



# 2019 HIGHWAY SAFETY CRASH DATA SURVEY

*FINAL REPORT*



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## *Final Report*

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# Executive Summary

The Wyoming Department of Transportation (WYDOT) Highway Safety Program has partnered with the Strategic Performance Improvement Program in order to conduct periodic customer satisfaction surveys titled the *Highway Safety Crash Data Survey*. The *Highway Safety Crash Data Survey* provides customers and partners an opportunity to express their opinions and perceptions about the services provided by the Highway Safety Program. Additionally, the survey supplies the Highway Safety Program with valuable end-user perspective in order to help inform policy decisions and guide system improvements. Survey information is gathered in order to provide a snapshot of the current status, as well as to measure changes over time.

In the spring of 2019, the Highway Safety Program conducted its second customer satisfaction survey over a period of 14 days from Monday, April 22, 2019 through Sunday, May 05, 2019. 53 completed survey responses were received during this period. The 2019 survey serves as a follow up to the original survey completed in the spring of 2012, which was conducted over a period of 17 days from Monday, April 02, 2012 through Wednesday, April 18, 2012. 54 completed survey responses were received during this period.

The findings of the 2019 survey provide the Highway Safety Program with critical information in regards to the types of organizations using crash data, how the crash data is being used, and how the individuals using the crash data rate the data's accessibility and quality. Findings also provide insight into overall customer satisfaction when working directly with the Highway Safety Program. Most importantly, the findings highlight areas in both crash data and customer service that are perceived as successful, as well as those areas where improvement may be needed.

The *Survey Results* sections of this report contain the complete response data from both the 2019 and 2012 surveys for direct comparison. In the *Findings* section of this report response data from the 2019 and 2012 surveys are presented and if significant differences between the years were established these are noted and discussed.

## Background

The Wyoming Department of Transportation (WYDOT) Highway Safety Program maintains Wyoming's crash reporting database and compiles and analyzes safety-related statistics which contribute to WYDOT's continuing goal of reducing fatalities, injuries and property damage crashes by means of the "Three Es" - engineering, education, and enforcement, along with the promotion of various training programs. In order to improve the accuracy, timeliness, and usefulness of Wyoming's crash data, as well as provide a high quality customer service experience, the Highway Safety Program sought feedback from its current and potential customers and partners with a focus on how data and access to the data may be improved.

# Methods

## Questionnaire Development

The first survey was conducted in the spring of 2012 and consisted of eight (8) questions which were focused on improving the usefulness and quality of Wyoming's crash data. Survey questions sought information on how crash data was accessed, how often crash data was requested, what data elements were considered most important, what the crash data was used for, and requested ratings for timeliness, accessibility, accuracy, and completeness of crash data. In addition, customer service ratings were requested for Highway Safety Program personnel in relation to accessibility, professionalism, knowledge, and helpfulness. The survey also requested suggestions for how the Highway Safety Program can better meet data end-user needs.

The 2019 survey serves as a follow up to the original survey and the questionnaire content remained fairly stable in this second iteration (addition/deletion of questions, refinement of question wording). The 2019 survey consisted of nine (9) questions with the stated purpose of improving the accuracy, timeliness, and usefulness of Wyoming's crash data, with a specific focus on feedback and suggestions for how the data, and access to it, can be improved. Much of the content remained the same, however in an effort to better identify the types of organizations requesting crash data and how they are utilizing the data a question was added to identify organization type. Additionally, the 5-point agreement and satisfaction response scales were reduced to 3-point scales in an effort to better conform to current, widely accepted survey practices (e.g. "Excellent, Good, Neutral, Fair, Poor" became "Good, Neutral, Poor"). The finalized anonymous electronic questionnaire was programmed and administered by the Strategic Performance Improvement Program and distributed by the Highway Safety Program via email containing a link to the survey.

## Survey Administration

In the spring of 2012, the Highway Safety Program conducted its first customer satisfaction survey over a period of 17 days from Monday, April 02, 2012 through Wednesday, April 18, 2012. 54 completed survey responses were received during this period. All survey responses to the survey titled *2012 Highway Safety Crash Data Survey* have been included in the *Survey Results* section of this report for comparison purposes.

In the spring of 2019, the Highway Safety Program conducted its second customer satisfaction survey over a period of 14 days from Monday, April 22, 2019 through Sunday, May 05, 2019. 53 completed survey responses were received during this period. All survey responses to the survey titled *2019 Highway Safety Crash Data Survey* have been included in the *Survey Results* section of this report for comparison purposes.

The 2012 and 2019 surveys were administered using an anonymous electronic survey link distributed via email. Active email addresses for current and potential customers and partners were gathered with the assistance of established points of contact within organizations the Highway Safety Program identified as potential beneficiaries of Wyoming's crash data. These organizations included, but were not limited to, government agencies, law enforcement agencies, non-profits, conservation groups, consultants, health care providers, and news agencies.

# Findings

This section contains a discussion of findings from the 2019 survey and the previous iteration of the survey, along with visual presentations of results. In some circumstances survey responses may have been summarized or compiled into categories for ease of analysis. Due to the small sample sizes and limited number of surveys available for comparison, findings have been generalized. For complete responses to all questions on the 2019 and 2012 surveys, see the *Survey Results* section of this report.

## DATA USE

### Organization Types

While organization type was not collected on the original 2012 *Crash Data Survey*, based on an overall comparison of 2019 and 2012 survey responses, it is probable that the distribution of organization types for the 2019 survey fairly resembles those participating in the 2012 survey. In general, nearly half of all crash data requests are submitted by government agencies (2019 – 47%) and a quarter of all crash data requests are submitted by law enforcement agencies (2019 – 24.5%). News agencies account for approximately 10% of all crash data requests (2019 – 9.4%). Non-profit organizations and consultants each account for approximately 5% of all crash data requests (2019 – 5.7%). The remaining 5% of all crash data requests are split between general public information and “other”. The results seem to indicate that the majority of the crash data are being requested and utilized by official organizations responsible for developing and maintaining public roadways, enforcing State Law, and those engaged in public safety.

### Purpose

In line with the types of organizations requesting the majority of all crash data, the crash data is largely used in order to promote public safety through engineering, education, and enforcement, with a growing emphasis on the promotion of public outreach and both public and organizational education and training programs. The four main categories of crash data use identified by the 2019 and 2012 surveys work in partnership with each other in order to develop preventative measures focused on reducing fatalities, injuries and property damage crashes.

Roadway Planning and/or Roadway Improvement Prioritization – Historical crash data is utilized to help guide engineering decisions and assist with the design of safer roadways and improvements to existing roadway sections that may show higher incidents of crashes or other public safety concerns. Items considered include, but are not limited to, intersection design, signalization, speed limit adjustments, road surface type, lighting, signage, rumble strips, and safety barriers.

Reporting Data to Others – Crash data is often used to track problem “hot spots” and report the concerning trends to engineers and policy makers who may have an opportunity to address the identified issues and help prevent future incidents. Crash data is also widely used to develop public safety initiatives and programs, track the rate of success for established initiatives and programs to allow for any necessary adjustments, and to help justify the termination of ineffective initiatives and programs. This helps to ensure resources are being used where they have the largest or most effective impact. In addition, crash data can be an important tool when used in applications for funding from grant and other revenue sources and while evaluating performance measures.

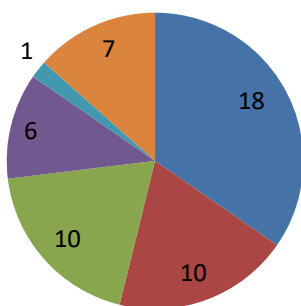


Outreach and/or Education/Training – This category appears to have experienced the most growth in use of crash data. Public outreach strives to both inform the public of current public safety concerns and seeks their partnership in reducing public safety threats. This is supplemented with education and training programs geared towards developing safer drivers based on recent crash data trends. Education and training programs are also developed or modified for agencies and organizations involved in promoting public safety to ensure they have the most current information available to help guide their efforts.

Organizational Strategic Planning and/or Informed Guidance – Historical crash data is useful in helping to evaluate trends and develop informed short-term and long-term priorities in order to improve public safety efforts. Recent crash data can be utilized to identify problem areas, or “hot spots”, and focus enforcement efforts on those areas most in need of increased oversight. Generally, crash data and its ability to highlight both trends and “hot spots” provides a useful tool for identifying areas of interest or concern within an organization’s scope of oversight which can then be utilized to develop a more informed and focused plan of action to be implemented in order to address those concerns.

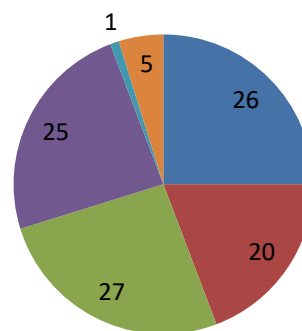
The prevalence and ranking of the four main categories seems to be relatively stable over time, with the exception of Outreach and/or Education/Training which appears to have experienced a significant increase. This trend could indicate that reporting of crash data may need to become more “user friendly” for use by the general public. Guidance indicates that material intended for the general public should be written at the 8<sup>th</sup> grade reading level or lower. The Highway Safety Program may need to develop simple reports and visual aids to meet this need.

## 2012 Survey Results



- Roadway Planning/Improvement Prioritization
- Organizational Strategic Planning/Informed Guidance
- Report Data to Others
- Outreach/Education/Training
- Litigation
- Other

## 2019 Survey Results



- Roadway Planning/Improvement Prioritization
- Organizational Strategic Planning/Informed Guidance
- Report Data to Others
- Outreach/Education/Training
- Litigation
- Other

Responses from Question 3 of the *2012 Highway Safety Crash Data Survey* were grouped for comparison purposes. The 2012 pie chart represents only one category choice per respondent while the 2019 pie chart represents an ability to choose multiple categories.

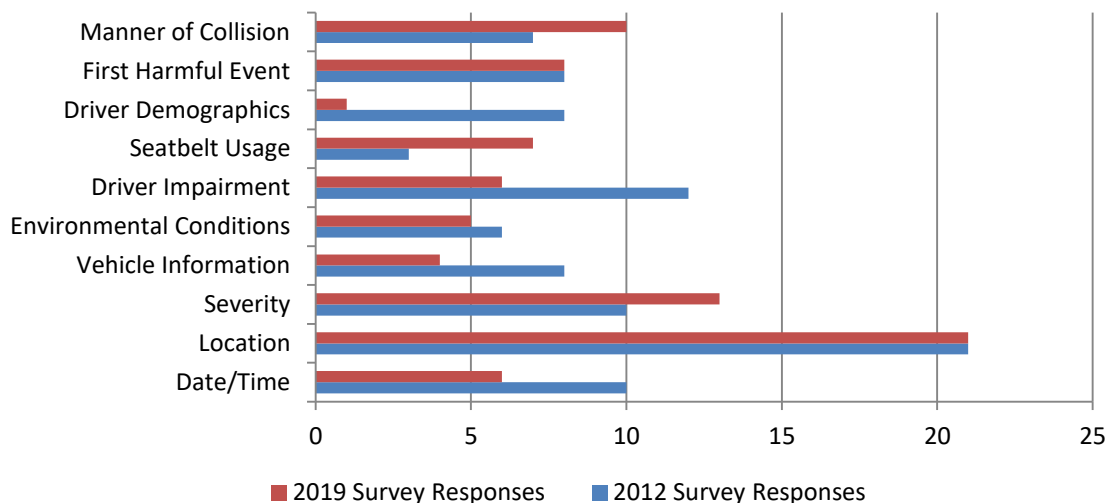
## Most Requested Elements

The majority of crash data requests consist of ten or more data elements and/or their corresponding attributes. The more detailed a data request becomes the more data elements/attributes must be selected and linked together properly in order to provide accurate and reliable data. The Wyoming crash database consists of 25 data tables containing 180 separate data elements with an additional 225 attributes for those elements. Generally, requests for crash data are focused on a specific topic (Speed-Related, Distracted Driving, Under the Influence, Young Drivers, Seatbelt Usage, Holiday Periods, Wildlife, Vehicle Types, Environmental Conditions, Location-Based, Crash Severity, First Harmful Event, etc.) that requires the use of multiple tables and corresponding data elements and attributes. Standardized Crash Summary and Crash History Reports are typically used to provide more detailed data for defined sections of roadway over a selected period of time. In order to ensure all necessary data elements are present on the requested data report, a clear understanding must be established of what data is being requested and for what purpose it will be used. Occasionally this will take some back and forth to get clarification as the report is developed. This helps to ensure data elements and attributes are presented correctly and the information provided is accurate.

Most crash data requests will include the foundational data elements that establish when and where the crash took place as well as the crash severity. Additional data elements can be added to this foundation to build a tailored report to meet the end-user's specific needs within the limits of the information contained in the crash database and how those elements and attributes can be pulled out and manipulated.

Data elements that were identifiable from Question 2 of the 2012 survey and Question 3 of the 2019 survey were grouped into element categories in order to identify the most commonly requested data elements. Of those groupings the top ten (10) data elements are presented below:

### Top 10 Requested Data Elements



As expected, the most common data elements/attributes requested are those that provide basic information for the crash such as when, where, what, who, and how. Elements/attributes related to some of the more common areas of interest, such as driver impairment, occupant seatbelt use, and driver demographics (often age group) are also present.

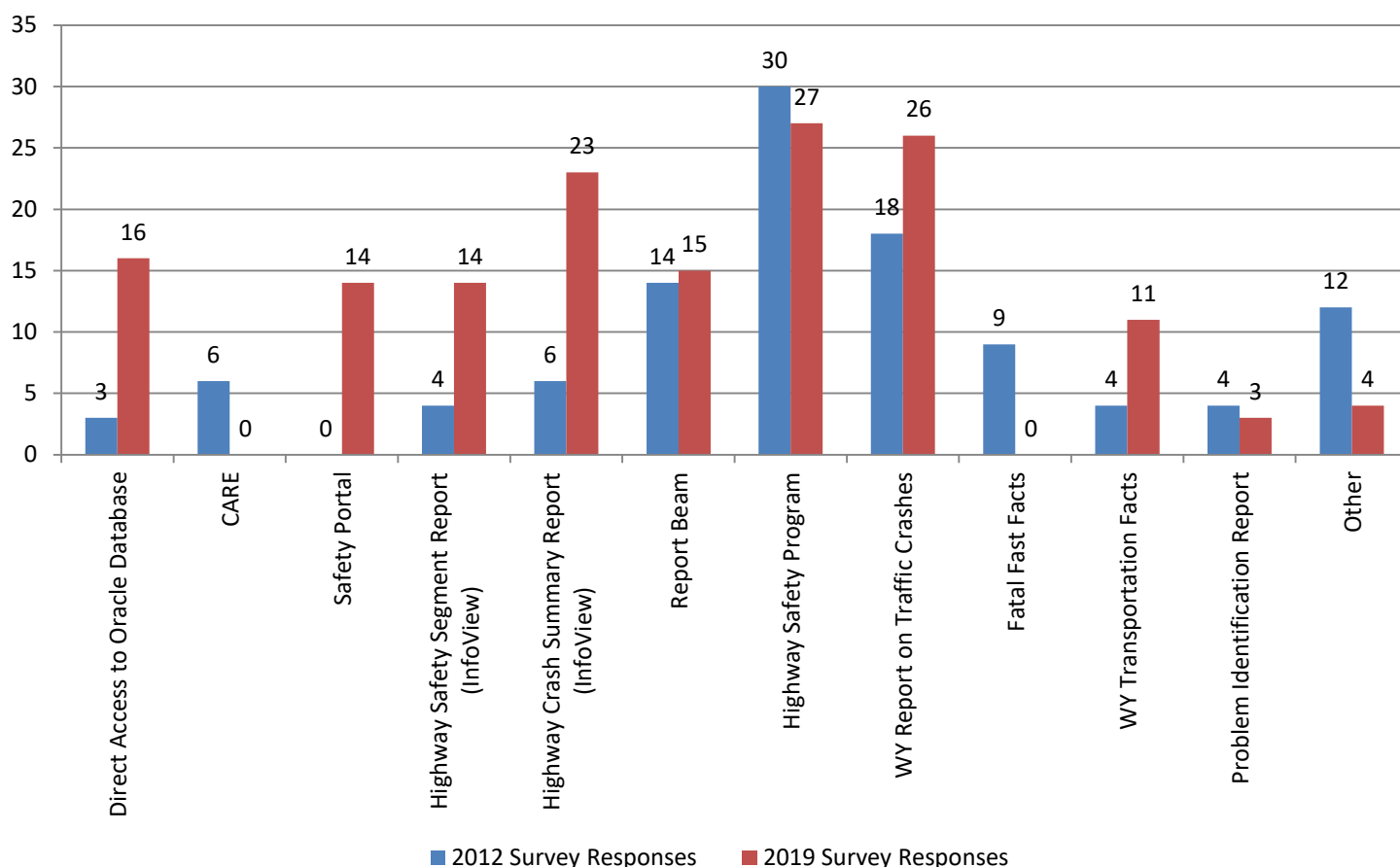


## DATA ACCESS

### Mode of Access

While contacting the Highway Safety Program remains the primary mode of requesting crash data, there has been a significant increase in end-users accessing the crash data directly using the software programs and standard reporting tools provided by the Highway Safety Program. Direct access to the Oracle Crash Database quintupled, while accessing crash data via the Safety Portal (which replaced the CARE database) more than doubled. Use of standardized reports provided by the Highway Safety Program nearly quadrupled. Report Beam experienced a 3% decrease in data access use, while crash data provided by various Highway Safety Program publications experienced a 6% decrease, but showed a significant increase in the use of continuing publications.

### MODE OF ACCESSING CRASH DATA



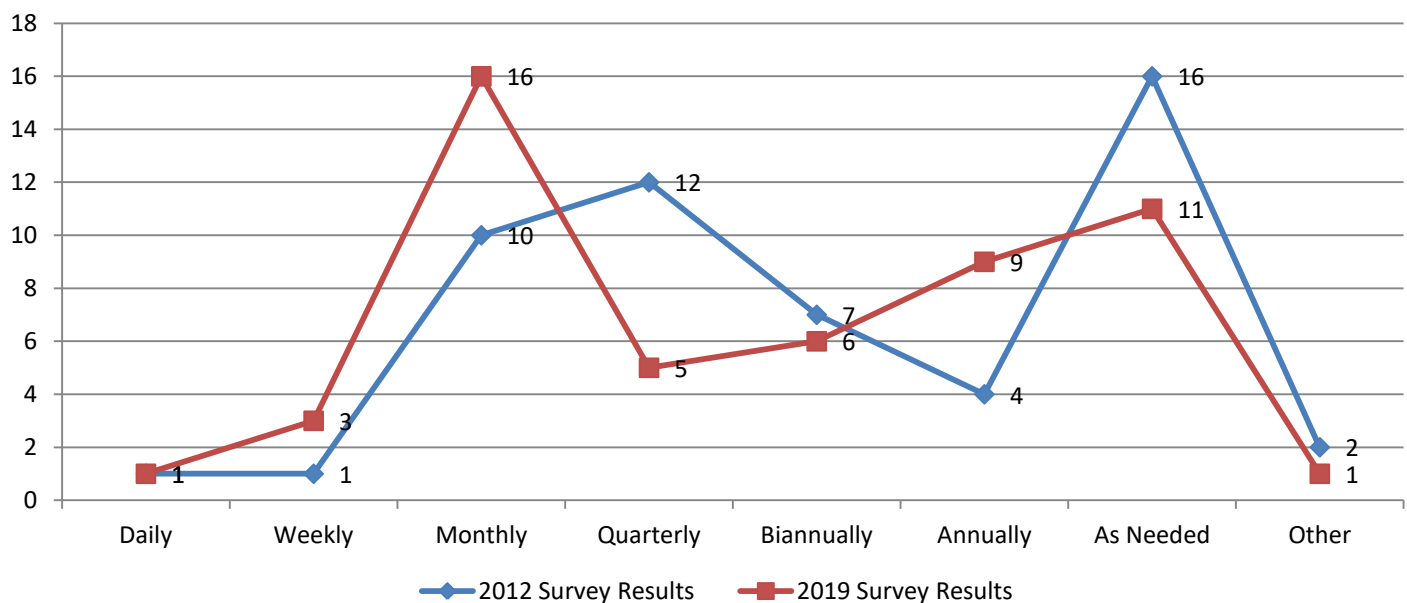
Use of the CARE database ended in 2017 and was replaced with the Safety Portal which went live in 2018. The last Fatal Fast Facts publication was in 2009.

The Highway Safety Program is continuing to develop user friendly access to crash databases and software programs to ease access to data for end-users. This includes the development of public use standardized reports that can be run by the user on-demand. The ultimate goal is to give end-users direct access to standardized data reporting while the Highway Safety Program becomes more focused on specialized studies and in-depth analysis. However, Highway Safety will always remain available to assist with any data request.

## Request Frequency

Currently, “monthly” and “as needed” data requests account for the majority of request frequencies, with annual requests rounding out the top three request frequencies. While daily and biannual request frequencies remain relatively stable over time, there has been a significant increase in weekly and annual data requests, and a significant decrease in quarterly requests. The goal of the Highway Safety Program is to work with customers and partners to establish standardized reports to be distributed at standardized frequencies. This ensures end-users receive comparable data at the frequencies deemed most beneficial for their purposes so they can better track areas of interest and act upon any areas of concern in a timely manner. It also assures data is received in a timely manner for all end-user reporting needs. A predetermined schedule allows for better planning and frees time to address as needed data requests that are frequently complex, in-depth, and time sensitive.

## FREQUENCY OF DATA REQUESTS



An “As Needed” category was added based on comment responses for comparison purposes.

## DATA QUALITY

### Data Timeliness

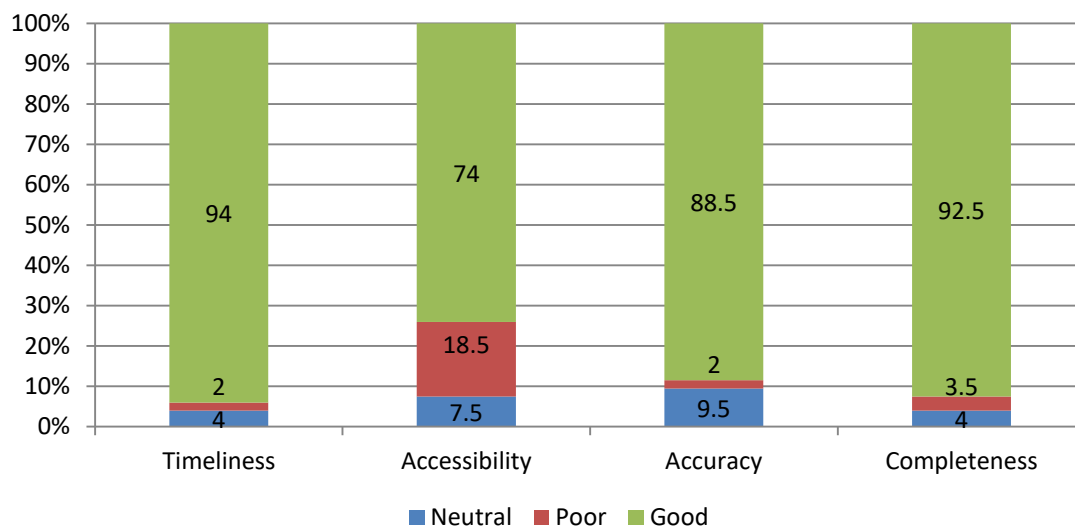
When asked if the crash information is sufficiently up-to-date for their needs, approximately 91.5% of respondents stated it was (2012 – 90.6%, 2019 – 92.3%) while approximately 8.5% stated it was not (2012 – 9.4%, 2019 – 7.7%).

Due to the nature of crash data collection and reporting, real time crash data is often not feasible. According to Wyoming Statute, law enforcement agencies have *10 days from the crash report completion date* to turn the report in to the State. On average crash reports are turned in to the State approximately a week after the date of the accident. There is no specified timeframe for law enforcement to complete a crash report. A thorough investigation period is left to the officer’s discretion. In general, the Highway Safety Program’s crash data is used for analytical purposes to identify trends over time and not a source of real time crash reporting.

## Data Ratings

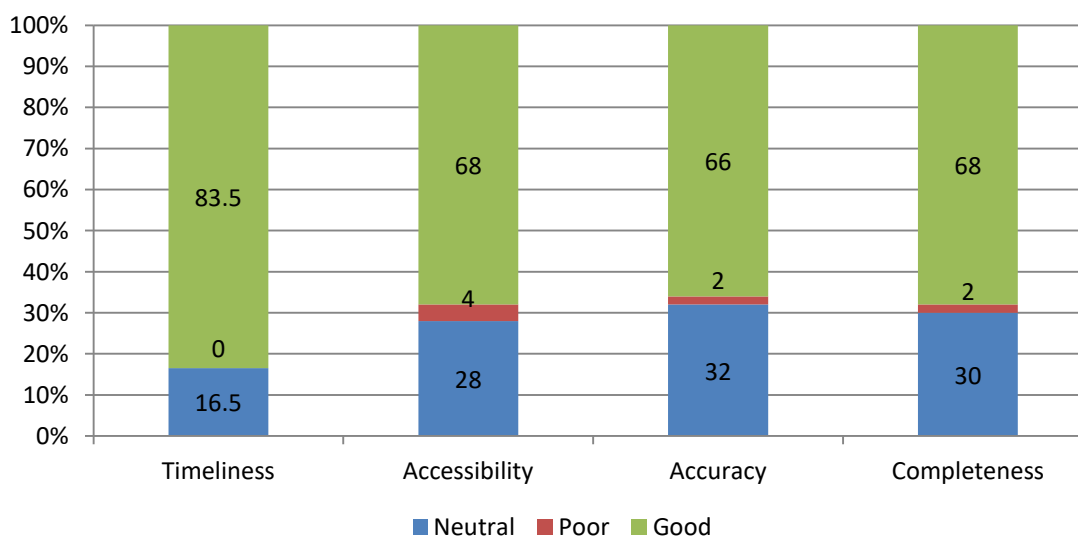
When asked to rate the overall quality of the crash data provided by the Highway Safety Program the majority of respondents for both the 2012 and 2019 surveys rated the data as good. Data accessibility made a significant improvement between surveys; however there still seems to be a lack of knowledge regarding the various ways to directly access crash data as well as a lack in the necessary training needed to become adept at utilizing the various reporting tools provided. In addition, there is a notable increase in “neutral” responses and a decline in “good” responses. The areas of most concern identified by respondent comments seems to be the accuracy and completeness of crash data input. A lack of automated data reporting and evaluation was also highlighted. It appears increased effective communication between all levels of data processing (collection, reporting, and the clear needs of end-users) should be an area of focus in order to improve all areas of data quality.

### 2012 Survey Responses



For ease of comparison the 2012 survey responses of “Excellent” and “Good” were combined, as were “Fair” and “Poor”.

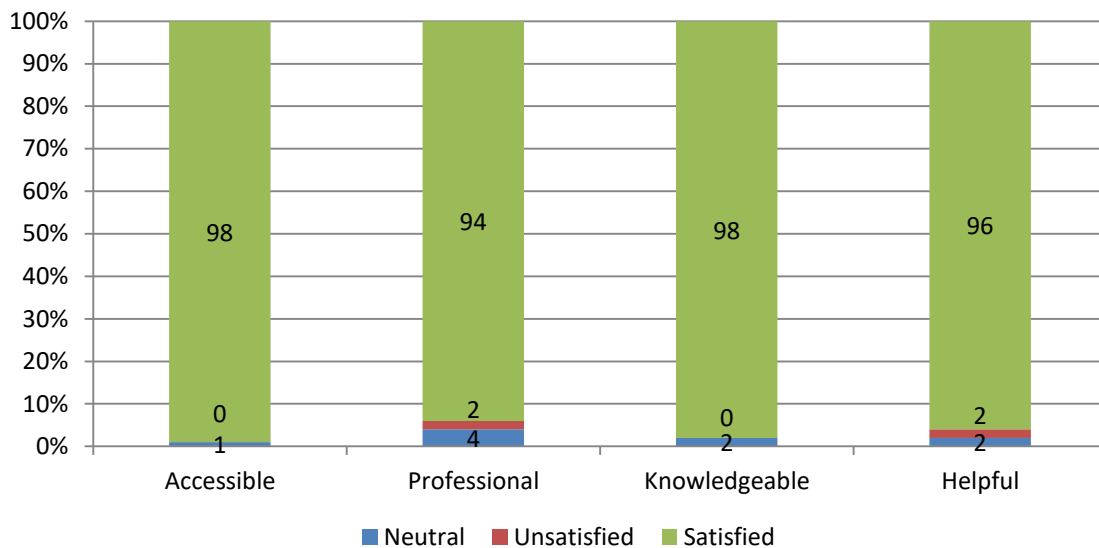
### 2019 Survey Responses



## CUSTOMER SERVICE SATISFACTION

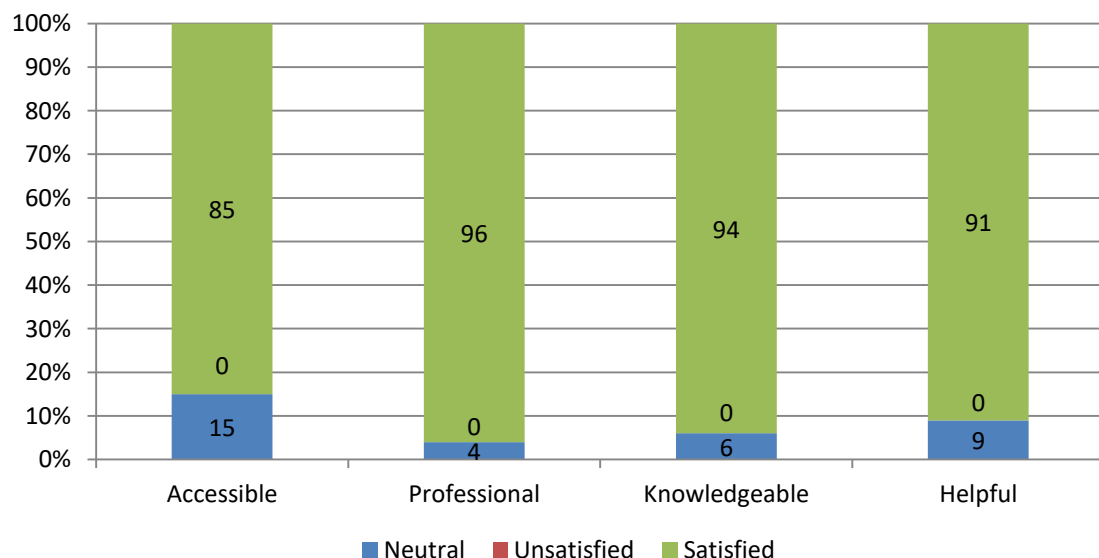
When asked to rate their overall satisfaction with the customer service provided by Highway Safety Program personnel the vast majority of respondents for both the 2012 and 2019 surveys were satisfied with their experience. While there were no unsatisfied responses in the most recent iteration of the survey, the neutral responses have increased significantly. The Highway Safety Program analyst section has experienced a significant turnover within the last year and this may have affected survey responses. The Highway Safety Program has recently filled all vacancies which should increase accessibility and new personnel are in the processes of learning the complex database and various means of reporting the data in order to provide timely, professional, knowledgeable, and helpful customer service with accurate data for all data requests.

### 2012 Survey Responses



For ease of comparison the 2012 survey responses of “Completely Satisfied” and “Satisfied” were combined, as were “Unsatisfied” and “Completely Unsatisfied”, and “Neutral” and “N/A”.

### 2019 Survey Responses



## SUGGESTED IMPROVEMENTS

Based on numerous survey responses, a top priority for the Highway Safety Program will be the publicizing of what the Highway Safety Program *is* and what it *does*. This should include defining our role within WYDOT, promoting and clarifying our purpose and abilities, and publishing personnel contact information (to include defined areas of specialty/focus). The Highway Safety Program maintains Wyoming's crash reporting database and compiles and analyzes safety-related statistics in a *supportive* role in order to assist various departments, agencies, and organizations in the continuing goal of reducing fatalities, injuries, and property damage crashes through engineering, education, and enforcement efforts, along with the promotion of various training programs. As a statistical and analytical unit the Highway Safety Program is not typically a source for real-time crash information, focusing instead on trends over time (generally at least a month out). In addition, improving our website to better promote our program's purpose and abilities, as well as provide commonly requested "at-a-glance" crash information for general public use (current number of crashes on main highways, fatality and injury statistics, seatbelt use, impaired driving, etc.) should be part of this process.

While data accessibility has improved, there still seems to be a lack of knowledge regarding the various ways that are available to directly access crash data as well as a deficiency in the training needed to become adept at utilizing the various reporting tools provided. Therefore, another priority should be developing direct end-user access/connections to crash reporting programs that are more "user friendly" and promoting the most appropriate mode of access to the corresponding departments, agencies, and organizations. This should include the development and promotion of standardized reports in all reporting programs that can be directly accessed and ran/updated on an as needed basis by the end-user. In addition, end-user training and support resources (such as user guides, how to videos, etc.) need to be developed in order to help ensure those directly accessing the data understand how to access the correct data elements and attributes in order to pull accurate information for their intended purposes.

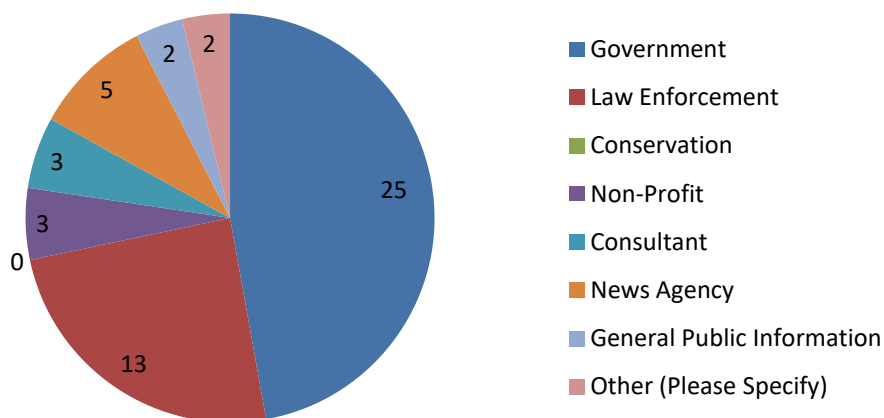
Some common areas of concern identified by respondent comments were the accuracy and completeness of crash data collection and input, crash data timeliness, and a lack of automated crash data reporting and evaluation. It would seem that all of these concerns could be addressed through improved communication between all levels of data processing (collection, reporting, and the clear needs of end-users). By making increased, effective communication a priority (and providing training resources where needed) we can better educate all crash data participants on the importance of data accuracy and how the data can best be collected and reported to meet end-user needs. End-users must also be aware of the crash data limitations, including crash data timelines. An understanding reached on all levels of participation will lead to better data quality and reporting. In addition, the Highway Safety Program should provide timely progress updates on pending developments/improvements being pursued in the various crash data reporting programs and distribute notifications when updates and/or changes will go into effect.

Lastly, the Highway Safety Program should assume a larger role in developing and distributing crash data analysis to public safety partners on a more frequent basis (monthly would be ideal). This will be more effective in helping partners to identify crash trends and direct resources where they will likely have the most impact.

# 2019 Highway Safety Crash Data Survey Results

RESPONSES RECEIVED: 53

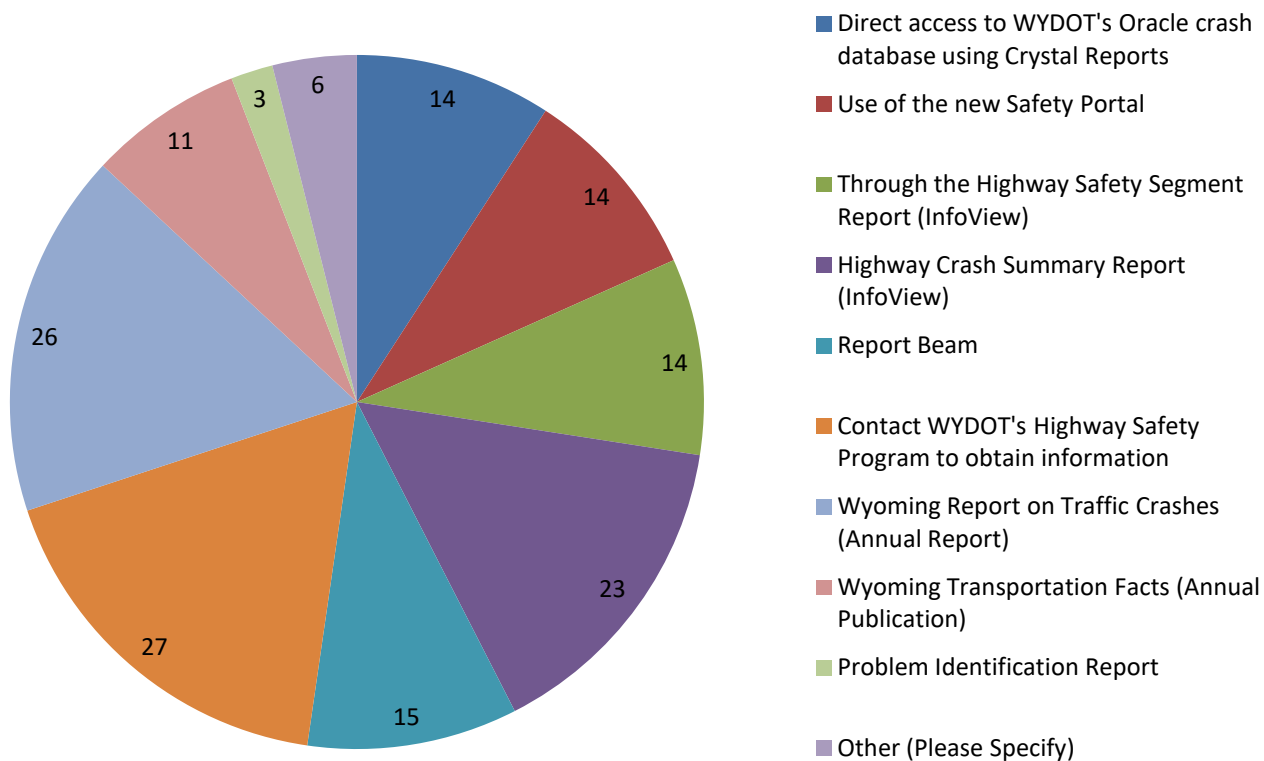
1) For what type of organization will data provided by Highway Safety be used?



Other Responses:

Trucking industry trade association.
Trucking industry trade association.

2) How do you receive crash information from WYDOT? (Please select all that apply.)





Other Responses:

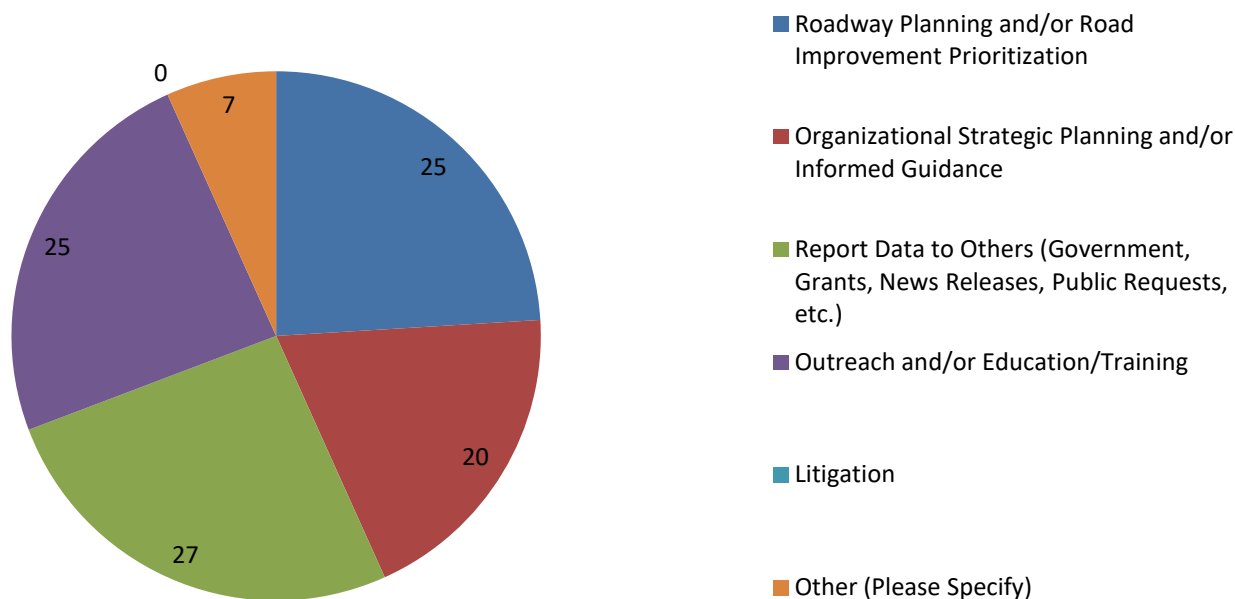
Email, press releases from WYDOT.
Direct access to WYDOT's Oracle crash data on SPOD WECRS using SQL Developer.
Email press releases.
Direct access to WYDOT's Oracle crash database.
Via email from WYDOT personnel.

3) Please list the crash information (data) that is important for you to have: (150 word limit.)

Timely info on fatalities and major incidents on highways. Summary reports.
Time, day, location, MP, highway segment, first harmful event, severity.
SI Score, SI Compare, SI Rating, CPMPY, Hotspots, horizontal curve crashes, vertical curve crashes, wildlife crashes, alcohol crashes, non-restraint used crashes, CMFs, SMS treatment benefits, crash counts by severity and by other factors.
Year, RM, Date, Crash Severity, F.H.E, FHE Location, light condition, collision type, junction related, weather, road condition, total crash summaries. Wildlife crashes.
Local (Bighorn Basin) crashes resulting in injury or death.
Mapping location of crashes - reasons for crashes mapped to high crash intersections - variety of other reports related to planning for our streets department as well as enforcement efforts.
Detailed intersection crash data, especially signalized intersections or those being considered for signalization.
Need crash information as soon as possible for news coverage. If delayed, social media has the wrong version of what happened.
Atmospheric and road weather conditions at time of crash, location where first harmful event happens, i.e. we need to know where the vehicle lost control due to poor road conditions, not where the vehicle ended up.
Crash types, severity, locations.
Crash statistics per intersection, crash reporting timeliness, distracted driving stats, restraints stats, injury stats, crash method stats.
Highway Safety Segment Report, number and type of crashes, first harmful event, safety rating, etc.
Accurate location, date, time, type, weather, first harmful event. Intersection crash diagrams.
Location (City, LRS, milepost, intersection/intersection related), Date, Crash Type, Crash Severity, Roadway characteristics (classification).
All crash information involving teens in Wyoming.
Impaired driving arrests, crashes, fatalities (both alcohol and drugs) and occupant protection usage data.
Carcass data, not just WVCs with damage reports. Reference marker; roadway; direction of travel; in, entering, or exiting a curve. Hotspots for both vehicle incidents and WVCs.
The Highway Safety Segment Report and Highway Crash Summary Reports are a major topic of discussion at the Kickoff Meeting for overlay-type projects and in Reconnaissance Reports for reconstruction-type projects.
Used for internal WYDOT traffic engineering studies and analysis. This requires numerous data fields from the crash data.
Driver inattention, or impaired.
Wildlife species involved, date, time, mile marker, direction of travel (if possible).

Causes, impaired driving, county by county records. Most dangerous locations.
The date/time/injury information is very important.
Predicted Crashes vs Actual Crash History, Hot Spot Identification, Counter-measure identification and deployment.
Truck related crash info.
Number of deaths, and pertinent information such as whether victims were buckled and if impaired driving was a factor.
Wildlife-vehicle crash data and carcass data.
Alcohol, seat belt, distracted driving, motorcycle, etc.. An assortment that pertain to news releases I'm working on.
Crash concentrations and types.
Location within each county, type of vehicle involved and severity of injury.
Agency crash reports in a dashboard format.
Monthly Crash Counts for Alcohol-Involved, Drug-Involved crashes, injuries and fatalities. Year-end data for seatbelt usage in Wyoming crashes and fatality crashes.
Location, type, lighting, severity, single/multi vehicle, vehicle type.
Crashes that occur in rural locations. Crashes that occur on hard surface roads versus unpaved roads.

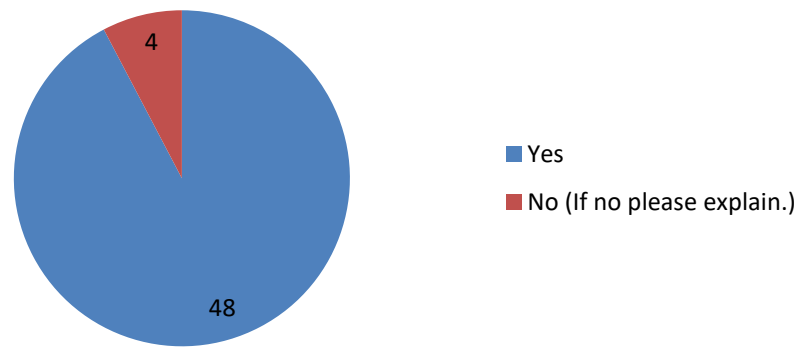
4) Please select all options for how you plan to use the data obtained from Highway Safety:



Other Responses:

Site specific concerns.
Snow fence placement.
I pull crash reports from Report Beam for Road Side Memorial requests.
Law enforcement.
WVC hotspots for possible mitigation.
Highway planning with WYDOT and partners specific to reducing wildlife-vehicle collisions.

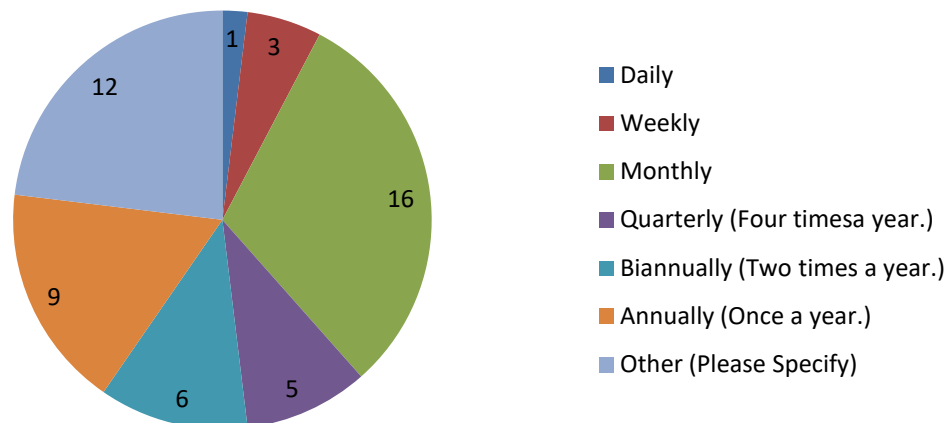
5) Is the crash information you use and/or request from WYDOT sufficiently up-to-date for your needs?



Comment Reponses:

We're web, so timeliness is important (24 hour info on crashes).
Would be nice if it was updated automatically within a week.
Report Beam allows immediate access - however it is of limited value especially since locations are most likely in lat/long coordinates only since the last update and Report Beam does not allow me to pull a map based on those coordinates.
The timeliness is superb. I couldn't ask for better. The quality of the actual crash details and locations still needs a lot of work.
Again, information ASAP.
So far. The issues I have are more with how patrol reports.
I would like to see WVC, or carcass count data, reported along with the data for reported crashes. Only having reported crashes does not give the entire story here in rural Wyoming.
Ideally, the data would be available in shapefile format so they could be mapped in GIS software.
Would like to know what "controlled substance" is related to DUI arrests and crashes.

6) How often do you request information from WYDOT's Highway Safety Program?



Other Responses:

Never
Only as needed if query goes outside the limits of my search capabilities (more than five years past crash history).
As needed for news reports.
I query it directly at random times and seldom ask HWS for data.
As needed.
Varies. Haven't used it in awhile due to other work, but when I do I use it quite often.
As needed by project.
Project or request specific.
As required. I can pull most of what I need with raw data using methods above. I make requests when more complex filtered data is required.
More or less as needed.
As needed.
On a project-specific basis.

7) In regards to the information you receive from WYDOT's Highway Safety Program, please rate the following:

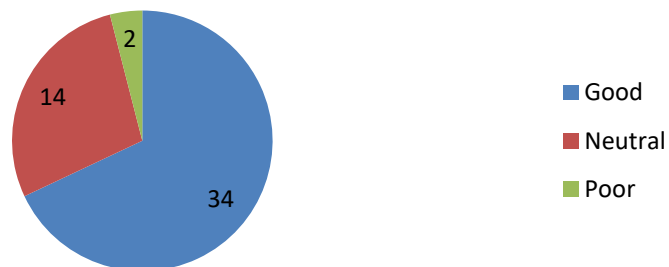
a.

### Timeliness



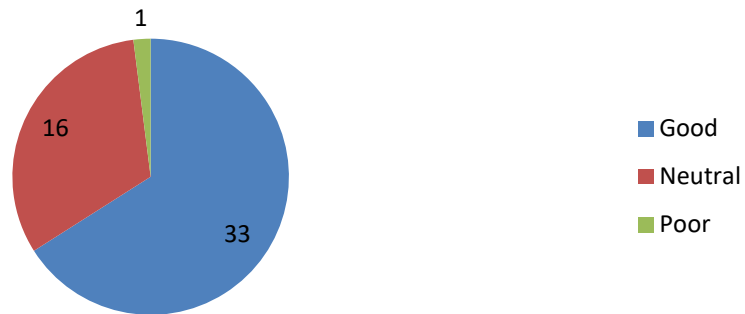
b.

### Accessibility (ease of obtaining data)



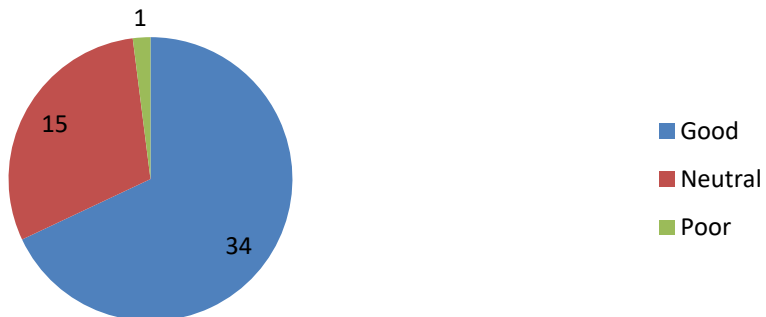
c.

### Accuracy (information contained no errors)



d.

### Completeness (information contained no missing critical elements)



#### Comment Responses:

I've created procedures that regularly access the safety data for various Planning initiatives. Since the form of the data is often changed, it creates some difficulty in maintaining and updating these procedures. Often I'm not informed of the changes and only realize they've been made when they create issues with the procedures. This in-turn causes concern for the accuracy of the data that I produce.
Limited evaluation of available data, at this time. May be able to provide better evaluation in the future.
Always need the information quickly, if only a first report and then follow-up with names, details, etc.
Again, I think Highway Safety does wonders with what it receives, I just question some of the input.
It has been generally pretty easy to obtain data from the Highway Safety program.
Michael is excellent at providing data ASAP.
Completeness depends on timeliness.
I was not aware of ways to access it other than the yearly report.

It appears that some crash and carcass data (especially misplaced paper records) may not make it into the system. This could be because some of the department members are unaware of how widely it is used and how valuable it is. Overall, though, it seems as though the data is adequately complete to tell the story. We share WYDOT's goal of data integrity so that we can educate the public using accurate information.

My analysis of crash data is at a very detailed level where I need to know exactly what direction each vehicle was going and what maneuver they were making at the time of the crash, because that level of detail is necessary to correctly relate the crashes to the traffic signal operation. The crash report should be able to report that data at the level of accuracy needed, but the human element entering the data doesn't seem to be able to comprehend the nuances for direction and maneuver; and constantly inputs crash data that does not paint an accurate picture of what is actually occurring at any given intersection. Also, they can't seem to figure out when a crash is intersection related, or not. The only way for me to get the level of accuracy that I need, I have to query the location by a combination of street codes, LRS codes and reference markers just to get a list of potential crashes; then I have to go through the actual crash reports and read the narrative to figure out what really happened. Even then, I'm often left guessing. I simply do not have the time to do that for 300 +/- intersections.

If you answered Fair or Poor please explain:

Poor is based on reporting ability (or lack thereof) regarding Report Beam.

I'm hoping the new map-based locating, when/if it's implemented, will help with locating crashes more effectively, although I'm sure it's still going to be difficult getting accurate data on relation to intersection (proximity helps but is nowhere close to being "correct". The crash report itself, or at least ReportBeam, needs to be modified to give the officers better feedback on what they are entering to where they can more accurately enter the data so that all angle crashes and left-turn opposing crashes reflect the correct directions and maneuvers.

Any time information was requested directly from Highway Safety it would not include all data columns requested, but when asked to add that data the next would iteration would include the forgotten data but then lose the some of the original columns. Iterative process was frustrating.

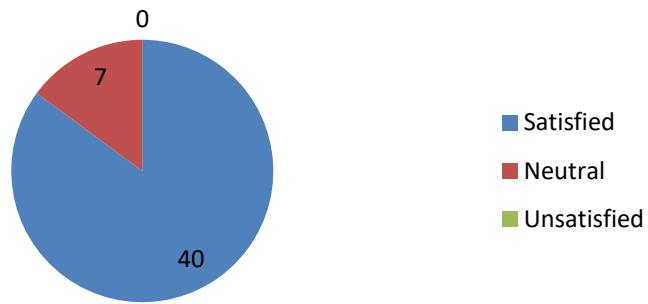
Is there any way to train and allow LE to access their own data? Meaning, we would prefer to be able to look at all of the crash data on our own and have a system that will help us identify "high crash" locations so we can emphasize enforcement to lower overall crash rates. Can WYDOT supply any of that 'boxed' information on a monthly basis via email to the LE agencies? Shouldn't Highway Safety take some responsibility in actually creating safer roadways by providing relevant data analysis to larger LE agencies to assist in making informed resource decisions? This data should be provided in a timely manner since an annual report takes way too long in immediately impacting trends.



8) If you have contacted WYDOT's Highway Safety Personnel, please rate your experience below:

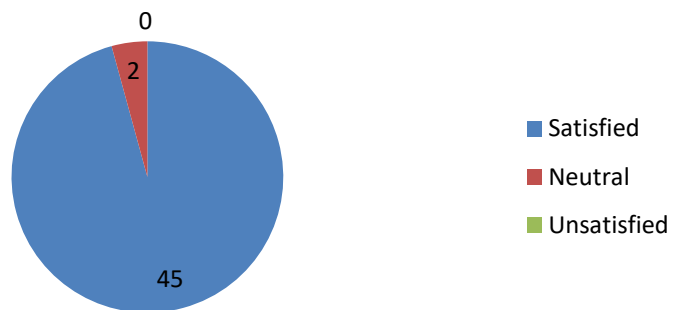
a.

### Accessible



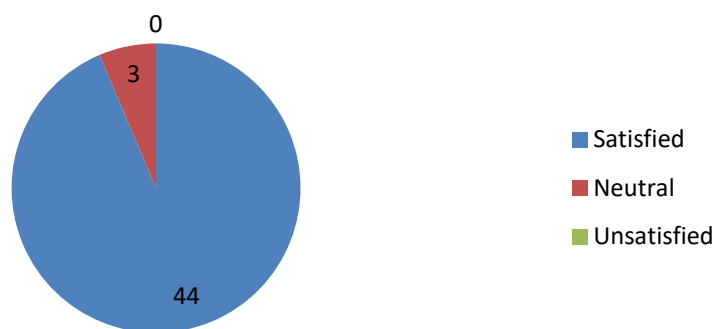
b.

### Professional



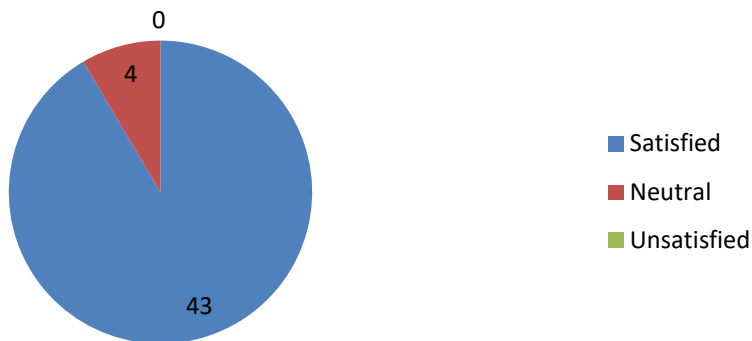
c.

### Knowledgeable



d.

## Helpful



### Comment Responses:

Media people always helpful and quick to respond.
The HWS folks are great to work with and provide data quickly and as accurately as the crash database can provide. Even though I have serious complaints about the quality of crash data, it's not their fault. To me it is a shortcoming in the report/reporting system and a lack of understanding/level of care by the reporting officers.
Have not contacted WYDOT staff.
Personnel are very helpful in getting the information requested and will tailor it to your needs.
The Highway Safety Office team, led by Karson James, is fantastic and easy to work with.
Locals are helpful, if we have to call Cheyenne it is usually less thorough.
The Highway Safety Office staff are all great to work with.

If you answered Unsatisfied or Completely Unsatisfied please explain:

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### 9) How can WYDOT better meet your needs for crash information?

Give info on avalanches/road closures in Hoback Canyon to Pinedale media. It goes to Teton Co, we don't get it when road closes. Pinedale Online (307-360-7689, dawn@pinedaleonline.com) and KPIN radio specifically (kpin@wyoming.com, 307-367-2000). We'd like info on major road closures (especially after hours).
I need consistent datasets that don't change too often. Typically I need access to large portions of the data to provide system wide types of analyses. This often means downloading tens of thousands of records.
Would be nice if we could set the date range in WYDOT Reporting Tool (InfoView).
By providing information on not just fatal crashes, but crashes that result in injury.
Provide tools that individual departments can use to pull location data - for instance number of crashes at a given location. The accuracy should be better now if you could select an area on a map based on lat/long coordinates. However that tool does not exist in Report Beam.

I think the crash report, or at least how ReportBeam handles the data entry, needs to be modified so the officers get immediate feedback on what they are entering so they can see what the data they are entering looks like in a crash diagram, preferably overlaid over an aerial view of the crash location so they can clearly see where/how the crash occurred.

The Safety Portal has several limitations that cause me to go elsewhere for data. Taylor McCort will be our office's representative for any committee meetings, etc. going forward, and my hope is that he can communicate our needs.

Would be helpful to access the data without having to request it. And, as mentioned earlier, would be helpful if data could be mapped in GIS. Also, would be helpful to combine crash and carcass data.

More information about what is available needs to be pushed out.

Mentioned above...just ensure that all WYDOT employees with direct access to crash and carcass data recognize how valuable it is to record it accurately and promptly. This may already be occurring at 100% confidence.

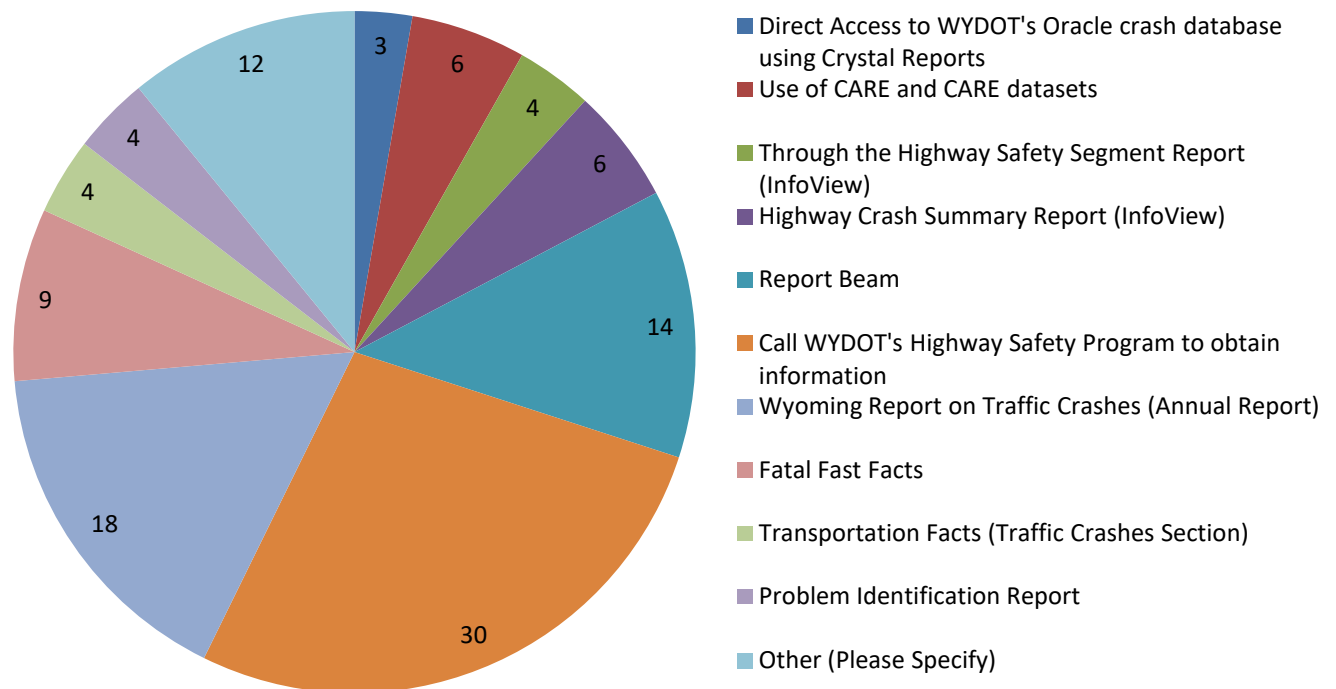
Please look at the concept of "COMPSTAT", which is used by many LE agencies across the country, especially larger LE agencies. Compstat provides specific criteria and direction for LE on identifying trends in order to direct LE resources to the issues. There is a lot of information on Compstat principles, which was developed in the 90's by large LE agencies to identify and deal with violent crimes. Compstat principles could certainly be used to help LE identify crash trends in order to immediately direct resources to lower crash rates. It would be extremely helpful if WYDOT had an employee or employees that analyzed data and worked directly with LE agency's leadership to provide guidance based on what the data is telling them. LE does not have the time or resources or personnel to constantly look at crash data. WYDOT and Highway Safety should take on more of a leadership role in using all of the data that is gathered through Report Beam to provide monthly reports which include identified trends, potential trends, etc.

I find it interesting the WYDOT sends out a report that tracks the "timeliness" of submitting crash reports, which is helpful in ensuring "timeliness" in the submissions (which is a BIG part of Compstat), but there is no analysis occurring with the data... at least not that I am aware of. Does WYDOT or Highway Safety have a person on the staff whose sole responsibility is to look at crash trends and provide guidance to LE? Or guidance to engineers on roadway design? Since I am with LE, I figure that could have significant and immediate impacts if this type of information was shared. Overall... You have a lot to deal with, so thank you for what you do!

# 2012 Highway Safety Crash Data Survey Results

RESPONSES RECEIVED: 54

1) How do you receive crash information from WYDOT? (Please select all that apply).



Other Responses:

Request wildlife/vehicle collision data from Tom Carpenter.
I ask Tom Carpenter to generate the data I need.
Email to Tom Carpenter
Cheyenne MPO
It is sent to me by someone obtaining the report through the Oracle crash database using Crystal Reports.
E-mail to WYDOT Highway Safety Program
Summary of Traffic Deaths and Fatal Crash Report from WYDOT
Occasional rail crossing related requests.
Email WYDOT for information
Via email—Monthly Report of Motor Vehicle Traffic Deaths from WYDOT/Highway Safety Program
Crash Mitigation Factors/Crash Reduction Factors for associated Accident Trend Counter Measures/Treatment Options from FHWA CMF Clearing House
I request crash data from Tom Carpenter for Cat Ex documents.

2) Please list the crash information (data) that is important for you to have:

Historic crash data on federal and state highways.
Type of vehicles, crash location, weather conditions during the crash, type of crash (rollover, rear-end, etc), time of day.
Pedestrian
Number of crashes, types of crashes.
Crash Rates and Indexes for Recon Reports
Highway Safety Report, InfoView, Care data sets, Wildlife Vehicle Collision data
Alcohol related crashes.
Quantity of crashes in specific areas and by specific types (fatal, animal, etc.).
-Wildlife species -Date/Time -Geographic coordinates
Total crashes, injury only crashes, fatal crashes & accident rate per MVMT: over a 10 year period for each roadway section.
Fatalities and contributing factors in fatalities.
I use most of the data in the reports.
Safety index comparisons; specific crash data RM to RM.
All that is listed on the reports.
Date, time, weather, road conditions, dark/light, lighted, direction of travel of all vehicles, citations issued, narrative from the report.
VIN, Plate, Plate State, Make, Model, Model Year, Accident Date, City and/or County in which the accident occurred. Point of Impact, Sequence of Events, Damage Severity, Extraction Use (if available, vehicle towed, airbag deployed).
Injuries, Deaths, Alcohol Related, how it relates to same quarter the year before.
Number, location and type of vehicle crashes. Number, location, and type of wildlife crashes.
Location, people, why crash happened, etc...
Teen Drivers info
DUI crash data
Number of Citations issued by WHP officers during vehicle crash investigations or 2.36% of total citations issued: Number of crashes investigated by WHP.
All of it.
A good complete summary of the crash.
Crash History; Highway Safety Report - Roadway/Roadside features, Safety Index Score, LOSS; Urban Area vehicle-pedestrian.
Time, location, road conditions, weather conditions, vehicles involved - number and type, age and sex of driver(s), passengers, seat belt use, impaired driver, explanation of crash.
Alcohol related - seat belt information.
1) Number of crashes within project limits 2) Category of crashes (PDO, injuries, fatalities) 3) Safety Rating Index 4) LOSS Rating
It varies.
List of crashes with basic data and crash diagram.
The majority of our crashes occur in parking lots, of which most are hit and run. Locations of crashes would probably be the most important as that lets us look to see if there is a specific problem area.
Number, month, cause, location.
Demographics, impaired driving, location.
Teen crashes, Seatbelt use, DUI, Distracted driving

Wild animal-vehicle crash data.
Number of crashes, number of persons injured, number of persons killed.
Deficient geometric design features of the roadway that may have contributed to a crash. Numbers of crashes at a particular mile marker.
Location, victims, driver.
Injury, fatal, train/no train, highway, city, county, etc.
Entire Report
Number and type of crashes in an area.
Motor vehicle traffic deaths by month.
AADT, % Trucks, accident history, turning movement counts, WYDOT modeling
Accurate Accident Histories and trends, SI Compare for identification of "Over Represented" locations.
Information about crashes at certain locations. I use the standard crash report for the last five years at intersections or road segments.
Winter crashes on state maintained highways.
Alcohol or drug involved crashes, under age driver accidents, high accident areas on roadways.
Officer's report narrative, location, date, time, direction of travel, number & type of vehicle, ped, bicycle, road condition, weather condition, lighting condition, driver condition, road geometric, driver action, harmful events.
Date of crash, Time of day, Milepost (as accurate as possible), Lighting condition, Number of vehicles, First Harmful Event, Weather, Driver impairment, Crash diagram, Officer's report, Drivers' reports
All Crash History
Type of crash, location, date and time of crash, severity, lighting conditions, pavement conditions (i.e. wet, icy, dry), direction of travel, etc.

### 3) For what do you use the crash information you obtain from Highway Safety?

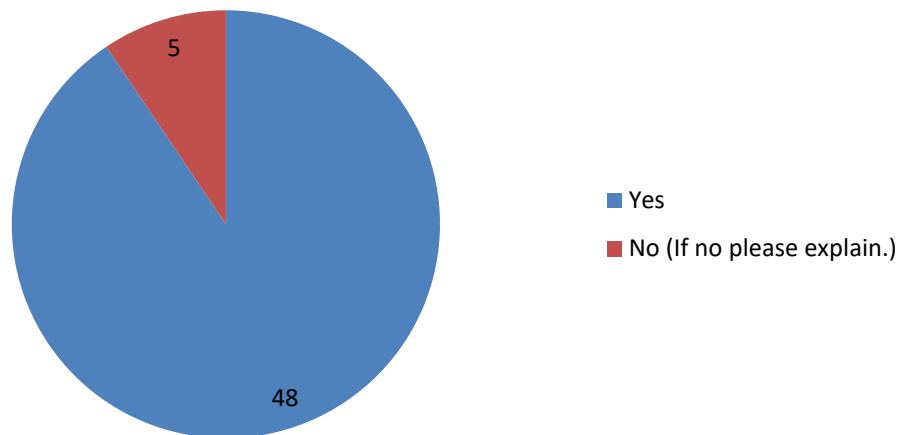
To prepare transportation assessments for federal National Environmental Policy Act documents.
We look at data to see if there is a need for devices in a certain location. We've looked at crashes to prove the efficiency of systems such as the Variable Speed Limit System. We look at crashes to determine hot spots that need to be addressed.
Safe Routes to Schools planning.
Environmental Documents
To identify if the rate is higher than normal and if something can be done with the geometrics of the road to improve the road.
Evaluate project priorities and scope of work for projects.
Increased knowledge.
WHP Strategic Planning.
Mapping incidence of road kill throughout the state. Identifying migration corridors to help mitigate future collisions.
To generate Program Study Reports and Scope Statements. I also obtain a crash index value each fall for inclusion in the Needs Analysis Report.
News releases and to answer questions from the news media.
Reports, grant requests, enforcement efforts.
Planning studies.
Litigation.



Intersection Evaluation
Records are used on Carfax reports to help customers know that an accident occurred on a particular vehicle.
State requiring it.
To look at safety issues that need addressed and to look at wildlife crossing areas for special signing or fencing.
Working with the media, WYDOT employees ... we use the information to do crash reports, incident reports on the highway.
Data Collection and Strategic Planning.
Highway Safety Funds Grant application.
Yearly stats for WHP use and for reporting to IACP for the "Law Enforcement Challenge".
I have used the information for a power point I created and presented for high school drivers and senior citizens.
For various traffic studies and crash analysis at signalized intersections.
WYDOT Reconnaissance Reports - Evaluations leading to project type selections; Categorical Exclusions; Safe Routes to School Plans.
Road-safety improvements, trends, work zone modifications.
Training, information.
Use in Categorical Exclusion document preparation for WYDOT projects.
Use it to help identify problem areas. We then allocate troopers to that area to watch for those violations that lead to those crashes.
Generally for traffic impact studies.
We use it for the HS-9FF Quarterly Crash Data Reports.
Safety planning, presentations on DWUI and speed.
Planning for special enforcement and regular traffic enforcement, grant reporting.
Safety Presentations and Data
To identify trouble spots and to help determine whether or not wildlife crossing structures are effective.
Reports to Fatality Analysis Reporting System (FARS), reports to National Safety Council (NSC), reports to interested agencies and persons.
Develop reconnaissance reports and design of new streets and highways.
Department reports.
Railroad diagnostic reviews.
Compare to WHP Records Management System and fulfill records requests.
City of Laramie traffic engineering.
For making national estimates of motor vehicle deaths.
Traffic studies, signal warrant analysis, accessory lane analysis, geometric reviews, exception reports, speed limit analysis.
Review the accident data, identify trends in crash type - first harmful event, identify potential counter-measure options for highest percent of accidents for accident reduction, identify Crash Modification Factors and Associated Costs for Preferred Treatments to see highest reduction in accidents, seek funding for installation of treatments by WYDOT or Contract Out for STIP inclusion, communicate improvements and date installed to SAFETY for tracking treatments and measure success in accident reductions, communicate efforts with City and County authorities and solicit participation in accident reduction at locations where jurisdictions interface, report to public efforts in accident reduction, fully engage on WYDOT goals of accident reduction and increased safety for the public
For studies and reports.

I include crash information in traffic impact studies.
To determine areas that have winter crashes.
Provide information for analysis.
Crash patterns, numbers of crashes, trends in crash type, weather, road, driver action, comparison to averages.

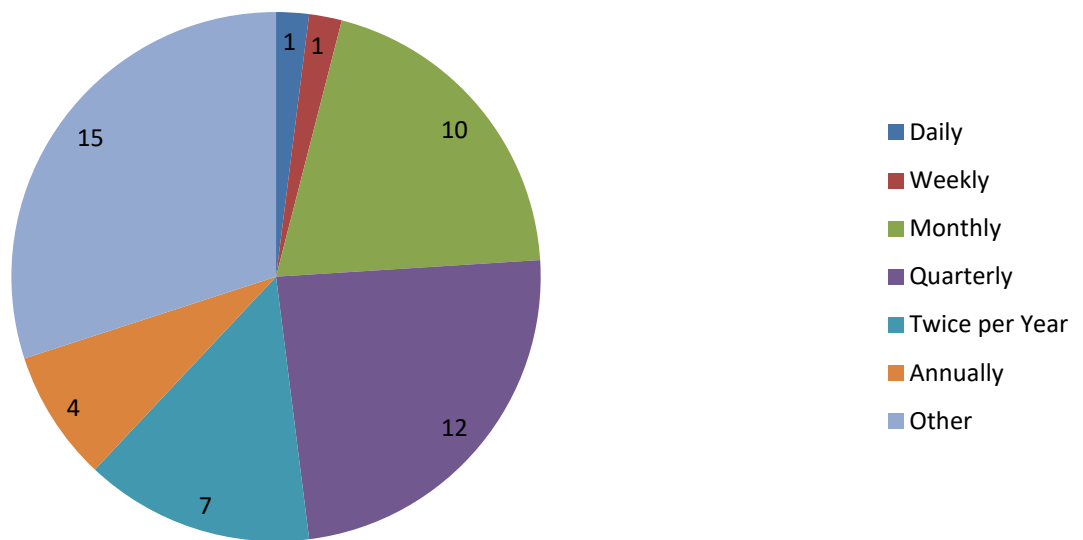
4) Is the crash information you use and/or request from WYDOT sufficiently up-to-date for your needs?



Comment Responses:

CARE isn't updated often enough. Last time I looked, it was about a year and a half behind the current date. We can't wait that long to evaluate our systems and deliver data to people who are looking for results.
Accessing the crash reports through Report Beam is extremely difficult and the results are very inconclusive.
It would be nice to get the data more frequently. Also, it would be good to have vehicle towed information available.
Sometimes crash information is full of errors, and requires new versions sent out... the only crash information we really receive is what's sent to the media. Too many errors, names spelled incorrectly, etc...
It is getting better but the Fatal Facts are always slower and the Comprehensive Manual.
One comment, the highway safety report segment lengths are typically much longer than a project length creating Index Scores and Loss that may/may not be applicable to the project.
IT working in our new inventory system which should connect with Hwy Safety crash data?
I am very excited by recent developments in the analysis and identification of SI Compare "Hotspots"! Quantum leap forward in ability to "identify and treat problem locations and measure true reduction in serious and fatal accidents."
Make CARE as up-to-date as Report Beam.
Sometimes, I do like to use the full data set and that is put out once a year. That being said, it's not a big thing....
Although location of crash is always critical (need accurate milepost or cross street information).

5) How often do you request information from WYDOT's Highway Safety Program?



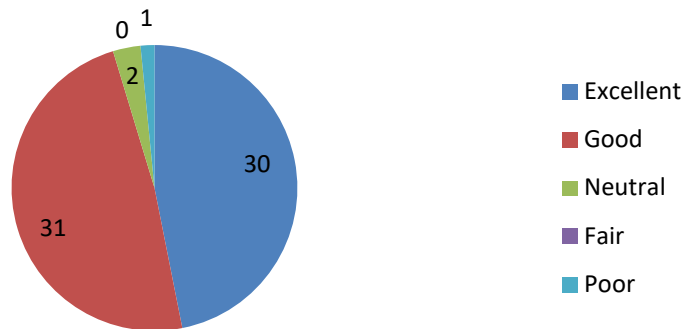
Other Responses:

As needed for NEPA assessments.
As required.
Based on need.
As needed.
I don't request it, I get it when it comes in. I was not aware I could request it.
As needed.
Varies, but generally monthly.
Unknown
As needed for road projects.
When a more detailed report is needed.
Varies
As needed for a study area. 6 to 12 times a year.
When necessary.
As needed, at request of City or County Officials, in response to public inquiry we can't answer, anytime we cannot pull the info ourselves, anytime called by "legal representation."
It varies. This quarter I have asked for information on four or five locations. At other times, I might go for several months before I need data.
Sporadically, or when I have problems.
Only when our company has been selected for a traffic or design project.
Not regularly. Only on an "as needed" basis.

6) In regards to the information you receive from WYDOT's Highway Safety Program, please rate the following:

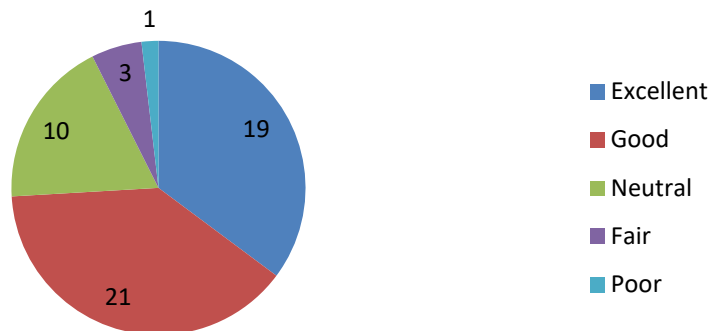
a.

### Timeliness



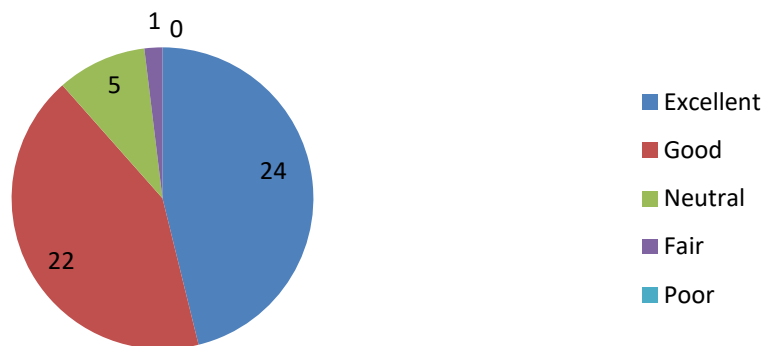
b.

### Accessibility (ease of obtaining data)



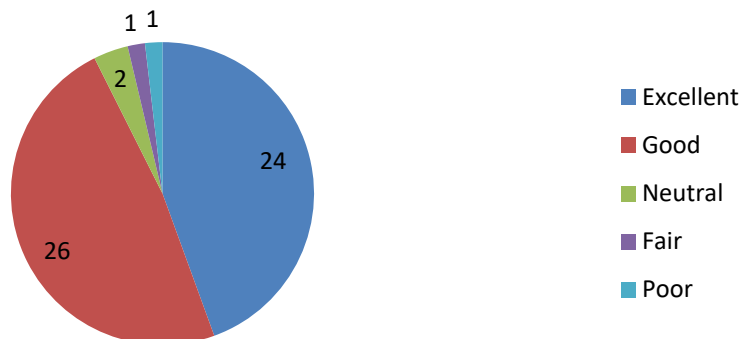
c.

### Accuracy (information contained no errors)



d.

## Completeness (information contained no missing critical elements)



### Comment Responses:

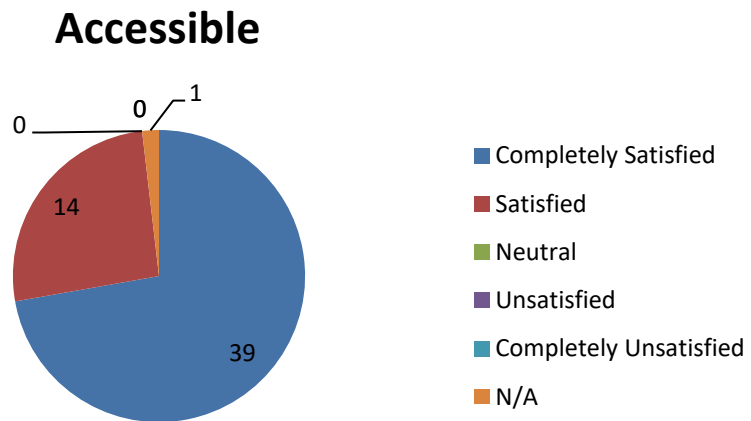
I wish ReportBeam.com was more user friendly - I could probably get the information myself.
Timeliness is no longer a problem since working with Tom Carpenter. Previous data contacts would ignore requests and then send incomplete data. The same could be said for accessibility.
Thomas Carpenter Rocks! He is always fast with the information.
Accessibility is through the Highway Safety Program, no direct access. Concerning Accuracy see comment above on segment length.
Hope we can connect our new rail inventory system which should connect with Hwy Safety crash data.
A few times the information was delayed (new system) or "double counted" (working on getting bugs out). I am confident they will sort this out ... it is a new process to mine the SPOD - EXCELLENT PROGRESS - Oorah!!!
I have not had an opportunity to view the latest data and I know they've been working on it
Errors appear to be related to officer entry on reports

### If you answered Fair or Poor please explain:

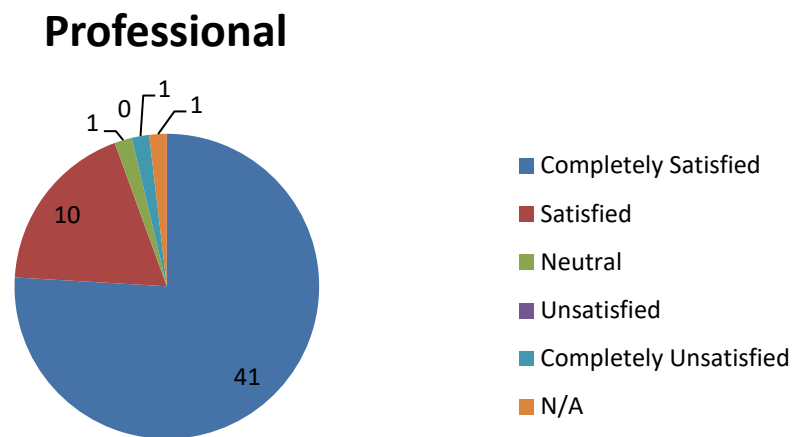
As I mentioned in question four, it just seems really behind. In order to use the CARE system, you need some training, it is confusing and advanced. As for completeness, it just seems like there is some stuff that I have been looking for (crashes on entrances/exits to interstates and US State Routes) that I haven't been able to find.
Attributes in the animal/vehicle collision dataset were not very standardized. This has improved over the past several years. In earlier records, the same road/county/etc. could be represented with multiple codes or abbreviations.
Most of the time I have to request the information rather than being able to easily find it somewhere myself.
I must ask someone in Accident Records for the info.
It is very difficult to run reports through Report Beam.

7) If you have contacted WYDOT's Highway Safety Personnel, please rate your experience below:

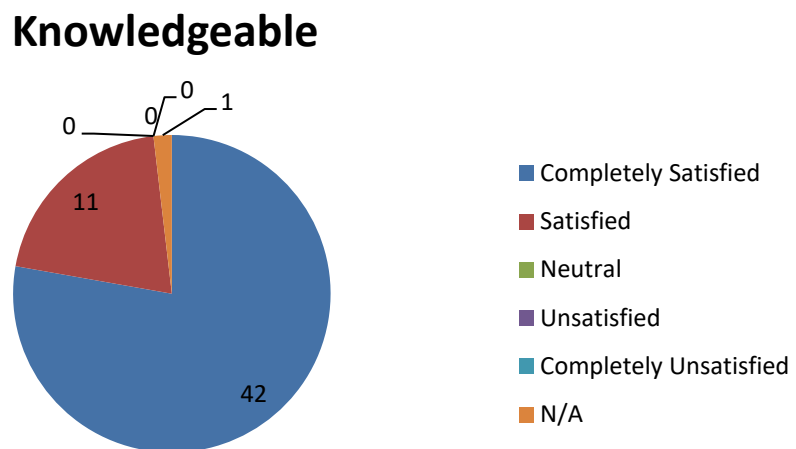
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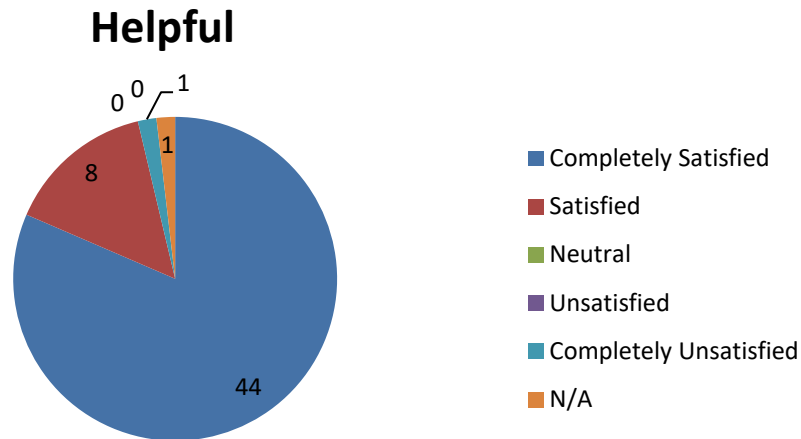


c.





d.



#### Comment Responses:

Tom Carpenter has been extremely helpful. Previous contacts were the opposite. This included not responding to voicemails/emails. Responding without answering specific questions or sending incomplete data without an explanation.
Very satisfied with the assistance I have received.
Always willing to assist with issues, problems, etc. Thanks Mike and Stacey!
Excellent support! Couldn't ask for more! All ya'all ROCK!!! Oorah!!!

If you answered Unsatisfied or Completely Unsatisfied please explain:

I have emailed the Highway Safety Personnel and been told that they'd look into my question and then have never heard back again. In those cases, I've had to email and email in order to get a response. Sometimes it also seems like you get passed around a lot. It seems like it would be better if the Highway Safety Personnel focus areas were listed somewhere so that you could email the person that can actually answer your question first instead of getting passed from person to person.
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#### 8) How can WYDOT better meet your needs for crash information?

Having crash data online by highway would be helpful.
Update the data more often. It isn't helpful to have to wait months upon months to get the data you need, or to harass someone in Highway Safety for information that should and could be available on CARE.
Data available on WYDOT web page. But the WYDOT web page is somewhat difficult to navigate.
I would really like to be able to access current data online or without having to contact WYDOT. Also I did not know there was other ways to get this information.
Easy to query reports and information are the most useful to me. As an example I have been able to query and run a "Highway Safety Report" while I am on the phone with a concerned customer. In a matter of minutes I can check the Diexis, or hot spot crash locations for any corridor.
Get rid of Report Beam and use something designed for the 21st Century. RB is the worst system ever devised.

If reportbeam.com was more user friendly I could get the information myself without bothering Highway Safety.
In the future it would be helpful if the Carcass and Animal/Vehicle Collision datasets worked more fluently with one another. Historic carcass records tied to a 0.1 mile reference marker were extremely time consuming to process, since WYDOT only has a whole mile reference marker shapefile. We went through the process of creating our own 0.1 mile reference marker dataset in order to map historic carcass records. After this work, there are still limited options for identifying duplicate records between carcasses and animal/vehicle collision records. Outside of crashes, it would be extremely helpful if WYDOT staff collected geographic coordinates for each carcass they picked up.
Keep crash and fatality statistics for I-80, since that is the highway we get the most request for statistics about.
Is there an easier, online way of getting crash information without contacting a WYDOT employee?
It would be nice to get the data more frequently (Weekly or Daily if available). Also, it would be good to have vehicle towed information available.
It is working for what I need.
More timely, we need better, useful information ... not just the media report from Patrol.
Either publish the stats or post on-line so that the numbers are readily accessible.
Not sure, maybe an email to all law enforcement officers on how to get the information and what information is available.
It would be nice to have access to the personal reports because there are times when the investigating officer's report is not complete but the individual's report may have the information that you need.
Tailor segment/corridor lengths to project lengths.
Keep accurate and up to date.
Satisfied with current level of support.
Develop a system to run reports through Report Beam that is not so cumbersome.
I am satisfied with service and product.
I have some concerns with the auto approval. Officers are now directly submitting Crash Reports, but they don't seem to be checking them for accuracy. I am concerned.
Just make it easier for me to access data without necessarily having to go through Highway Safety personnel.
Make it available online.
WYDOT is currently providing all the data we need--thanks!
Keep perfecting the system so the Districts query and obtain the most accurate data in the most timely fashion possible. Don't know if it is possible to link "Accident Trends" directly with "proven Counter Measures from FHWA" ... would be nice... maybe just wishful thinking on my part
WYDOT does just fine for me.
Some fields could be changed to make information more correct as to what actually happened in the crash - some redundancy.
Training on what is available and how to access the data.
By doing whatever you can to work with State Patrol, local agencies and others to ensure that the crash data that they gather on-scene is as accurate and detailed as possible.
Keep doing what you're doing.