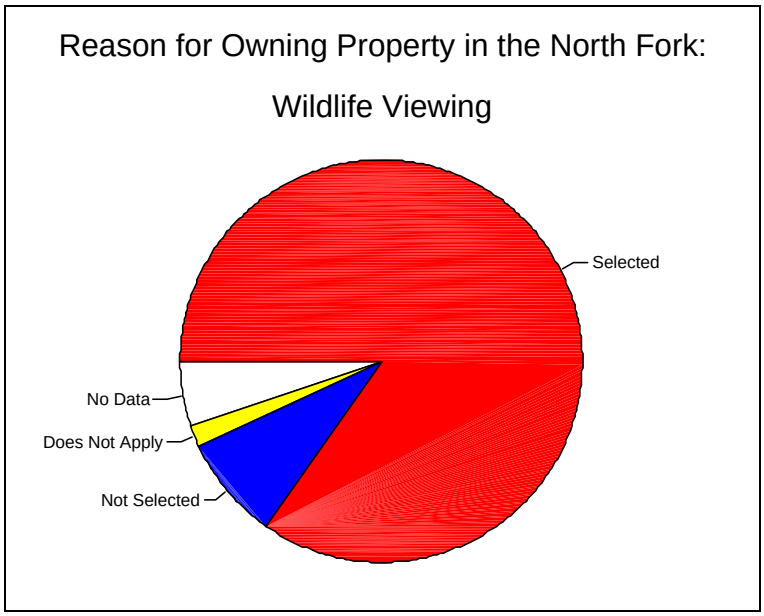



Table 10K. Other Outdoor Recreation Opportunity

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 186 | 65.5 | 65.5 |
| 2.0 | 62 | 21.8 | 87.3 |
| 3.0 | 21 | 7.4 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

Table 10L. Other Reason

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1.0 | 85 | 29.9 | 29.9 |
| 2.0 | 181 | 63.7 | 93.7 |
| 3.0 | 3 | 1.1 | 94.7 |
| 9.0 | 15 | 5.3 | 100.0 |
| Total | 284 | 100.0 | |

The final portion of this section asked for any other reason that the landowner chose to own property in the North Fork. Space was provided for the respondent to write their own reason if it was not included in the original list of reasons provided. Many respondents (29.9%) chose to indicate additional reasons. While some actually did include additional reasons, many used this section to voice their opinions about the survey and issues associated with the North Fork Road and area.

## **Results and Discussion of Cross-tabulation**

For this survey, I decided to employ cross-tabulation to further compare what I saw to be significant questions in the survey. Essentially, cross-tabulation allows the researcher to ask questions of the data collected. I decided to look further into what people thought about paving sections of the North Fork Road based on where they lived, what landowners thought of the road's condition

based on how long they have owned property in the North Fork, and what those who indicated "rustic lifestyle" and "solitude" as reasons for owning property in the North Fork thought about both paving and development issues.

The first cross-tabulation performed looks at what people said about paving the various segments of the road based on what road segment their property lies. It is difficult to compare between the groups of landowners in the two road segments, since there are so many more respondents from the Polebridge to US-Canada border group. However, it is interesting to track the responses from within a road segment. For example, with respect to the Polebridge to US-Canada Border group, 66 individuals strongly oppose paving Canyon Creek to Camas Junction, while 83 strongly oppose paving Camas to Polebridge, and 101 strongly oppose paving from Polebridge to the border. For the same group of respondents, 84 strongly support paving Canyon Creek to Camas Junction, while 62 strongly support paving Camas to Polebridge, and only 45 strongly support paving from Polebridge to the border. Therefore, it appears that as the road runs further up the North Fork, support for its paving decreases for those that live in the area furthest up the road.

Road Segment * Pave Road Surface-Canyon Creek to Camas Junction

| | | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|---|
| | 2.0 | 15 | 2 | 1 | 0 | 19 | 5 | 42 |
| | 3.0 | 66 | 17 | 8 | 19 | 84 | 35 | 229 |
| | 9.0 | 0 | 0 | 0 | 0 | 5 | 8 | 13 |
| Total | | 81 | 19 | 9 | 19 | 108 | 48 | 284 |

Road Segment * Pave Road Surface-Camas Junction to Polebridge

| | | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|---|
| | 2.0 | 14 | 6 | 1 | 2 | 16 | 3 | 42 |
| | 3.0 | 83 | 18 | 10 | 21 | 62 | 35 | 229 |
| | 9.0 | 0 | 0 | 0 | 0 | 5 | 8 | 13 |
| Total | | 97 | 24 | 11 | 23 | 83 | 46 | 284 |

Road Segment * Pave Road Surface-Polebridge to US-Canadian Border

| | | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|---|
| | 2.0 | 18 | 4 | 8 | 1 | 4 | 7 | 42 |
| | 3.0 | 101 | 17 | 18 | 10 | 45 | 38 | 229 |
| | 9.0 | 0 | 1 | 0 | 0 | 4 | 8 | 13 |
| Total | | 119 | 22 | 26 | 11 | 53 | 53 | 284 |

The second cross-tabulation performed further investigates what landowners thought about the road's condition, based on how long they have owned property in the North Fork.

# Yrs. Owned Property in NF * Road Condition

| Years | Very Poor | Poor | Average | Good | Very Good | No Answer | Total |
|---|---|---|---|---|---|---|---|
| 0-14 | 19 | 53 | 24 | 5 | 5 | 5 | 111 |
| 15-29 | 28 | 30 | 22 | 5 | | 4 | 89 |
| 30-44 | 13 | 13 | 11 | 1 | 1 | 2 | 41 |
| 45-59 | 2 | 5 | 2 | | | 2 | 11 |
| 60-74 | 3 | 1 | 1 | | | | 5 |
| 75-89 | 4 | 4 | 2 | | | 1 | 11 |
| 90-104 | 2 | 1 | | | | | 3 |
| 105+ | 1 | | | | | | 1 |
| | 6 | 1 | | | | 5 | 12 |
| Total | 78 | 108 | 62 | 11 | 6 | 19 | 284 |

Although it is difficult to compare between the groups of individuals based on different numbers in each group, it is interesting to note that it was only the newer landowners (less than 44 years) that considered the condition of the North Fork Road to be “good” or “very good”.

The third group of cross-tabulations looks at what those landowners that selected “rustic lifestyle” as a reason for owning property in the North Fork thought about paving the road surface of the three sections.

“Rustic Lifestyle” * Pave Road Surface-Canyon Creek to Camas Junction

| | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 76 | 18 | 7 | 13 | 85 | 26 | 225 |
| Unmarked | 3 | 1 | 2 | 3 | 10 | 9 | 28 |
| Does Not Apply | 2 | | | 3 | 9 | 2 | 16 |
| | | | | | 4 | 11 | 15 |
| Total | 81 | 19 | 9 | 19 | 108 | 48 | 284 |

“Rustic Lifestyle” * Pave Road Surface-Camas Junction to Polebridge

| | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 90 | 22 | 8 | 17 | 62 | 26 | 225 |
| Unmarked | 4 | | 2 | 4 | 11 | 7 | 28 |
| Does Not Apply | 3 | 2 | 1 | 2 | 6 | 2 | 16 |
| | | | | | 4 | 11 | 15 |
| Total | 97 | 24 | 11 | 23 | 83 | 46 | 284 |

"Rustic Lifestyle" * Pave Road Surface-Camas Junction to Polebridge

| | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 109 | 20 | 20 | 10 | 37 | 29 | 225 |
| Unmarked | 6 | | 4 | 1 | 8 | 9 | 28 |
| Does Not Apply | 4 | 2 | 2 | | 4 | 4 | 16 |
| | | | | | 4 | 11 | 15 |
| Total | 119 | 22 | 26 | 11 | 53 | 53 | 284 |

I chose to look at "rustic lifestyle" because so many respondents, 225 out of 284, indicated that this was a reason for owning property in the North Fork. Again results show that the further the North Fork Road runs, the less support exists for paving it. For example, as the segments run closer to the US-Canadian border, the number of individuals (who selected "rustic lifestyle" as a reason for owning property in the North Fork) "strongly opposed" to paving increases from 76, to 90, and finally 109. Likewise, those that indicated that they "strongly supported" paving decreased in number as the road approached the US-Canadian border, with totals of 85, 62, and 37 for the three sections respectively.

The fourth group of cross-tabulations looks at what those landowners that selected "rustic lifestyle" as a reason for owning property in the North Fork thought about the questions regarding current and future development in the North Fork.

"Rustic Lifestyle" * Satisfied with the current rate of development in the N. Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 29 | 34 | 64 | 69 | 19 | 10 | 225 |
| Unmarked | 3 | 2 | 10 | 6 | 5 | 2 | 28 |
| Does Not Apply | 2 | 2 | 6 | 4 | 2 | | 16 |
| | | | 1 | 4 | | 10 | 15 |
| Total | 34 | 38 | 81 | 83 | 26 | 22 | 284 |

"Rustic Lifestyle" * Rate of development increase in the North Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 143 | 42 | 27 | 5 | 4 | 4 | 225 |
| Unmarked | 9 | 8 | 7 | | 1 | 3 | 28 |
| Does Not Apply | 4 | 7 | 4 | | | 1 | 16 |
| | | 4 | 1 | | | 10 | 15 |
| Total | 156 | 61 | 39 | 5 | 5 | 18 | 284 |

Many respondents, 185, out of 225 who selected "rustic lifestyle" as a reason for owning property in the North Fork, either "strongly disagreed" or "disagreed" with an increase in the rate of development in the North Fork.

"Rustic Lifestyle" *Current condition of the NF road affects the rate of development in the North Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 18 | 38 | 26 | 79 | 60 | 4 | 225 |
| Unmarked | 3 | 6 | 3 | 11 | 3 | 2 | 28 |
| Does Not Apply | 3 | 4 | 2 | 3 | 3 | 1 | 16 |
| | | 1 | 4 | | | 10 | 15 |
| Total | 24 | 49 | 35 | 93 | 66 | 17 | 284 |

139 out of 225 respondents who indicated "solitude" as a reason for owning property in the North Fork, either "agree" or "strongly agree" that the current condition of the North Fork Road affects the rate of development in the North Fork.

"Rustic Lifestyle" * Future condition of the NF road will affect the rate of development in the North Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 9 | 31 | 19 | 67 | 96 | 3 | 225 |
| Unmarked | 3 | 6 | 1 | 13 | 3 | 2 | 28 |
| Does Not Apply | 4 | 4 | 1 | 2 | 4 | 1 | 16 |
| | 4 | 1 | | | | 10 | 15 |
| Total | 20 | 42 | 21 | 82 | 103 | 16 | 284 |

163 of 225 respondents, who indicated "rustic lifestyle" as a reason for owning property in the North Fork (approximately 72.4%), either "agree" or "strongly agree" that the current condition of the North Fork Road affects the rate of development in the North Fork.

The fifth group of cross-tabulations looks at what those landowners that selected (and did not select) "solitude" as a reason for owning property in the North Fork thought about paving the various sections of the North Fork Road.

"Solitude" * Pave Road Surface-Canyon Creek to Camas Junction

| | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 77 | 19 | 8 | 18 | 91 | 30 | 243 |
| Unmarked | 3 | | 1 | 1 | 7 | 6 | 18 |
| Does Not Apply | 1 | | | | 6 | 1 | 8 |
| | | | | | 4 | 11 | 15 |
| Total | 81 | 19 | 9 | 19 | 108 | 48 | 284 |

"Solitude" * Pave Road Surface-Camas Junction to Polebridge

| | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 94 | 24 | 9 | 21 | 66 | 29 | 243 |
| Unmarked | 2 | | 1 | 1 | 9 | 5 | 18 |
| Does Not Apply | 1 | | 1 | 1 | 4 | 1 | 8 |
| | | | | | 4 | 11 | 15 |
| Total | 97 | 24 | 11 | 23 | 83 | 46 | 284 |

"Solitude" * Pave Road Surface-Polebridge to US-Canadian Border

| | Strongly Oppose | Oppose | Neutral | Support | Strongly Support | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 115 | 21 | 21 | 11 | 41 | 34 | 243 |
| Unmarked | 2 | | 2 | | 7 | 7 | 18 |
| Does Not Apply | 2 | 1 | 3 | | 1 | 1 | 8 |
| | | | | | 4 | 11 | 15 |
| Total | 119 | 22 | 26 | 11 | 53 | 53 | 284 |

Again, "solitude" was chosen for more in depth analysis, since so many respondents, 243 out of 284, indicated that this was a reason for owning property in the North Fork. And very similarly to the "rustic lifestyle" section, results show that the further the North Fork Road runs, the less support exists for paving it. For example, as the segments run closer to the US-Canadian border, the number of individuals (who selected "solitude" as a reason for owning property in the North Fork) "strongly opposed" to paving increases from 77, to 94, and finally 115. However, a difference is seen in those that indicated that they "strongly supported" paving. While the "rustic lifestyle" respondents who also "strongly supported" paving decreased in number as the road approached the US-Canadian border, those who selected "solitude" and "strongly supported" paving had more of an average response for the paving questions with totals of 30, 29, and 34 for the three sections respectively.

The sixth group of cross-tabulations looks at what those landowners that selected (and did not select) "solitude" as a reason for owning property in the North Fork thought about the questions regarding current and future development in the North Fork.

"Solitude" * Satisfied with the current rate of development in the N. Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 32 | 35 | 68 | 74 | 24 | 10 | 243 |
| Unmarked | 1 | 1 | 8 | 4 | 2 | 2 | 18 |
| Does Not Apply | 1 | 2 | 4 | 1 | | | 8 |
| | | | 1 | 4 | | 10 | 15 |
| Total | 34 | 38 | 81 | 83 | 26 | 22 | 284 |

"Solitude" * Rate of development increase in the North Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 151 | 47 | 32 | 4 | 4 | 5 | 243 |
| Unmarked | 3 | 6 | 4 | 1 | 1 | 3 | 18 |
| Does Not Apply | 2 | 4 | 2 | | | | 8 |
| | | 4 | 1 | | | 10 | 15 |
| Total | 156 | 61 | 39 | 5 | 5 | 18 | 284 |

A large amount of respondents, 151 out of 243, who selected "solitude" as a reason for owning property in the North Fork also "strongly disagreed" with an increase in the rate of development in the North Fork.

"Solitude" * Current condition of the NF road affects the rate of development in North Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 20 | 41 | 28 | 88 | 61 | 5 | 243 |
| Unmarked | 1 | 5 | 3 | 3 | 4 | 2 | 18 |
| Does Not Apply | 3 | 2 | | 2 | 1 | | 8 |
| | | 1 | 4 | | | 10 | 15 |
| Total | 24 | 49 | 35 | 93 | 66 | 17 | 284 |

149 out of 243 respondents, who indicated "solitude" as a reason for owning property in the North Fork, either "agree" or "strongly agree" that the current condition of the North Fork Road affects the rate of development in the North Fork.

"Solitude" * Future condition of the NF road will affect the rate of development in the North Fork

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | No Answer | Total |
|---|---|---|---|---|---|---|---|
| Marked | 12 | 32 | 20 | 79 | 96 | 4 | 243 |
| Unmarked | 2 | 5 | 1 | 3 | 5 | 2 | 18 |
| Does Not Apply | 2 | 4 | | | 2 | | 8 |
| | 4 | 1 | | | | 10 | 15 |
| Total | 20 | 42 | 21 | 82 | 103 | 16 | 284 |

175 of 243 respondents, who indicated "solitude" as a reason for owning property in the North Fork (approximately 72%), either "agree" or "strongly agree" that the current condition of the North Fork Road affects the rate of development in the North Fork.

## Conclusion

As stated, the purpose of this research was to identify a range of maintenance alternatives for the North Fork Road and present them to the landowners for their opinion. While this goal was attained, results from the survey only further emphasize the polarized nature of this debate. Many respondents chose not to fill out the section focusing on maintenance alternatives, or simply expressed their opinions for the paving alternative only. Based on the amount of surveys that were returned yet not complete, it is difficult to garner much information on landowner opinions for the various maintenance alternatives presented.

The results from the section devoted to reasons why landowners own property in the North Fork were not surprising, but do offer some concrete evidence for the values individuals hold that make the North Fork such a special place. Solitude, rustic lifestyle, scenic qualities, and wildlife viewing are the most commonly held values of landowners in the North Fork. This is significant in that these are the very qualities that are potentially at risk due to an increased rate of development, an increase in tourism, and higher speed traffic along the North Fork Road.

Many of the respondents to the survey own property from Polebridge to the US-Canadian border. As the cross-tabulation shows, as the road runs further north towards the border the support for it's paving, from both sides of the debate, decreases. It is interesting to question how all of these opinions complement each other. Many desire solitude and a rustic lifestyle on one hand, but support paving of the road on the other. This opinion is satisfactory; if they do not believe that paving increases development. Yet how does that explain the lack of support for paving the road further north? Is paving supported in other portions of the North Fork, but not near ones front door? It could be argued that many feel that they have attained their "solitude" and "rustic lifestyle" in the North Fork and do not want their piece of paradise disturbed, but they do wish for a smoother ride to their home.

The debate over the maintenance of the North Fork Road is not something that is going to go away. The pressure to pave the road, as well as the pressure not too will continue to come up until a long-term solution is reached that all stakeholders can agree on. In a purely economic and practical sense, nothing can happen to the road without funding from outside the county and the state district. Funds do not currently exist to pave large portions of the road, or adequately maintain the road to a suitable gravel condition. Therefore, interest groups from either side must find creative funding solutions to further their respective agendas. This study can act as a tool to inform and assist stakeholders and decision-makers who will be responsible for finding an acceptable solution for the North Fork Road.