Avista Utilities

2015

Customer Service Quality and Electric System Reliability Report

April 29, 2016

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I. Introduction

A. Executive Summary

Avista's Service Quality and Reliability Report for 2015 provides the annual performance results for the Company's new "service quality measures" program and for its overall electric system reliability. Results for the service quality measures have been incorporated into the electric system reliability report which the Company files each year with the Washington Utilities and Transportation Commission ("WUTC" or "Commission").

1. Background

Avista has for many years submitted an annual technical report to the Commission on its electric system reliability performance. For this report, the "electric system" is the overall network of electric transmission lines, substations, and the distribution lines, or "feeders," that carry electricity to every home and business in our service area. "System reliability" refers to the various measures of the number of times during the year that our customers experience an electric service outage (outage frequency) and the length of time it takes to restore our customers' service after an outage has occurred (outage duration). In accordance with the Commission's rules,[1] the Company established a baseline year (2005) for each of its reliability measures, and then compares the results for each reporting year with its baseline results. The reliability results Avista has measured and reported are determined on a "system basis" (i.e. the results represent the performance of its entire electric system in Washington and Idaho). Avista is also required to report any changes it may make to the methods used to collect and report the results of its system reliability. The report must also identify the geographic areas of greatest reliability concern on the Company's electric system and explain how it plans to improve its performance in those areas. Finally, the Company must report the number of complaints from its customers having to do with its electric system reliability and power quality. The detailed reporting requirements are listed under the title "Electric System Reliability Reporting Requirements" in Appendix A. Avista files its annual electric system reliability report with the Commission by April 30th each year.

In early 2015, Avista engaged Commission Staff and representatives of the Public Counsel Division of the Washington Office of the Attorney General and the Energy Project (collectively, the "Parties") to develop a set of service quality measures that would be reported to the Commission and Avista's customers each year (in addition to the electric system reliability report). This effort reflected the interest of Staff in having each of its regulated electric and electric/natural gas utilities report annually on their service quality performance, and was not driven by specific concerns regarding Avista's customer service performance. Through the course of these discussions Avista and the Parties agreed on a set of service measures and accompanying benchmarks and reporting requirements that, taken together, provide an overall assessment of the quality of the Company's service to its customers. These measures, referred to collectively as Avista's "Service Quality Measures Program," include: 1) six individual measures of the level of customer service and satisfaction that the Company must achieve each year; 2) the requirement to report on two measures of its electric system reliability; and 3) seven individual service measures

[1] Washington Administrative Code (*WAC) 480-100-393.*

where Avista will provide customers a payment or bill credit in the event it does not deliver the required service level ("customer guarantees"). The Company must report to its customers and the Commission each year on its prior-year performance in meeting these customer service and reporting requirements. Because these performance measures are related, at least in part, to electric system reliability, Avista chose to include this report as part of its annual electric system reliability report. Avista is currently reporting on its 2015 results in meeting its six customer service measures and reporting on its two measures of electric system reliability. The Company will report its first year's performance in meeting its seven customer service guarantees in 2017 (for its service results in 2016).

2. Customer Service Measures - Results for 2015

Avista's reporting requirements under this program are described in its Tariff Schedules 85 and 185,[2] which were approved by the Commission in June 2015. Listed in the table below are the six customer service measures, including their respective service requirements (benchmarks), and the Company's performance results in meeting them in 2015. Avista achieved all of its customer service benchmarks for the year.

Customer Service Measures	Benchmark	2015 Performance	Achieved
Percent of customers satisfied with our Contact Center services, based on survey results	At least 90%	96.1%	✓
Percent of customers satisfied with field services, based on survey results	At least 90%	96.8%	✓
Number of complaints to the WUTC per 1,000 customers, per year	Less than 0.40	0.17	✓
Percent of calls answered live within 60 seconds by our Contact Center	At least 80%	80.7%[3]	✓
Average time from customer call to arrival of field technicians in response to electric system emergencies, per year	No more than 80 minutes	44 Minutes	✓
Average time from customer call to arrival of field technicians in response to natural gas system emergencies, per year	No more than 55 minutes	51 Minutes	✓

[2] Schedule 85 for electric service and Schedule 185 for natural gas service, in Dockets UE-140188 and UG-140189 (consolidated).

[3] Results include all calls received for the year, including the nearly 56,000 calls answered during the November wind Storm event from November 17-27.

3. Electric System Reliability - Results for 2015

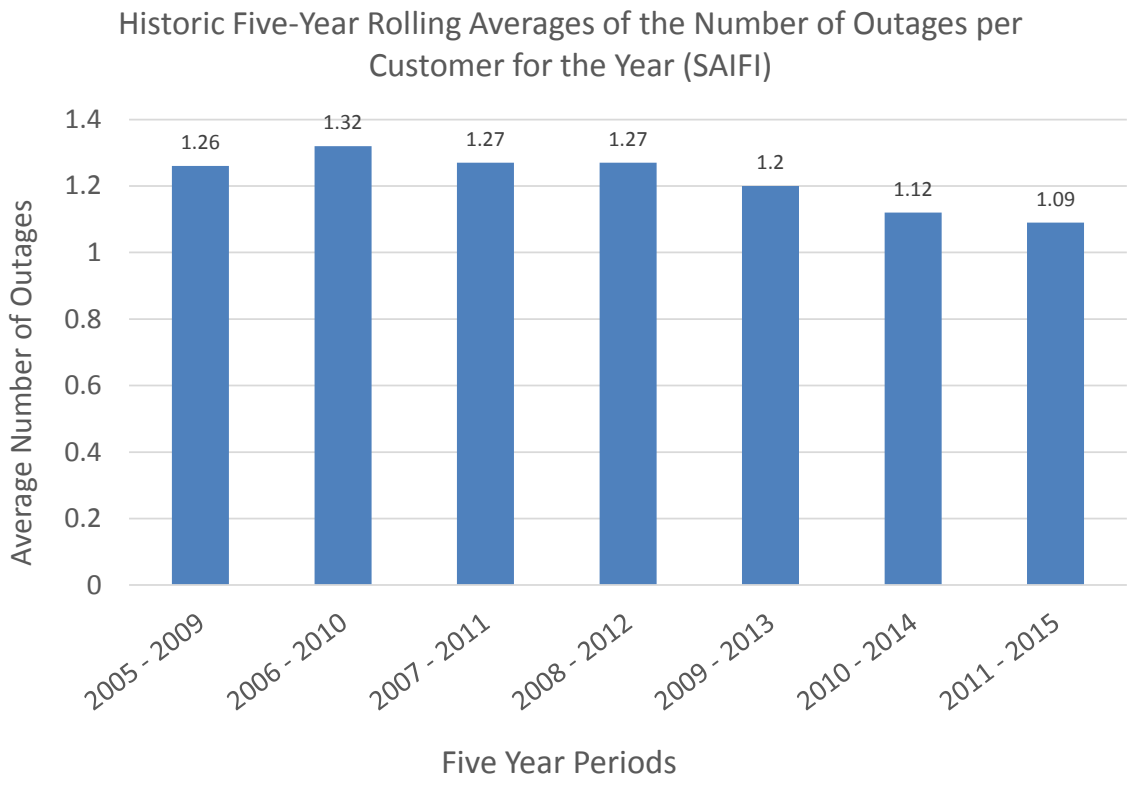
The tables below contain the two measures of electric system reliability to be reported by Avista each year as part of its service quality measures program. Because the annual electric reliability results often vary substantially year-to-year (for any electric utility's system), it is difficult to derive a meaningful assessment of the Company's system reliability from any single-year's result. Consequently, in addition to reporting the current-year result for each measure, we also report the average value of each measure for the previous five years, the average for the current five-year period (which includes the results for the current year - 2015), and the "five-year rolling average" from 2005 – 2015 (current-year results). This data will provide our customers with some context for understanding each year's reliability results.

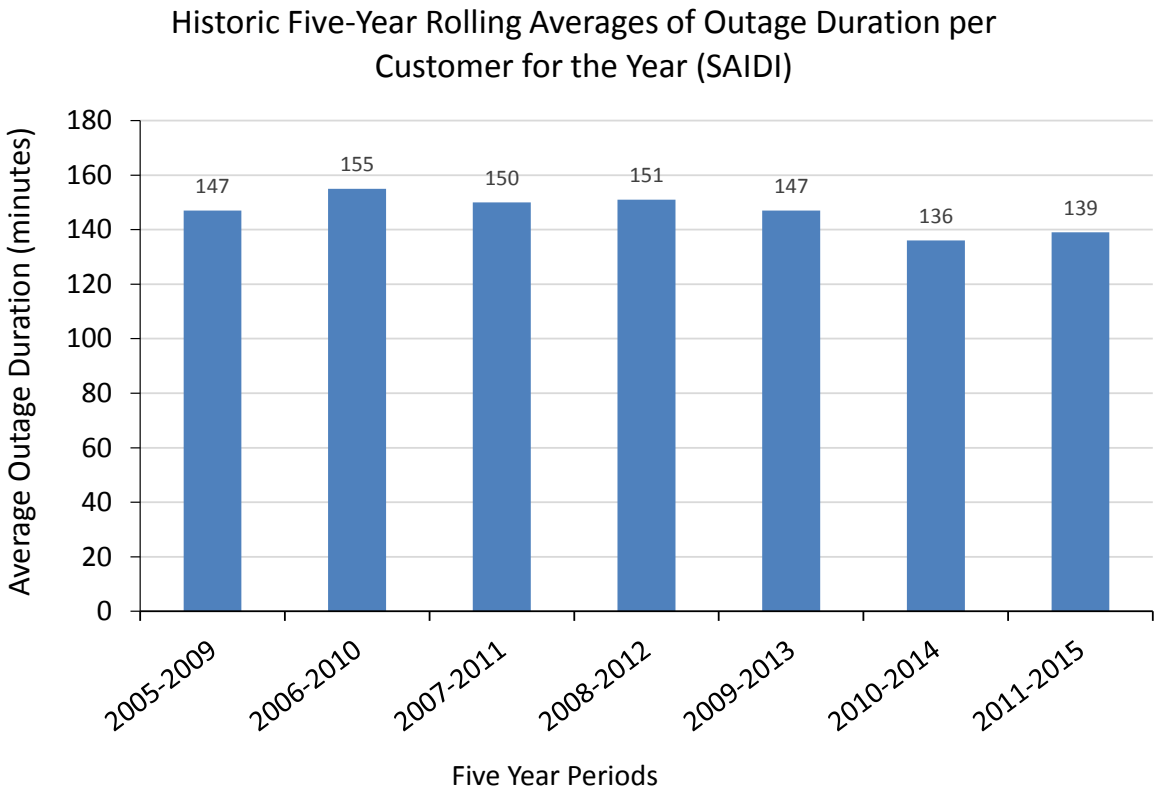
Number of Electric System Outages per Customer for the Year	**2015 System Results**	**5 Year Average (2011-2015)**	**5 Year Average (2010-2014)**
Number of sustained interruptions in electric service per customer for the year (SAIFI)[4]	1.05	1.09	1.12

Total Outage Duration per Customer for the Year	**2015 System Results**	**5 Year Average (2011-2015)**	**5 Year Average (2010-2014)**
Total Duration of all electric service outages for the per customer for the year (SAIDI)[5]	163 Minutes	139 Minutes	136 Minutes

The two figures below show the "five-year rolling average" for each reliability measure from 2005 through 2015. As shown in the figures, the long-term trend for each reliability measure is fairly stable, with trends toward improvement, over this period. Though the Company formally reports its reliability results, as noted above, for its entire electric system, beginning in 2015 Avista agreed to report its annual results separately for its Washington system. The Washington-only number of average electric system outages per customer in 2015 was 1.07, and the average total outage duration per customer was 169 minutes.

[4] See Appendix B for calculation of indices.
[5] See Appendix B for calculation of indices.


Historic Five-Year Rolling Averages of the Number of Outages per Customer for the Year (SAIFI)
Average Number of Outages
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1.26
1.32
1.27
1.27
1.2
1.12
1.09
2005 - 2009
2006 - 2010
2007 - 2011
2008 - 2012
2009 - 2013
2010 - 2014
2011 - 2015
Five Year Periods


Historic Five-Year Rolling Averages of Outage Duration per Customer for the Year (SAIDI)
Average Outage Duration (minutes)
180
160
140
120
100
80
60
40
20
0
147
155
150
151
147
136
139
2005-2009
2006-2010
2007-2011
2008-2012
2009-2013
2010-2014
2011-2015
Five Year Periods

4. Customer Service Guarantees

Our service quality measures program includes seven types of service for which we will provide "customer service guarantees." A list of the services covered is provided below:

- ✓ Keeping Our Electric and Natural Gas Service Appointments
- ✓ Promptly Restoring an Electric System Outage
- ✓ Promptly Switching on Electric Service When Requested
- ✓ Promptly Providing Cost Estimates to Customers for New Service
- ✓ Promptly Responding to Customer's Bill Inquiries
- ✓ Promptly Responding to Customer's Requests for Meter Testing
- ✓ Providing Customers Advance Notice of Scheduled Electric Interruptions

Under its service quality measures program, Avista began tracking its performance in meeting these customer service guarantees in 2016. Results for 2016 will be reported for the first time in 2017.

5. Electric System Reliability Report for 2015

Avista reports a range of detailed reliability statistics each year in its electric system reliability report filed with the Commission. Though two of these measures are the same as those reported under the Company's service quality measures program, described above, this report follows a separate set of technical reporting requirements and is separate and distinct from those in the service quality measures program. The four primary reliability statistics (or indices) that Avista reports each year in its electric system reliability report are briefly described below:

- ✓ System Average Interruption Frequency Index or "SAIFI," which is the average number of sustained interruptions per customer for the year.
- ✓ Momentary Average Interruption Event Frequency Index or "MAIFI," which is the average number of momentary interruption events per customer for the year.
- ✓ System Average Interruption Duration Index or "SAIDI," which is the average sustained outage time per customer for the year.
- ✓ Customer Average Interruption Duration Index or "CAIDI," which is the average restoration time for those customers who experienced an outage for the year.

In addition to these four reliability indices, Avista also tracks the following additional measures:

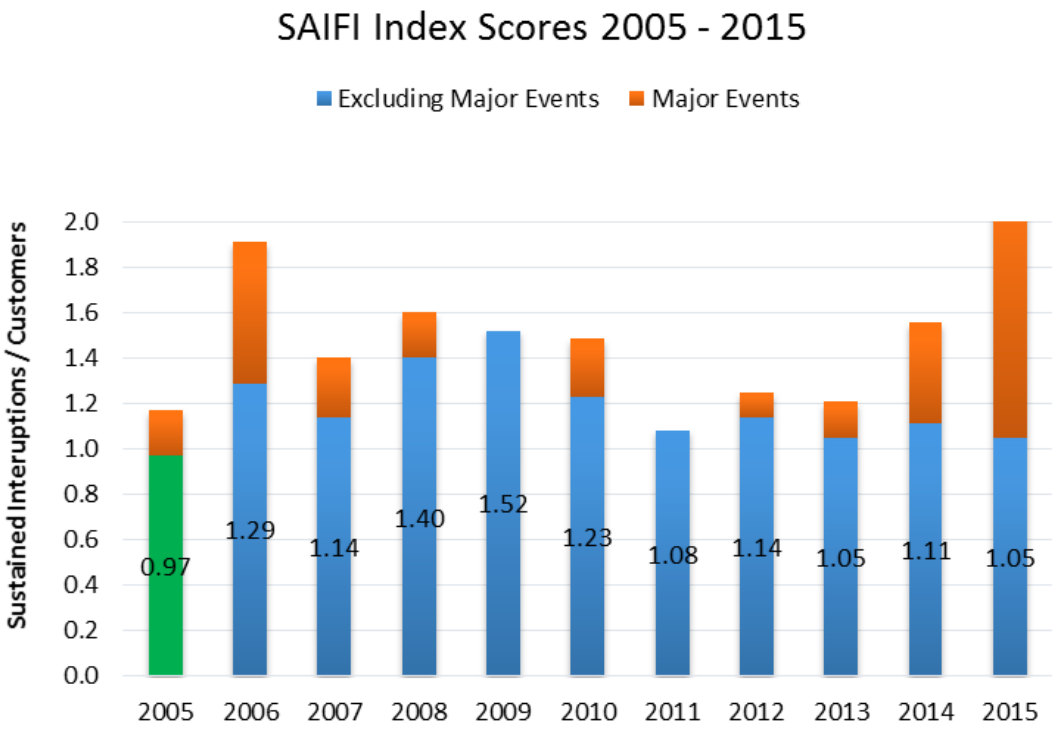
- ✓ Customers Experiencing Multiple Sustained Interruptions or "CEMI," which is the number of customers experiencing greater than a set number of interruptions.
- ✓ Customers Experiencing Multiple Sustained Interruption and Momentary Interruption Events or "CEMSMI," which is the number of customers experiencing multiple sustained interruption and momentary interruption events.

All of these reliability statistics and the methods of their calculation are discussed in greater detail later in the report and in Appendix B.

For 2015, Avista's results for its four primary reliability measures are listed in the table below. In addition to the current-year results we have also listed the past five-year average for each measure, and the 2005 baseline value.

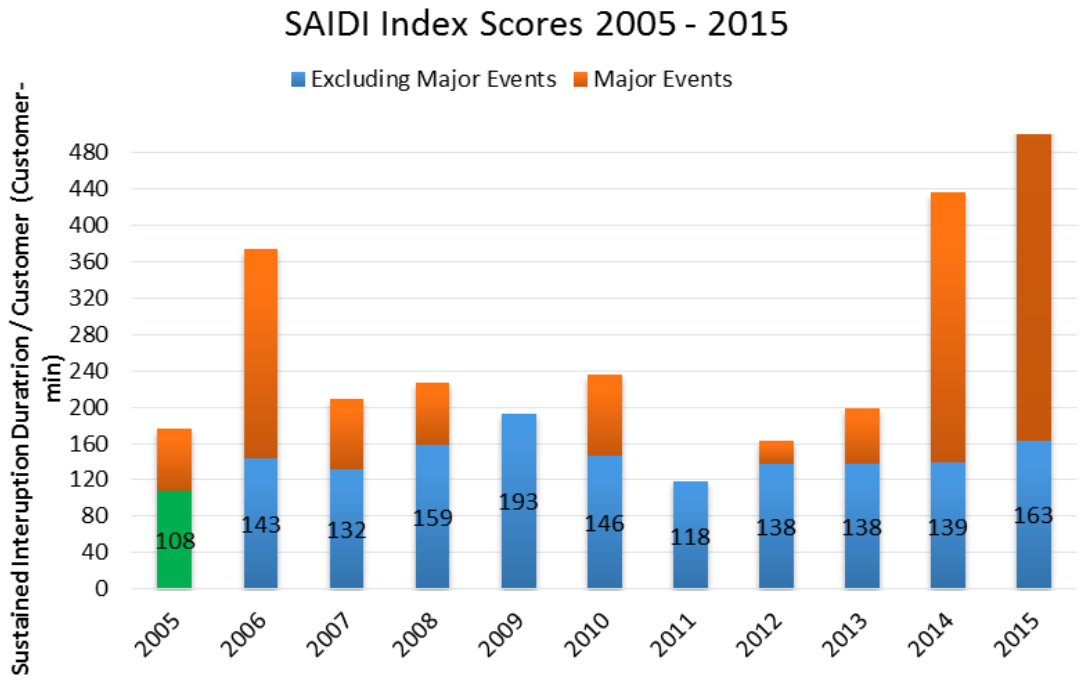
Reliability Index	Average 2010-2014[6]	Baseline Value 2005	Result for 2015 Reporting Year
SAIFI	1.12	0.97	1.05
MAIFI	2.49	3.58	2.11
SAIDI	136	108	163
CAIDI	121	112	156

For the index SAIFI, the average number of outages per customer reported by year on Avista's system, is shown in the chart below. The chart distinguishes between the outages associated with and without Major Events.

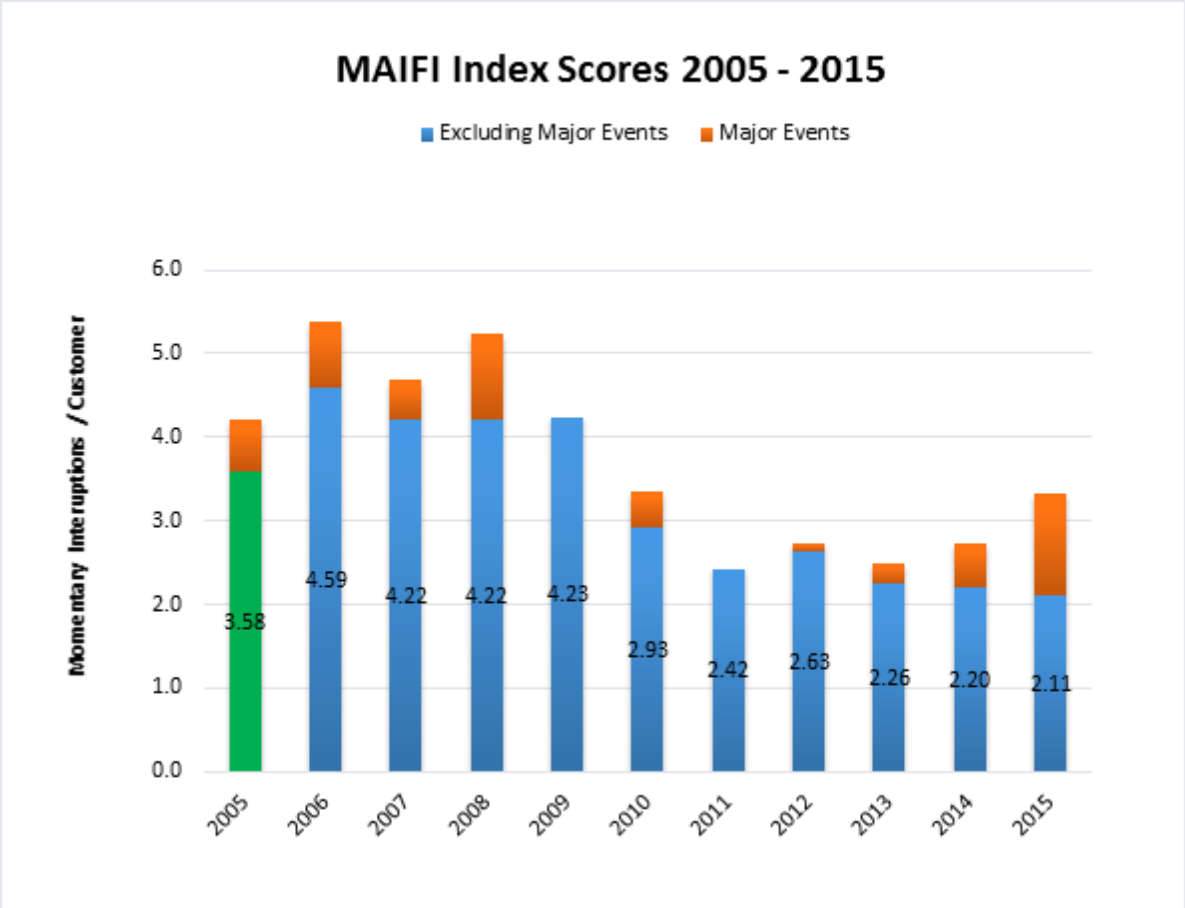


[6] Excludes Major Event Days.

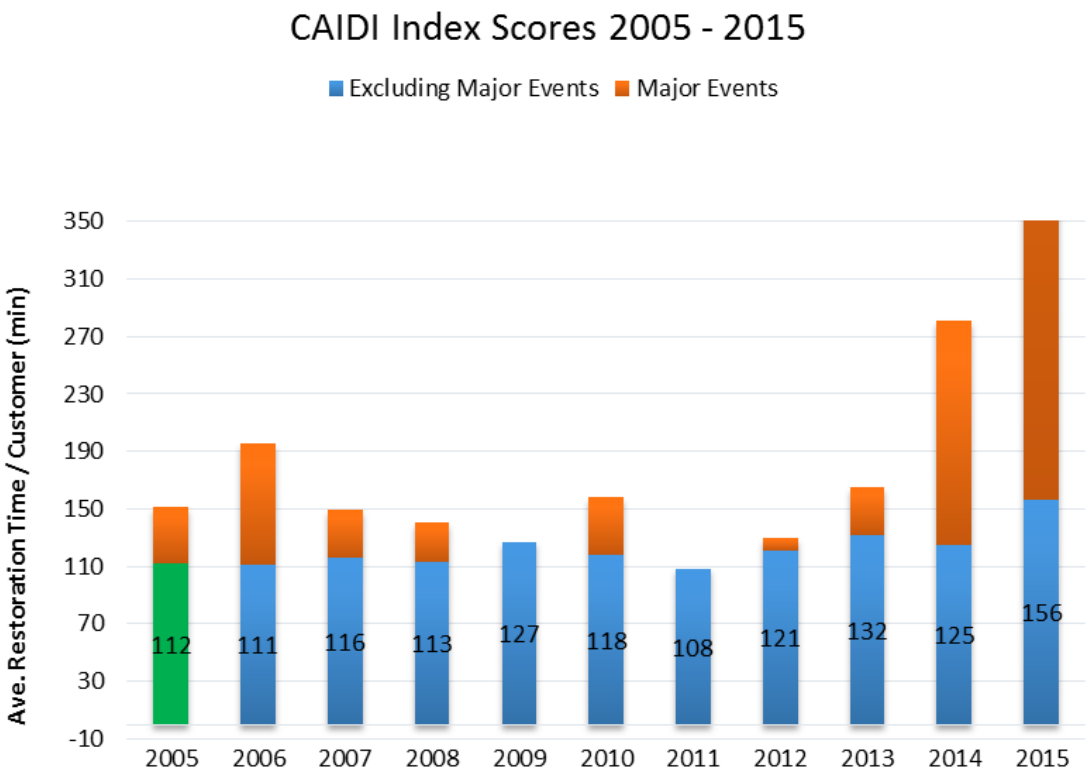
For the index SAIDI, the average duration in minutes of outages per customer reported by year on Avista's system, the annual results for each year are shown in the chart below. The chart distinguishes between the outages associated with and without Major Events.



For the index MAIFI, the average number of momentary outages reported by year on Avista's system, the annual results for each year are shown in the chart below. The chart distinguishes between the outages associated with and without Major Events.



For the index CAIDI, the customer average outage duration time (minutes) for those customers who experienced an outage on Avista's system, the annual results for each year are shown in the chart below. The chart distinguishes between the outages associated with and without Major Events.



II. Service Quality Measures Program

A. Background

Avista has a long history of providing safe, reliable and cost-effective service to our customers. Our culture of service is the result of an enduring leadership focus, an organizational ethic of service, actively listening to our customers, and the dedication and commitment of our employees. We also understand the importance of setting goals, measuring performance, and responding through continuous improvement. For many years, we have conducted a quarterly survey of our customers to measure and track their satisfaction with the Company's customer and field services. We have also participated in other survey efforts, such as the JD Power customer satisfaction survey, and have worked to align our internal systems (such as incentive compensation) with our customer satisfaction and service performance. We understand that good customer service is more complex than is represented by a common suite of survey metrics, such as the contact center "average handle time." It requires awareness of, and attention to a host of factors that contribute in some way to the overall service experience of our customers. A few examples include the inherent complexity of a business process, the intuitiveness and appeal of our website, the availability and ease of our self-service options, the apparel worn by our employees, wearing protective booties while inside the customer's home, and calling the customer to make sure their service is working once we have finished restoring an outage.

1. Keeping Pace with Customer Expectations

We understand that customers' expectations are constantly changing and that the quality and/or nature of our service must evolve over time to keep pace. As an example, new technologies that emerged 20-30 years ago allowed us to better measure and track the service performance of our contact centers. Equipped with new and accurate measures of a broad range of service attributes, we were able to establish new and responsive performance goals and to implement the technology, process, behavioral, and training improvements required to achieve these goals. This concerted effort allowed us to effectively meet the changing service expectations of our customers, and resulted in some industry recognition when we were named the best utility call center in the nation in 1999 by Call Center magazine. Continuing improvements since that time have allowed us to continue to keep pace with the needs and expectations of our customers.

In contrast to the long-term cycle of continuous improvement described above, some improvements in service have come about more abruptly, such as in 1996 when the Company experienced an unprecedented ice storm that devastated many parts of our electric transmission and distribution system. The challenge of managing an event of that magnitude with then-conventional systems, accompanied by the natural frustration of our customers, prompted us to initiate the development of a state-of-the-art geographical information system (GIS)-based outage management system, launched in 1999. This system provided us much greater visibility of outage events, which enabled us to more-efficiently manage the restoration process. But just as importantly, it allowed us to provide our customers with timely information that is important to them during an outage, such as maps showing the location and extent of the outage, early and updated estimates of outage restoration time, and the option to receive an automated call from the Company when service has been restored.

In recent years we have placed an emphasis on improving our customers' experience and satisfaction by improving the quality of the many service "touchpoints" where our customers interact with Avista. In this effort we inventoried the many touchpoints across our business and developed a programmatic approach for evaluating and improving them - from the customers' perspective - one touchpoint at a time. Since 2012, we have commissioned 39 employee "touchpoint teams" to assess and improve a range of service touchpoints. Through this process the Company has made numerous individual improvements to the overall quality of service we provide our customers.

Most recently, as customers' expectations regarding technology and self-service continue to advance, we are making strides to keep pace with these changes. In early 2015, the Company launched new customer information and work management systems. These new platforms provide the foundation for future technologies, such as the new outage information center launched in November 2015, a mere two weeks before a severe wind storm hit our service territory. The new outage information center provides real time updates to customers about outages in their area and can be accessed at www.avistautilities.com from a computer or smart phone. The next phase of the outage information center now in development is a mobile application ("App") that customers will be able to download to their smartphone. Additionally, work is underway to replace the Company's customer website and to provide more and easier tools to our customers for self-service.

2. Striking the Right Balance

As described above, Avista, like every business, is continuously engaged in the very granular and evolving work of assessing our customers' expectations and evaluating our capabilities and performance in meeting them. The key point here is that Avista must constantly judge whether its overall service quality meets the expectations of our customers, in balance with what it costs to deliver that level of service. We believe we are striking a reasonable balance among our customers' expectations, the characteristics of our extensive and often rural system, the quality of our services, and the cost associated with delivering those services. And when we sense that we are out of balance in a certain area, we make changes and investments needed to achieve, in our judgment, the optimal level of service. The examples described above help illustrate this point. In our customer contact center, we have for many years maintained a grade of service of answering 80% of our customer calls in sixty seconds. While there are numerous examples of industry norms where the grade of service is higher than Avista's, we have chosen to maintain our service level because, on balance, our customers are satisfied with our overall customer service. And we believe it is not cost effective to increase our staffing costs to achieve a higher level of service in this one area, when our customers are already very satisfied.

3. The Value of Setting Goals and Measuring Performance

We believe that measurement is, inherently, a good thing. It promotes organizational focus and accountability and always stimulates ideas for improvement. We also know from experience that it is very important to measure the right things, and for the right reasons. We all naturally take steps to promote the things that get measured, but sometimes at the expense of other things that (while unmeasured) are much more important. For many years we have measured the satisfaction of our customers through a quarterly survey we refer to as "Voice of the Customer." The purpose

of the survey is to measure and track customer satisfaction for Avista Utilities' "contact" customers – i.e., customers who have contact with Avista through the Call Center and/or field personnel with work performed operationally in the field. Customers are asked to rate the importance of several key service attributes, and are then asked to rate Avista's performance with respect to the same attributes. Customers are also asked to rate their satisfaction with the overall service received from Avista Utilities. Finally, customer verbatim comments are also captured and recorded. Our most recent 2015 year-end results show an overall customer satisfaction rating of 96.4% across our Washington, Idaho, and Oregon operating divisions. This rating reflects a positive experience for customers who have contacted Avista related to the customer service they received.

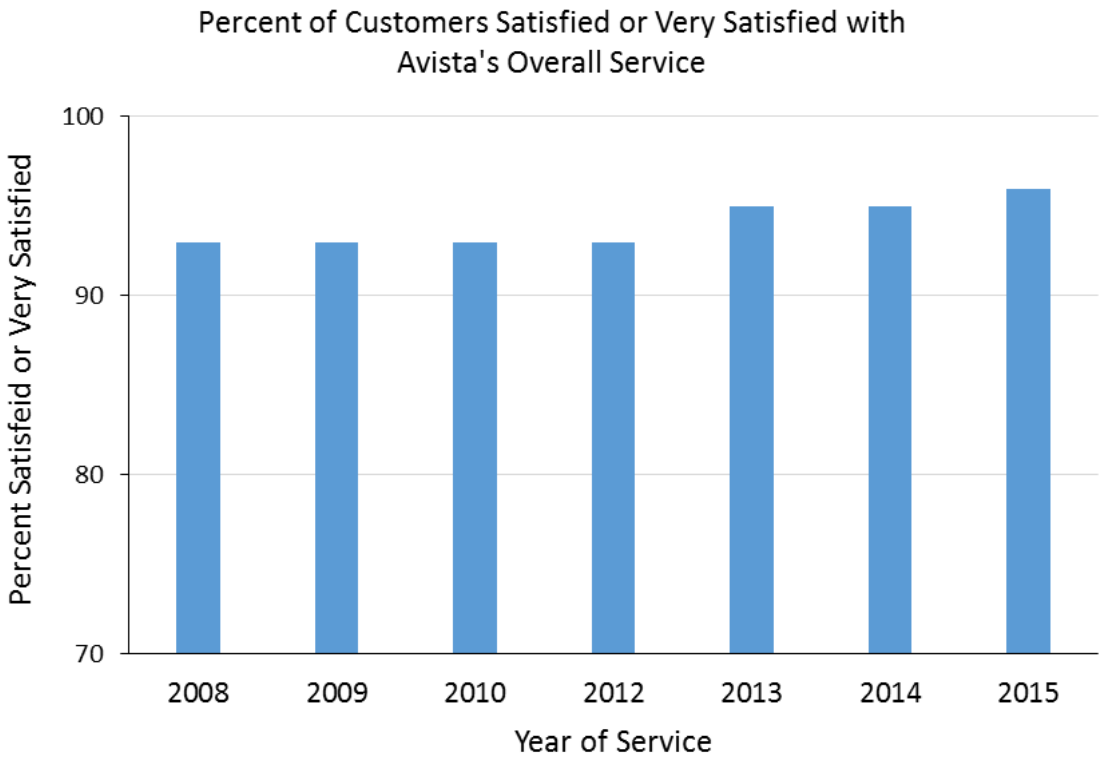
4. Adopting the Service Quality Measures Program

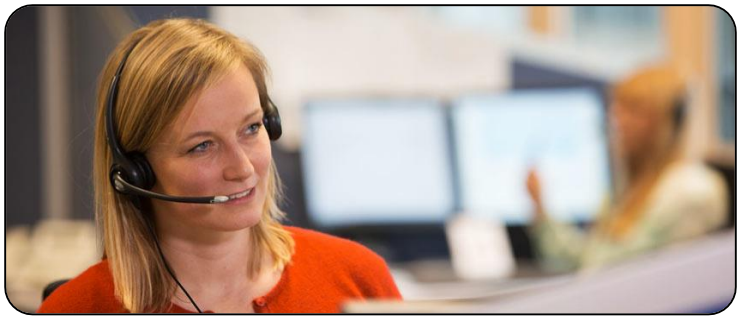
It is from the above perspective that we approached the process of working with Commission Staff and other interested parties to develop and implement a set of service quality measures for Avista. We believe the Company's history of customer service, including the level and quality of service we provide today, effectively meets the needs and expectations of our customers, and that it provides them with cost-effective value. We believe the service quality measures adopted by the Commission[7] for Avista, as contained in this report, represent a reasonable set of service expectations for our customers, the Commission, and our Company.

B. Customer Service Measures

As noted above, there are many points of service our customers have with Avista and each contributes to the overall impression they have of the Company and the level of satisfaction they have with our services. While for many years we have tracked our customers' satisfaction with primary services such as our customer contact center and field services, we have also been interested in knowing whether our performance is meeting our customers' broader service expectations. As part of our Voice of the Customer survey we have asked our customers to rate their level of satisfaction with the overall service they receive from the Company. We believe this overall measure is an important barometer of our customers' satisfaction with the entirety of the integrated services and value they receive from Avista. As show in the figure below, the overall satisfaction of Avista's customers (either satisfied or very satisfied) has ranged between 93 and 96% over the past eight years. These results are similar to our customers' satisfaction with our contact center and field services for this same time period. Accordingly, we believe the results of the six customer service measures contained in this report, taken together, provide a reasonable assessment of our customers' overall satisfaction with the quality and value of our service.

[7] On June 25, 2015 the Commission approved Avista's Service Quality Measures Program as filed by the Company on May 29, 2015. Order 06 - Final Order Approving Avista's Service Quality Measures Program Compliance Filing, in Dockets UE-140188 and UG-140189 (consolidated).


Percent of Customers Satisfied or Very Satisfied with Avista's Overall Service
Percent Satisfeid or Very Satisfied
100
90
80
70
2008
2009
2010
2012
2013
2014
2015
Year of Service



1. Customer Satisfaction with the Telephone Service provided by Avista's Customer Service Representatives

As part of Avista's Service Quality Measures program, the level of our customers' satisfaction with the telephone service provided by the Company's contact center will meet or exceed a benchmark of 90%.[8]

Several factors influence our customers' satisfaction with the quality of telephone service provided by our customer service representatives and contact center. We measure the importance of these factors to customers as well as their satisfaction with them each year. These factors, including our customers' satisfaction (either satisfied or very satisfied) for each factor in 2015 are listed below.

- ✓ The customer service representative handling the customer's call in a friendly, caring manner. **(97.4%)**
- ✓ The customer service representative being informed and knowledgeable. **(95.3%)**
- ✓ The customer service representative meeting the customer's needs promptly. **(94.9%)**
- ✓ The customer service representative giving the customer all the information they need in one call. **(94.4%)**
- ✓ Being connected to a customer service representative in a reasonable amount of time. **(93.2%)**

In addition to making sure our customer service representatives are effectively trained and sufficiently staffed to deliver excellent service during the course of normal business operations, Avista also faced a significant challenge to our service levels when we launched a new customer information and work and asset management system in February 2015. The launch of any new customer information system typically results in customer calls taking longer than normal as the

[8] The level of Customer satisfaction with telephone service, as provided by the Company's Contact Center, will be at least 90 percent, where:

a. The measure of Customer satisfaction is based on Customers who respond to Avista's quarterly survey of Customer satisfaction, known as the Voice of the Customer, as conducted by its independent survey contractor;
b. The measure of satisfaction is based on Customers participating in the survey who report the level of their satisfaction as either "satisfied" or "very satisfied"; and
c. The measure of satisfaction is based on the statistically-significant survey results for both electric and natural gas service for Avista's entire service territory for the calendar year, and if possible, will also be reported for Washington customers only.

customer service representative learns to efficiently navigate the new system. And because calls are longer, there will be more calls on hold waiting to be answered by a representative, which will result in longer hold times. In addition to these challenges, Avista made several changes in its billing process including a new bill format and new customer account number. These changes caused an increase in the number and duration of customer calls.

In anticipation of these challenges the Company focused on effectively training its customer service representatives on the new systems and implemented a substantial customer communication campaign to familiarize customers with the pending changes to their account and the new monthly bill. Avista also added several temporary customer service representatives to its normal staffing compliment to help manage the greater call volume and duration. These efforts resulted in a very successful launch of the new customer information and work and asset management systems. On the first day of service we slightly missed our normal benchmark of answering 80% of our customer calls live within 60 seconds (referred to as the "grade of service"), but we were able to achieve this benchmark by the second day and beyond. By the end of the first week of service we were able to operate our customer contact center with our normal staffing compliment. Because it is not uncommon for a utility to require a much greater period of time (and with substantially increased staffing) to achieve its normal operating benchmarks (e.g. a month or longer), Avista was very pleased with our overall results. Also, the Company had no customer complaints filed with the Commission for any aspect of its launch of the new systems or changes to the customer account and billing format.

2015 Results - The annual survey results for this measure of customer satisfaction show that 96.1% percent of our customers were satisfied with the quality of the telephone service they received from our customer service representatives. Overall, 82.3% of our customers were "very satisfied" and 13.8% were "satisfied" with the quality of our service.

Customer Satisfaction with Avista's Contact Center Representatives	Service Quality	2015 Performance	Achieved
Percent of customers either satisfied or very satisfied with the Quality of Avista's Customer Contact Center Representatives	90% or Greater Satisfied	96.1%	✓

Prior to the development of the service quality measures program, Avista did not separately track or report results for any of our state jurisdictions, and for reporting our annual service quality performance under this program the Company will continue to use its system-wide results. We will, however, separately track and report the results for this measure for our Washington customers only. For 2015, the company was able to separately track our Washington customers for the months of April through December. For that portion of the year the percent of Washington customers satisfied or very satisfied with the Company's customer service representatives and contact center was 93.8%. Going forward, Avista will report the results separately for its Washington customers for the full year.

2. Customer Satisfaction with Avista's Field Service Representatives

As part of Avista's Service Quality Measures program, the level of our customers' satisfaction with the Company's field services will meet or exceed a benchmark of 90%.[9]

The quality of our field services and the satisfaction of our customers is influenced by several factors. Each year we measure the importance of these factors to our customers and their satisfaction with each aspect of our service. These factors, including our customers' level of satisfaction (either satisfied or very satisfied) with each factor in 2015, are listed below.

- ✓ The service representative keeping you informed of the status of your job. **(94.1%)**
- ✓ The service representative or service crew being courteous and respectful. **(98.5%)**
- ✓ The service representative or service crew being informed and knowledgeable. **(97.5%)**
- ✓ The service representative or service crew leaving your property in the condition they found it. **(97.5%)**
- ✓ The service work being completed according to the customer's expectations. **(96.7%)**
- ✓ The overall quality of the work performed by Avista Utilities. **(97.5%)**

2015 Results - The annual survey results for this measure, as reported in the table below, show that 96.8% percent of our customers were satisfied with the service provided by Avista's field service representatives. Overall, 86% of our customers were "very satisfied" and 10.8% were "satisfied" with the quality of our field services.

[9] The level of Customer satisfaction with the Company's field services will be at least 90 percent, where:
a. The measure of Customer satisfaction is based on Customers who respond to Avista's quarterly survey of Customer satisfaction, known as the Voice of the Customer, as conducted by its independent survey contractor;
b. The measure of satisfaction is based on Customers participating in the survey who report the level of their satisfaction as either "satisfied" or "very satisfied"; and
c. The measure of satisfaction is based on the statistically-significant survey results for both electric and natural gas service for Avista's entire service territory for the calendar year, and if possible, will also be reported for Washington customers only.

Customer Satisfaction with Avista's Field Services Representatives	Service Quality	2015 Performance	Achieved
Percent of customers either satisfied or very satisfied with the Quality of Avista's Field Service Representatives	90% or Greater Satisfied	96.8%	✓

Prior to the development of the service quality measures program, Avista did not separately track or report results for any of our state jurisdictions, and for reporting our annual service quality performance under this program the Company will continue to use its system-wide results. We will, however, separately track and report the results for this measure for our Washington customers. For 2015, the company was able to separately track our Washington customers for the months of April through December. For that portion of the year the percent of Washington customers satisfied or very satisfied with the Company's field service representatives was 94.9%. Going forward, Avista will report the results separately for its Washington customers for the full year.

3. Customer Complaints made to the Commission

As part of Avista's Service Quality Measures program, the number of complaints filed by our customers with the Commission will not exceed a ratio of 0.4 complaints per 1,000 customers.[10]

When our customers are unhappy with any aspect of the service they receive from Avista, and the Company is made aware of the issue, our intent is work with the customer to quickly and fairly resolve the issue to their satisfaction. Though we are successful in resolving the majority of these customer issues, there are some that cannot be favorably resolved and result in the customer filing a formal complaint with the Commission. In addition to complaints arising in this manner, there are also instances where a customer files a complaint without having first notified the Company of their issue or concern. While past experience has shown that the Commission ultimately finds in the great majority of these complaints that the Company has acted properly, Avista agrees that the number of complaints filed does provide one indicator of the level of dissatisfaction our customers may have with our service.

2015 Results – Our Washington customers filed a total of 70 complaints with the Commission in 2015. The predominant areas of concern related to credit and collections and billing matters. Avista's customer count as defined for this measure was 409,639. The resulting fraction of complaints (68 ÷ 409,639) was 0.0001659, and the number of complaints per 1,000 customers (0.0001659 × 1,000) was 0.17 (rounded up), as noted in the table below.

Percent of Avista's Customers Who File a Commission Complaint	Service Quality	2015 Performance	Achieved
Number of Avista's customers who file a complaint with the Commission (number of complaints per 1,000 customers)	Ratio of 0.4 or Lower	0.17	✓

[10] The ratio is calculated by dividing the sum of all electric and natural gas customer complaints filed with the Commission by the average monthly number of Avista customers for the year. The rate is calculated by multiplying the percentage by 1,000.

4. Answering Our Customer's Calls Promptly

As part of Avista's Service Quality Measures program, the percentage of customer calls answered live by a customer service representative within 60 seconds will average 80% or greater.[11]

This particular customer service measure is one of the subset of service attributes that contribute to the customer's overall satisfaction with our service representatives and contact center. Often referred to as the "grade of service," this measure is the average percentage of customer calls to our contact center that are answered live by a customer service representative within 60 seconds for those customers who wish to speak with a service representative. When a customer calls Avista's contact center their call is initially received by our automated (voice activated) phone system. The customer is presented the option of using the phone system for self-service (e.g. to check their account balance or pay their bill, etc.) or to speak with a customer service representative live to meet their service need. Avista's response time in answering the customer's call is the time that elapses between the customer's request to speak to a representative and when their call is answered live by a representative.

For many years Avista has maintained a service benchmark of 80% or greater, even though some utilities and businesses have established a higher "grade of service" (e.g. 90% or a goal of answering calls within 30 seconds). Because it requires an increased level of staffing and cost to customers to achieve a higher service level, Avista has focused on lower cost / no cost measures, such as effective employee training and coaching to achieve superior standards for attributes such as courtesy, caring, knowledge, and proficiency, to maintain our very high level of overall customer satisfaction with our service representatives and contact center.

In addition to responding to customers effectively, Avista has implemented measures to help reduce the overall volume of customer calls, which helps reduce the cost of service paid by our customers. These efforts include providing customers a way to communicate with the Company using their preferred "channel" of communication, such as e-mail, customer web, or the automated phone system. We are currently working to launch a new customer website and mobile application

[11] The percentage of Customer calls answered by a live representative within 60 seconds will average at least 80 percent for the calendar year, where:

a. The measure of response time is based on results from the Company's Contact Center, and is initiated when the Customer requests to speak to a Customer service representative; and
b. Response time is based on the combined results for both electric and natural gas Customers for Avista's entire service territory.

("App") to improve the satisfaction of our customers who prefer these channels. This not only helps reduce the volume of calls to our contact center and maintain a high level of service at lower cost, but it also improves customer satisfaction.

2015 Results – Our Washington customers made a total of 763,263 qualifying calls to Avista that were answered live by a customer service representative in 2015. Of these calls, 615,953 were answered live in 60 seconds or less, for a score of 80.7%, as shown in the table below.

Percent of Avista's Customer Calls Answered Live Within 60 Seconds	Service Quality	2015 Performance	Achieved
Percent of Avista's customer calls answered live by a customer service representative within 60 seconds	80% or Greater	80.7%	✓

5. Avista's Response Time for Electric Emergencies

As part of Avista's Service Quality Measures program, the average response time to an electric system emergency will not exceed 80 minutes for the year.[12]

When our customers call Avista to report an electric emergency we work with the customer to quickly ascertain the particular circumstances being reported, and instruct the customer on how best to ensure their own safety and that of others until help arrives. We immediately begin the dispatch of service personnel best situated to respond in the shortest time possible. Once at the scene Avista's first priority is to make the situation safe for our customers, citizens, other emergency responders, and our employees. Restoration of the problem can begin once the safety of the site is secured and needed resources arrive at the scene. The Company's ability to respond quickly to an electrical emergency is influenced by many factors, some of which include the urban or rural locale, the location of the nearest available respondent (especially in rural areas), the time of day, season of the year, weather conditions, traffic, and the presence of other simultaneous emergency events across the system. For this measure, the response time to an electric emergency is the elapsed time between the confirmation of the emergency with the customer (when the dispatch field order is given) and when the Avista service person arrives at the scene.

2015 Results –The average response time for the year is calculated by dividing the sum of all applicable electric emergency response times by the total number of qualifying electric emergency incidents. Avista received 378 qualifying emergency reports in 2015, which had a cumulative response time of 16,483 minutes. The average response time for the year is calculated by dividing the cumulative response time by the total number of responses. The resulting average for 2015 was 43.6 minutes as noted in the table below.

[12] The Company's average response time to an electric system emergency in Washington will not exceed 80 minutes for the calendar year, where:

a. Response time is measured from the time of the Customer call to the arrival of a field service technician;
b. "Electric system emergency" is defined as an event when police / fire services are standing by, or arcing/flashing wires down (unspecified location, pole to house, or pole to pole), or for feeder lockout; and
c. Response times are excluded from the calculation for those periods of time when the Company is experiencing an outage that qualifies as a "Major Event Day" (or "MED"), as defined by the Institute of Electrical and Electronics Engineers, and which includes the 24 hour period following the Major Event Day.

Avista's Response Time for Electric Emergencies	Service Quality	2015 Performance	Achieved
Average time from customer call to the arrival of Avista's field technicians in response to electric system emergencies	80 Minutes or Less	43.6 Minutes	✓

6. Avista's Response Time for Natural Gas Emergencies

As part of Avista's Service Quality Measures program, the average response time to a natural gas system emergency will not exceed 55 minutes for the year.[13]

When our customers call Avista to report a natural gas emergency, we work with the customer to quickly ascertain whether the presence of natural gas (odor) is likely coming from inside the customer's home or business or from facilities outside. If inside, the customer is instructed to immediately evacuate the building to a safe distance and await the arrival of emergency responders. If the leak is in facilities outside, instructions to the customer are based on the proximity and type of the leak to their (or others') home or business. Once the nature of the leak has been determined and the customer has been given precautionary instructions on how best to ensure their own safety and that of others until help arrives, we immediately begin the dispatch of service personnel best situated to respond at the scene in the shortest time possible. At the scene Avista's first priority is to make the situation safe for our customers, citizens, other emergency responders, and our employees. Restoration of the problem can begin once the safety of the site is secured and needed resources arrive at the scene.

The Company's ability to respond quickly to a natural gas emergency is influenced by many factors, some of which include the urban or rural locale, the location of the nearest available respondent (especially in rural areas), the time of day, season of the year, weather conditions, traffic, and the presence of other simultaneous emergency events across the system. Natural gas emergencies differ from electric emergencies, however, in that the risk of a potential consequence to a gas leak can increase with the passage of time as leaking natural gas may accumulate at the site. For this reason Avista's work practices and staffing levels aim to provide an average response time of 55 minutes or less. For this measure, the response time to a natural gas emergency is the elapsed time between the confirmation of the emergency with the customer (when the dispatch field order is given) and when the Avista service person arrives at the scene.

[13] The Company's average response time to a natural gas system emergency in Washington will not exceed 55 minutes for the calendar year, where:

a. Response time is measured from the time of the customer call to the arrival of a field service technician; and
b. "Natural gas system emergency" is defined as an event when there is a natural gas explosion or fire, fire in the vicinity of natural gas facilities, police or fire are standing by, leaks identified in the field as "Grade 1", high or low gas pressure problems identified by alarms or customer calls, natural gas system emergency alarms, carbon monoxide calls, natural gas odor calls, runaway furnace calls, or delayed ignition calls.

2015 Results –The average response time for the year is calculated by dividing the sum of all applicable natural gas emergency response times by the total number of qualifying emergency incidents. Avista received 798 qualifying emergency reports in its Washington service area in 2015, which had a cumulative response time of 40,700 minutes. The average response time for the year is calculated by dividing the cumulative response time by the total number of responses. The resulting average for 2015 was 51 minutes as noted in the table below.

Avista's Response Time for Natural Gas Emergencies	Service Quality	2015 Performance	Achieved
Average time from customer call to the arrival of Avista's field technicians in response to natural gas system emergencies	55 Minutes or Less	51 Minutes	✓

C. Electric System Reliability

Providing safe and highly-reliable electric service for our customers at a reasonable cost is fundamental to our business. We believe our current level of reliability is reasonable and cost effective for our customers, and our long-term objective is to generally uphold our current levels of electric system reliability. Achieving this requires a constant focus on maintaining the health of the system and meeting the expectations of our customers regarding the reliability of their electric service. By electric "system" we are referring to the overall network of electric transmission lines, substations, and the distribution lines, or "feeders," that carry electricity to every home and business in our service area. When we speak of "system reliability" we are essentially referring to the number of times in a year that our customers experience an electric service outage (outage frequency), and the length of time it takes to restore our customers' service after an outage has occurred (outage duration).

The electric industry has adopted a fairly uniform set of measures (or indices) developed by Institute of the Electrical and Electronics Engineers[14] to report various aspects of electric system reliability. Two of the most-commonly reported measures are very briefly described below, and are discussed in detail in in section III of this report and in Appendix B. For its service quality measures program Avista will report its annual reliability results in the context of its historic five-year rolling average for these two measures.

- ✓ **Number of Outages Experienced per Customer for the Year** – This measure of system reliability, which is referred to as the System Average Interruption Frequency Index or ("SAIFI") is equal to the total number of customers whose service is interrupted divided by the total number of customers served.
- ✓ **Total Outage Duration Experienced per Customer for the Year** – This measure, which is referred to as the System Average Interruption Duration Index or ("SAIDI") is equal to the total outage time in minutes experienced by all customers who had service outages divided by the total number of customers served.

Many factors influence the frequency and duration of outages on any electric system. Some of these include the average age of the system, its engineering design, construction standards, general condition, the extent of the system that is rural, terrain, utility equipment and staffing levels, and its day-to-day operation. The type and proximity of surrounding vegetation and local and regional weather patterns, including variability in weather, can have a pronounced impact on system

[14] See Appendix B for definitions and index calculations.

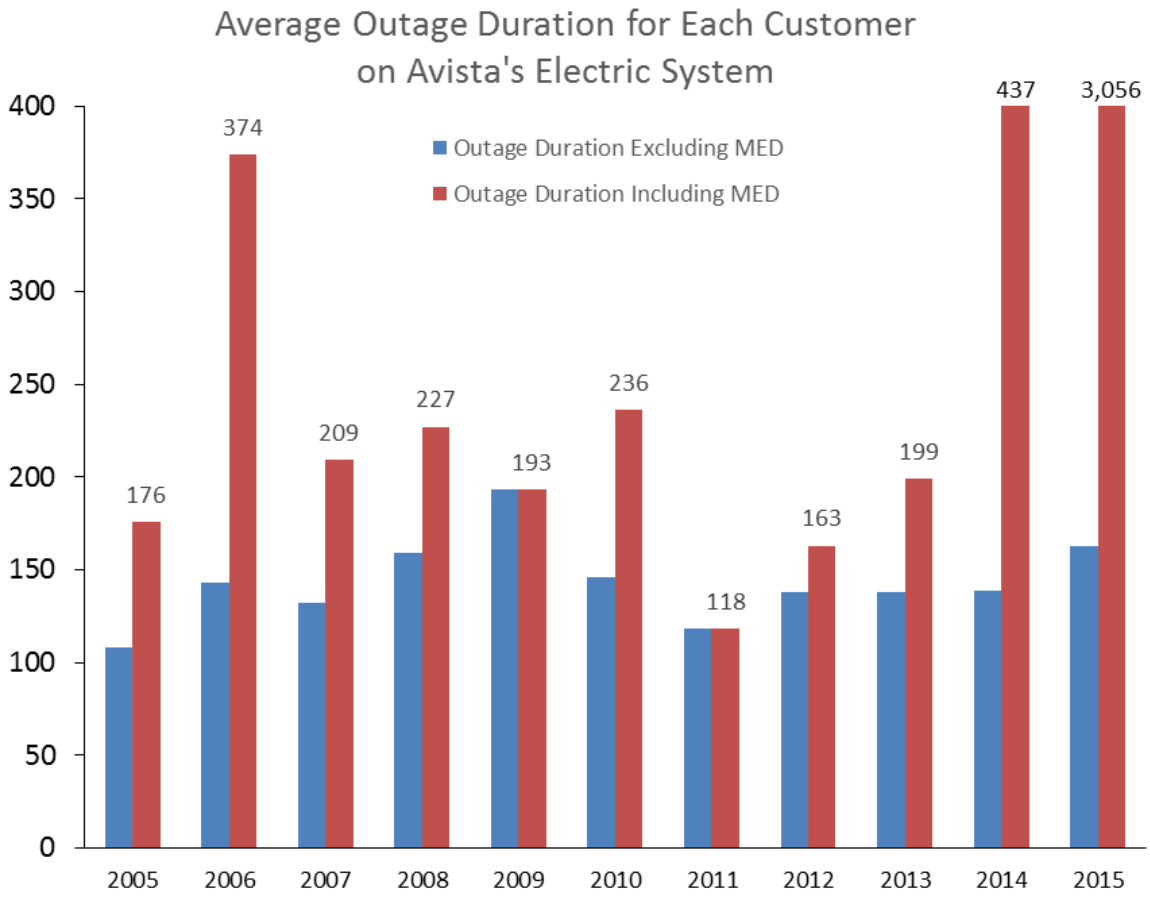
reliability. Because the frequency and duration of the electric system outages that result from these factors can vary substantially from year to year, there is, naturally, substantial variability in the measures of overall system reliability over time.

For Avista, weather-related outages tend to have a predominant impact on the reliability of our system. This is because individual weather events often impact large portions of our system and can result in damage to many types of facilities. Weather caused outages, particularly from high winds, ice, and snow can also require substantial effort and time to restore. These storm events can result in many customers without service for an extended period of time. This was clearly evident in the substantial system outages caused by windstorms in the late summer of 2014, and the very significant wind storm event of November 2015.

On November 17th, 2015 a substantial portion of Avista's electric service area was subject to an unprecedented high wind event for our area. As the winds progressed in speed and magnitude throughout the day, Avista began to see customer outages increase rapidly and dramatically. The storm interrupted service to 178,210 customers. At its peak, 111 distribution feeder lines were without service (about 1/3 of all Avista's feeder lines). A total of 58 substations were impacted, and 40 substations were without power on November 17. Approximately 70% of Spokane County customers had service interrupted. Impacts to the electric transmission system included loss of service on twenty-five small transmission lines (115,000 volts) and four large transmission lines (230,000 volts). It took almost 10 days of around-the-clock restoration effort by up to 132 electric construction crews, composed of Avista, electrical contractors, and mutual aid crews from utilities in six western states and Canada. These crews worked 16-hour shifts on a rotating basis to restore service to everyone impacted by the windstorm.

Because the impact of weather on system reliability is common to all electric systems, the industry has adopted standardized adjustments that remove most of the weather-caused variability in measures of outage frequency and duration. When storm damage to an electric system reaches a threshold level of severity the outage results for that day are qualified as a Major Event Day or ("MED"). The outages caused by any storm event that qualifies as a Major Event Day are removed from the data used to calculate the utility's annual reliability results for outage frequency and duration. The figure below shows the results for the total duration of outages per customer for the

year on Avista's system (SAIDI). The blue columns represent the annual duration where the outages associated with Major Event Days are excluded, which is the standard format for our reliability reporting. The red bars show the annual duration for all outages, including the outages associated with Major Event Days.

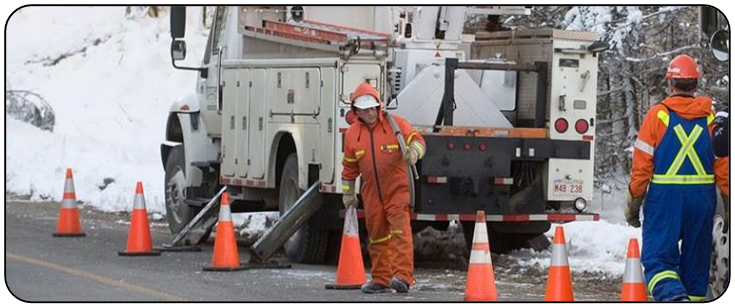


Although the year-to-year variability in outage duration is substantially reduced by the adjustment for Major Events, there can still be a substantial weather impact on reliability. This is the result of storms that, while not qualifying as Major Events, can still cause substantial system outages during the year. As an example, in the figure above, with the Major Event Days included (orange line) the outage duration for year 2009 is in the lower third of the range of variability. But with the Major Event Days excluded (blue line) the 2009 results exceed those for any other year. This is because Avista experienced many storms that year that caused significant system outages, however, none of those storm events qualified as a Major Event. The result is that even with Major Event Days removed, weather can still have a significant effect on the overall system reliability.

The important point of this discussion is that the reliability results for any single year, considered in isolation, do not provide a meaningful measure of the overall reliability of the utility's system, or an assessment of whether the performance that year was "acceptable" or "unacceptable." Importantly, Avista is not trying to make the case that any particular level of reliability is acceptable to its customers. Regardless of the year-to-year variability in reliability, Avista must

achieve a balance in the costs and benefits of its reliability investment and we must meet the service expectations of our customers every year. The reliability performance of our system (or any utility system) should be evaluated over the long term as the basis for evaluating whether our reliability is trending stably, improving, or degrading.[15] Avista has agreed to report its annual reliability results to its customers in the context of its historic five-year rolling average. This approach provides our customers with the context for understanding how each year's reliability results fit into our long-term trend in overall system reliability.

[15] This is similar to the approach now used by the California Public Utilities Commission to evaluate electric utilities' system reliability. In: Approaches to Setting Electric Distribution Reliability Standards and Outcomes, pages 130 - 136. The Brattle Group, Ltd. 2012.



1. Number of Electric System Outages

As part of Avista's Service Quality Measures program, the Company will report its annual electric system reliability measure for the number of non-major storm power outages experienced per customer for the year (SAIFI).[16]

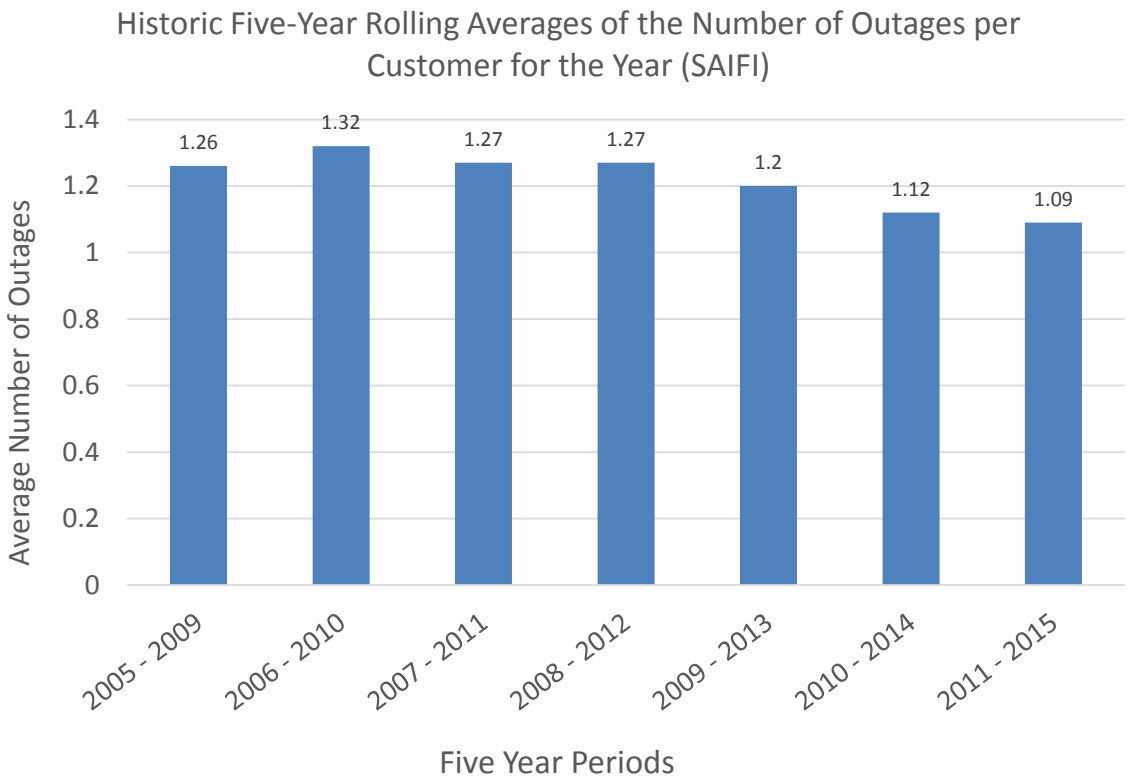
2015 Results – This measure, as noted earlier, represents how often an average Avista electric customer experienced a sustained[17] interruption in service (outage) for the year. This measure is calculated by totaling the number of customers who experienced an interruption for the year divided by the total number of customers served. The 2015 result of 1.05 (slightly more than one outage per customer for the year) was below the average value for the previous five-year period (2010-2014) of 1.12, which resulted in a slight lowering of the average for the current five-year period. For 2015 the Washington only result was:

Number of Electric System Outages for the Average Avista Customer	2015 System Results	Current 5 Year Average (2011-2015)	Change in 5 Year Average
Number of sustained interruptions in electric service for the average Avista customer for the year (SAIFI)	1.05	1.09	-.03

The figure below shows the rolling five-year average value for SAIFI for each five-year period from 2005 through 2015. Over this period, the general trend shows a slight increase in outage frequency during the middle years followed by decline in frequency in the later years of the period. Overall, the trend is relatively stable.

[16] The Company will report the frequency of electric system interruptions per Customer for the calendar year, where:
a. The interruptions are measured as the System Average Interruption Frequency Index ("SAIFI"), as calculated by the IEEE;
b. The calculation of SAIFI excludes interruptions associated with any MED;
c. The report will provide a brief description of the predominant factors influencing the current-year results, and in the context of the Company's historic five-year rolling average of SAIFI; and
d. The results will be reported on a system basis for Washington and Idaho and will include the annual SAIFI for Washington only.

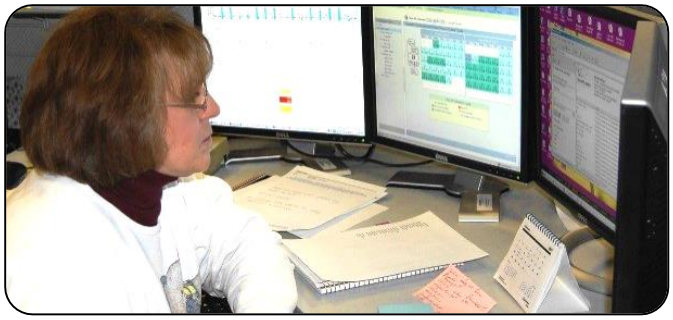
[17] Any service interruption that is greater than five minutes in duration.



In 2015, with the outages associated with Major Events removed (in particular the November windstorm), the top three outage cause categories were: 1) weather; 2) pole fires; and 3) public caused.[18] Their respective contributions were 27.6%, 16.6%, and 12.4%.

- A major contributor to the weather-caused outages was heavy snowfall from December 17th – 25th that caused the loss of many trees and large tree branches in the proximity of our lines.
- A large component of the pole fire-caused outages was an incident on an electric transmission line owned and operated in the Kettle Falls area by the Bonneville Power Administration. This line (rated at 115,000 volts) supplies power to multiple Avista substations and, as a consequence, this outage affected many of our customers served on feeder lines from each of these substations. In addition to the number of customers affected, the duration of the outage was lengthy due to the time required to repair the damaged transmission line.
- The two leading types of incidents associated with public caused outages included cars striking poles or ground-mounted transformers, and wildfires. There were many wildfires in the Colville-Kettle Falls area in 2015, which resulted in many outages and long outage durations because the outage restoration efforts were often halted by the Fire Incident Commander as a safety precaution.

[18] Such as car striking a pole and causing an outage for customers served from that line; "dig-ins" where an excavator cuts an underground line; wildfire caused outages; citizen-caused tree fall; and miscellaneous other causes such as theft of electricity.



2. Average Duration of Electric System Outages

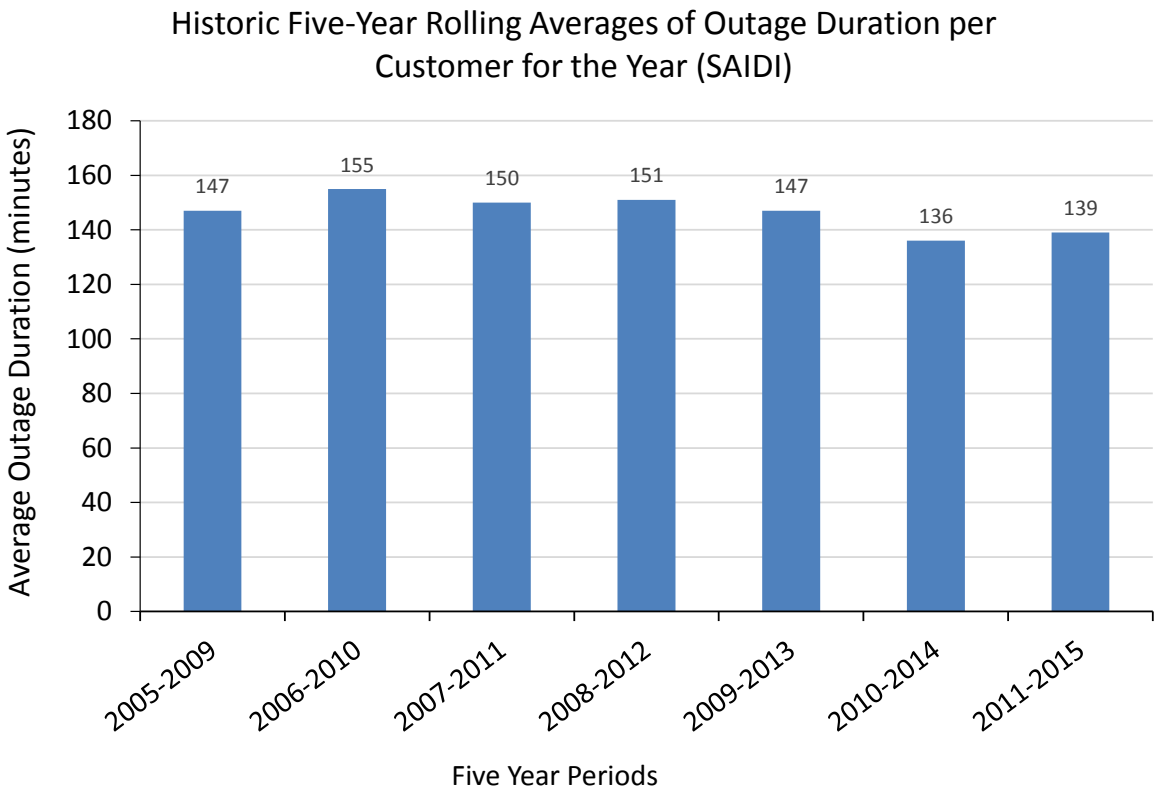
As part of Avista's Service Quality Measures program, the Company will report its annual electric system reliability measure for the total duration of non-major storm power outages experienced per customer for the year (SAIDI).[19]

2015 Results – This measure, as noted earlier, represents the total duration, in minutes, of the sustained outages experienced by the average Avista customer for the year. This measure, determined on a system basis, is calculated by totaling the number of minutes of service interruptions (outages) experienced by our customers for the year, divided by the total number of customers served. The 2015 value of 163 minutes was greater than the average value for the previous five-year period (2010-2014) of 136 minutes, which resulted in a slight increase in the average value for the current five-year period (2011-2015). For 2015 the Washington only value was 169 minutes.

Total Outage Duration for the Average Avista Customer	2015 System Results	Current 5 Year Average (2011-2015)	Change in 5 Year Average
Total duration of all electric service outages for the average Avista customer for the year (SAIDI)	163 Minutes	139 Minutes	+3 Minutes

The figure below shows the rolling five-year average value for SAIFI for each five-year period from 2005 through 2015. Over this period, the general trend shows a slight increase in the average outage duration during the middle years followed by slight decline in average duration in the later years of the period. Overall, the trend is relatively stable.

[19] The Company will report the duration of electric system interruptions per Customer for the calendar year, where:
a. The interruption duration is measured as the System Average Interruption Duration Index ("SAIDI"), as defined by the IEEE;
b. The calculation of SAIDI excludes interruptions associated with any MED;
c. The report will provide a brief description of the predominant factors influencing the current-year system results, and in the context of the Company's historic five-year rolling average of SAIDI; and
d. The results will be reported on a system basis for Washington and Idaho and will include the annual SAIDI for Washington only.



Snow storms in January, lightning-caused wildfires in August, and heavy snow in December contributed substantially to the overall outage duration per customer for the year. The outage duration result would have been near the five year average if the all of the snowfall caused outages in December had reached the threshold of a Major Event. Because of the dispersed pattern of snowfall over many days, however, only two days of the roughly week-long snow event qualified as Major Event Days. As a result, the outage duration was substantially above normal for the month, which had a large impact on the overall annual value. This is another example of how weather events can result in substantial service interruptions even with the effect of weather-related Major Events removed.

D. Customer Service Guarantees

Our service quality measures program includes seven types of service for which we will provide "customer service guarantees." Our service commitments under the customer guarantees reflect the level of service we currently provide, however, the guarantees recognize the customer inconvenience that can result when our delivered service does not meet our commitment. In these cases we agree to provide customers a bill credit or payment in the amount of $50 in recognition of that inconvenience. All costs associated with the payment of customer service guarantees will be paid by the Avista's shareholders. These costs will not be paid by our customers.

As noted above, the Company began offering the customer service guarantees on January 1, 2016. Results of Avista's customer service guarantees will be included in the Company's Service Quality and Reliability report filed in 2017, and in each year following.

For informational purposes the Customer Service Guarantees included in the Service Quality Measures Program are the following.

1. Keeping Our Electric and Natural Gas Service Appointments

The Company will keep mutually agreed upon appointments for electric or natural gas service, scheduled in the time windows of either 8:00 a.m. – 12:00 p.m. or 12:00 p.m. – 5:00 p.m.[20]

2. Prompt Restoration of Electric System Outage

When the Customer experiences an electric interruption, the Company will restore the service within 24 hours of notification from the Customer.[21]

[20] Except in the following instances:
   a. When the Customer or Applicant cancels the appointment;
   b. The Customer or Applicant fails to keep the appointment; or
   c. The Company reschedules the appointment with at least 24 hours notice.

[21] Except for the following instances:
   a. During periods of time when the outage is associated with a MED, which includes the 24-hour period following the MED; or
   b. When an action or default by someone other than a utility employee that is outside the control of the company prevented the Company from restoring supply.

3. Promptly Switching on Electric Service When Requested

The Company will switch on power within one business day of the Customer or Applicant's request for service.[22]

4. Promptly Providing Cost Estimates to Customers for New Service

The Company will provide a cost estimate to the Customer or Applicant for new electric or natural gas supply within 10 business days upon receipt of all the necessary information from the Customer or Applicant.

5. Promptly Responding to Customer's Bill Inquiries

The Company will respond to most billing inquiries at the time of the initial contact, and for those inquires that require further investigation, the company will investigate and respond to the Customer within 10 business days.

6. Promptly Responding to Customer's Requests for Meter Testing

The Company will investigate Customer-reported problems with a meter, or conduct a meter test, and report the results to the Customer within 20 business days.

7. Providing Customers Advance Notice of Scheduled Electric Interruptions

The Company will provide notification to the Customer, through means normally used by the Company, at least 24 hours in advance of disconnecting service for scheduled interruptions.[23]

[22] Except for the following instances:
a. When construction is required before the service can be energized;
b. When the Customer does not provide evidence that all required government inspections have been satisfied;
c. When required payments to the Company have not been received; or
d. The service has been disconnected for nonpayment or theft/diversion of service.

[23] Except for the following instances:
a. When the interruption is a momentary interruption of less than five minutes in duration;
b. When the safety of the public or Company personnel or the imminent failure of Company equipment is a factor leading to the interruption; or
c. The interruption was due to work on a meter.

III. Avista's Electric System Reliability

1. Introduction

Pursuant to WAC 480-100-398, Avista Corporation dba Avista Utilities ("Avista" or "the Company") submits its annual Electric Service Reliability Report. The report describes the Company's reliability monitoring and reliability metrics for 2015. All numbers included in this report are based on system-data. The Company's system includes 11 geographical divisions with two of those divisions overlapping the Washington and Idaho border leading to a commingling of jurisdictional customers. A map of Avista's operating area is included on page 59 of this report.

WAC 480-100-393 (3)(b) requires the establishment of baseline reliability statistics. The Company's baseline statistics are included in this report, which compares the current year data to the baseline year of 2005 and the years in between. The Company also calculates a statistical range for each reliability index that is based on the average value for a period of time plus two standard deviations of the average. This range represents the statistical probability that the annual result for the current year will fall below the upper limit of the range 95% of the time. Accordingly, the year to year results should be within this range in most years, but they can exceed the range in years when conditions vary substantially from the normal pattern of variation. Over the years, Avista has referred to this range as the "target," however, the term "target" should not be interpreted as a "level of performance" that Avista is trying to achieve each year. Rather, it simply represents the range of variability that is expected to encompass the results for each reliability statistic in most years.

Avista has reported in its previous annual reports that the completion of the transition to the Outage Management Tool (OMT) system had caused an increase in the variability of the data collected from 2001 to 2007. The 2009 Annual Report (UE-100659) indicated that a gradual increase in the SAIFI and SAIDI numbers that cannot be attributed to the transition to the OMT system was occurring. Through 2012, the trend lines for SAIFI and SAIDI were both showing an upward trend. The trend line for SAIFI now shows a slightly downward trend with the inclusion of the 2015 data. The trend line for SAIDI is now showing a slight upward trend with the inclusion of the 2015 data. The charts on pages 8 and 11 show a trend line for SAIFI and SAIDI historical data.

The 2015 SAIFI and SAIDI reliability indices are both higher than the 2005 baseline, which may be partially due to the under reporting that may have occurred during the transition to OMT in 2005. The 2015 CAIDI index is the higher than the 2005 baseline. On another note, the 2015 MAIFI reliability index is below the 2005 baseline.

Avista added a new section beginning in the 2007 annual report (UE-080787) which analyzes the areas where customers are experiencing multiple sustained outages. This section provides analysis of a reliability index called $CEMI_n$, which implies Customers Experiencing Multiple sustained Interruptions more than n times.

Avista continues to review its annual baseline reliability statistics in light of operational experience under current regulatory protocol. Avista may modify its baseline statistics as appropriate and will update the Commission accordingly.

2. Data Collection and Calculation Changes

WAC 480-100-398 (2) requires the Company to report changes made in data collection or calculation of reliability information after initial baselines are set. This section addresses changes that the Company has made to data collection.

Data Collection

> Since Avista's Electric Service Reliability Monitoring and Reporting Plan was filed in 2001 (UE-011428), there have been several improvements in the methods used to collect outage data. In late 2001, centralizing the distribution trouble dispatch and data collection function for Avista's entire service territory began. The distribution dispatch office is located in the Spokane main complex. At the end of September 2005, 100% of the Company's feeders, accounting for 100% of the customers, are served from offices that employ central dispatching.

The data collected for 2014 represents the eighth full year of outage data collected through the Outage Management Tool (OMT). For 2015, all data was collected using the "Outage Management Tool" (OMT) based on the Company's Geographic Information System (GIS). The OMT system automates the logging of restoration times and customer counts.

Avista discovered a software coding error that has been within the OMT system since 2002 that caused a small increase in the SAIDI and CAIDI for 2008. Previous years were also evaluated to determine the overall impact to the Avista baseline statistics and at this time Avista is not proposing a change to the baseline numbers. The software error only occurred during very specific outage conditions when a group of customers with an initial outage starting time were "rolled" up into another group of customers that were determined to be part of the first group outage. The second group may have had a later outage starting time. When the first group of customer outage information was rolled up, the original outage starting time was lost and the second group outage starting time was used for both groups of customers instead of using the first outage starting time. The number of customers was counted correctly.

Even as good as the OMT system is at quantifying the number of customers and duration of the outage duration, there still are areas where the data collection is not precise. Determining the exact starting time of an outage is dependent on when a customer calls in, how well the Avista Distribution Dispatcher determines where the outage is and defines the device that has opened to remove the faulted section.

As AMR/AMI metering is implemented in the future and the customer meter provides outage information to the OMT system through an interface, the SAIDI and CAIDI numbers are expected to increase. This is similar to the above discussion.

Use of the OMT system and GIS data has improved the tracking of the numbers of customers without power, allowed for better prioritization of the restoration of service, and the improved dispatching of crews.

3. System Indices

The charts below show indices for Avista's Washington and Idaho ("system") electric service territory by year. Breakdown by division is included later in this report. Each chart shows eight years of data along with the baseline reliability statistic which is highlighted in green. The statistically likely range of results, or the reliability target, as described above, is the average over the previous five years plus two standard deviations (shown in yellow on the reliability index charts).

The reliability targets have been adjusted by removing Major Event Days, MED's, as defined in the previous section.

Table - Reliability Statistic Target by Index

Index	2010-2014 Average (Excluding Major Events)	2005 Baseline	Reliability Target (Ave + 2 Standard Deviations)
SAIFI	1.12	0.97	1.26
MAIFI	2.49	3.58	3.08
SAIDI	136	108	157
CAIDI	121	112	139

Additional comparisons of the Reliability Indices are provided in the Office Indices section (page 44) and Monthly Indices section (page 65) of this report.

The Company continues to use the definition of major events as described above to be consistent with IEEE Standards. Therefore, the following charts show statistics including the effect of major events per this definition. Both the Baseline Statistic is shown for the year 2005 (green bar), along with the target (yellow bar).

Refer to Attachment D – SAIDI and SAIFI Historical Summary for additional historical information.

Chart – SAIFI - Sustained Interruptions / Customer

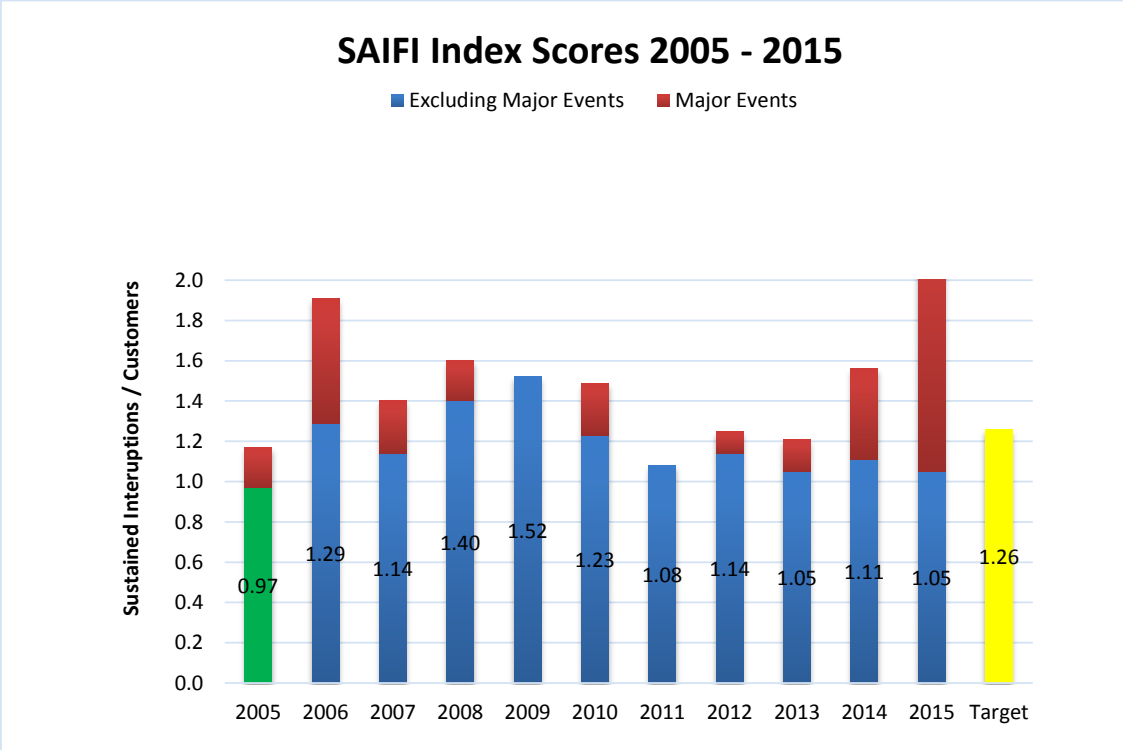
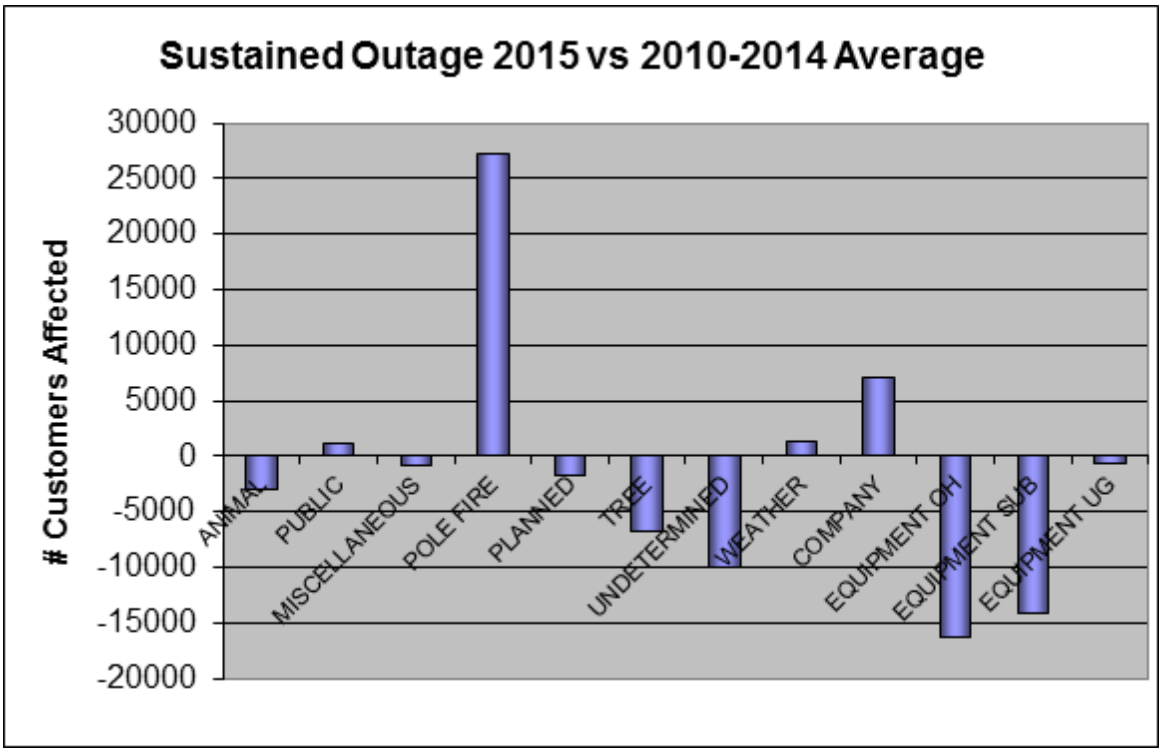


Chart – Sustained Interruptions / Customer Historic Comparison



SAIFI for 2015 was slightly over the 2005 baseline statistic but represents a decreasing trend. The 2015 SAIFI index is the equal to the lowest value we've seen since the 2005 benchmark. Using a simple linear regression to establish a trend line, it would look like about a -0.014% growth in the number of customers affected. A chart of this analysis has been provided just after this discussion.

There were 80,354 customers affected by sustained outages caused by weather in 2015, not including major event days. This compares to the 2010–2014 average of 78,982.

Pole Fire outages affected 57,760 customers as compared with the 2010–2014 average of 30,475. This increase was mainly due to a few Transmission pole fires that affected entire substations.

Planned outages numbered 43,923 customers for 2015 as compared to the 2010–2014 average of 45,681 customers.

Public outages affected 39,788 customers as compared to the 2010–2014 average of 38,592 customers.

Outages associated with Tree causes affected 39,441 customers as compared to the 2010–2014 average of 46,109.

Undetermined cause outages affected 38,996 customers as compared with the 2010–2014 average of 48,922.

Chart - SAIFI Linear Trend Line Chart

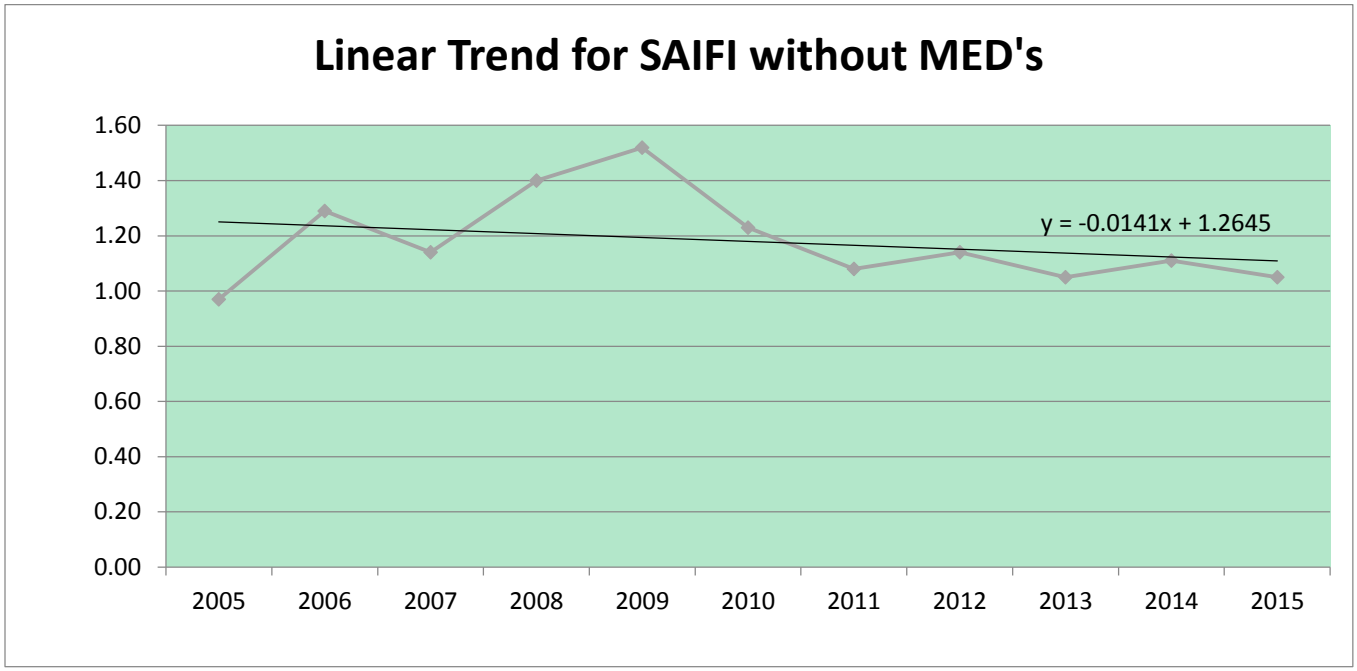


Chart - MAIFI Momentary Interruption Events / Customer

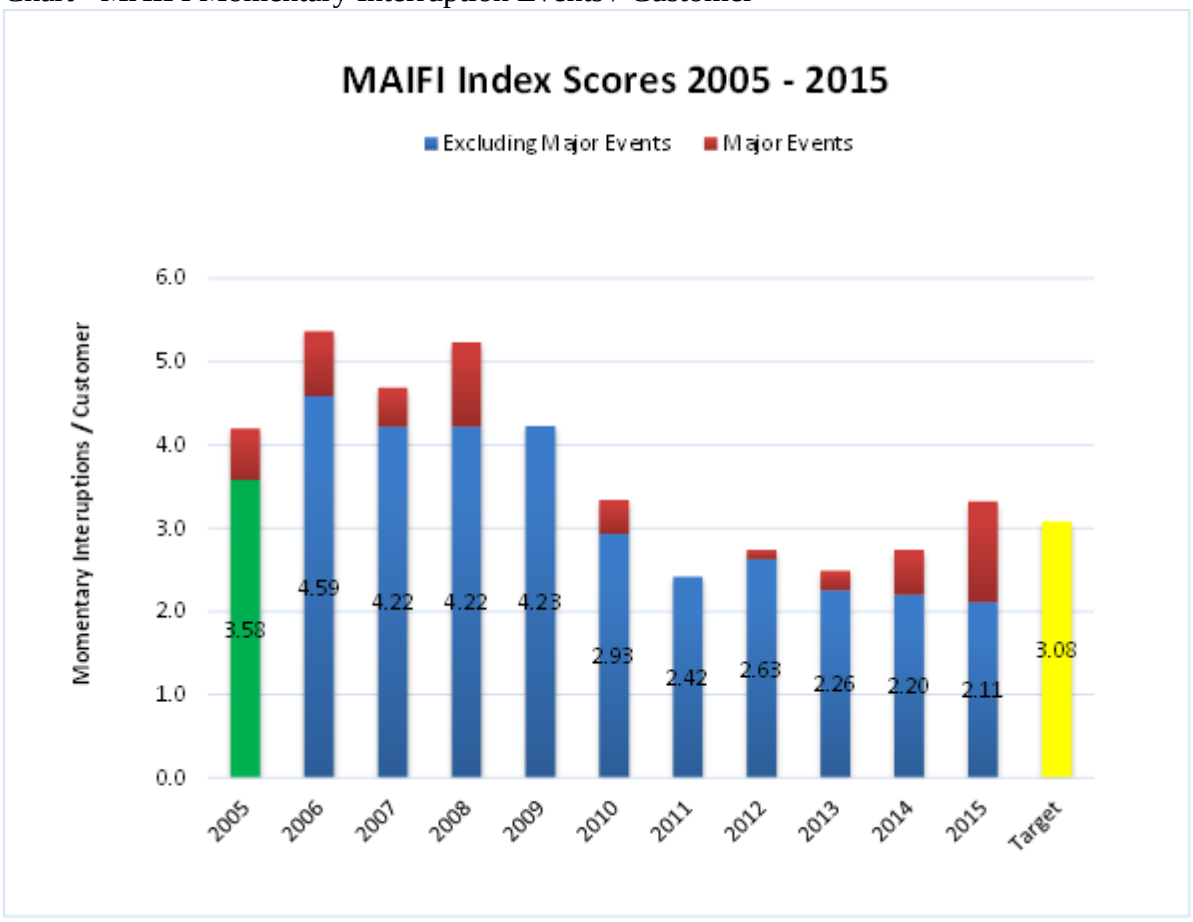
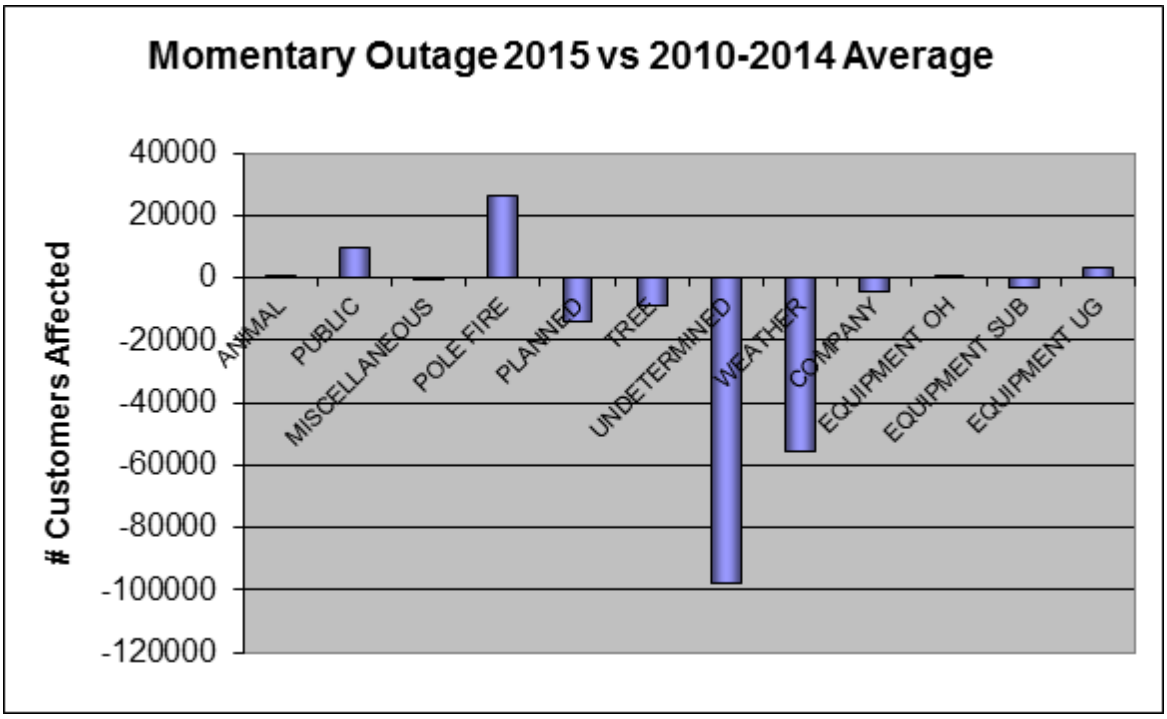


Chart – Momentary Interruptions / Customer Historic Comparison



The 2015 results for MAIFI show the lowest level we have seen, continuing the downward trend we have seen over the past few years. There was a decrease from the 5-year average for 2015 in the number of undetermined cause interruptions. This shift may be due to accuracy improvement efforts in Distribution Dispatch. The overall improvements in the MAIFI numbers may be due to tree trimming efforts along with Overhead Equipment replacement and Underground Equipment replacement. Some of the Urban areas have had the instantaneous trip function blocked, which reduces the total feeder customer momentary impacts, but may increase both SAIFI and SAIDI numbers for a few customers located downstream of a fused lateral.

Distribution Dispatch continues to make improvements in correlating the momentary outages with subsequent sustained outages, which reduces the undetermined causes.

Chart - SAIDI – Average Outage Time / Customer

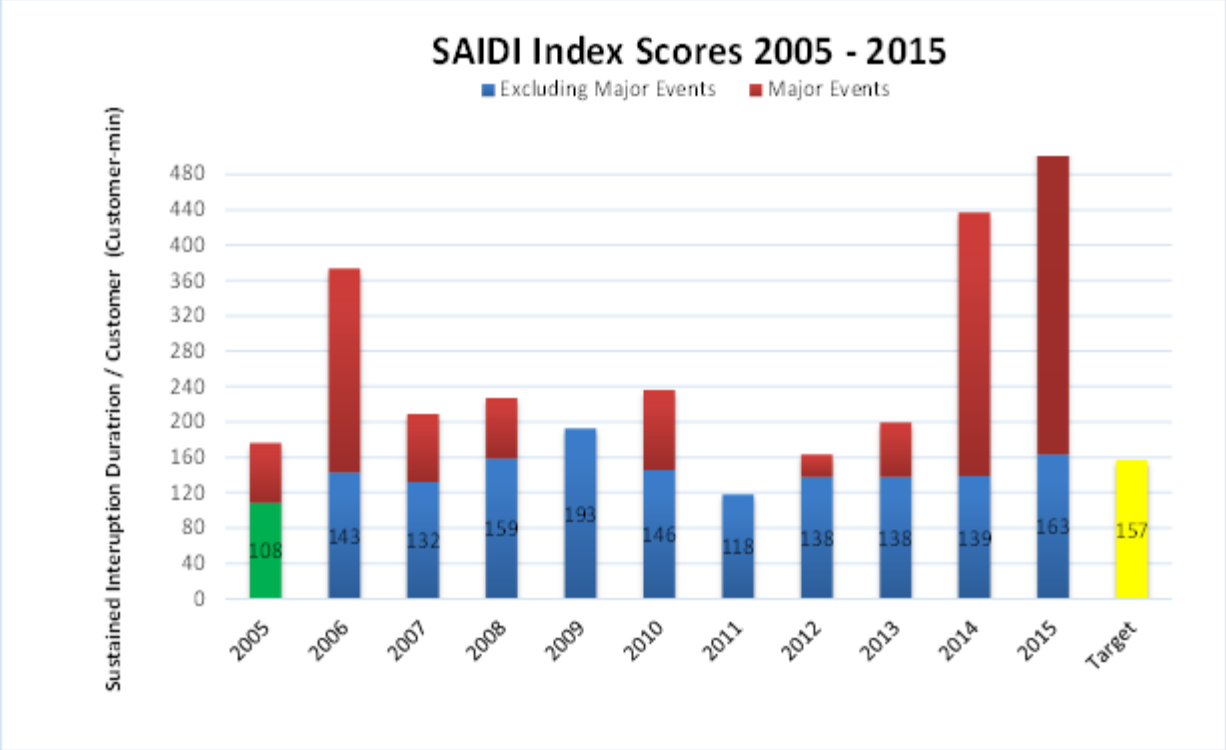


Chart - SAIDI Linear Trend Line Chart

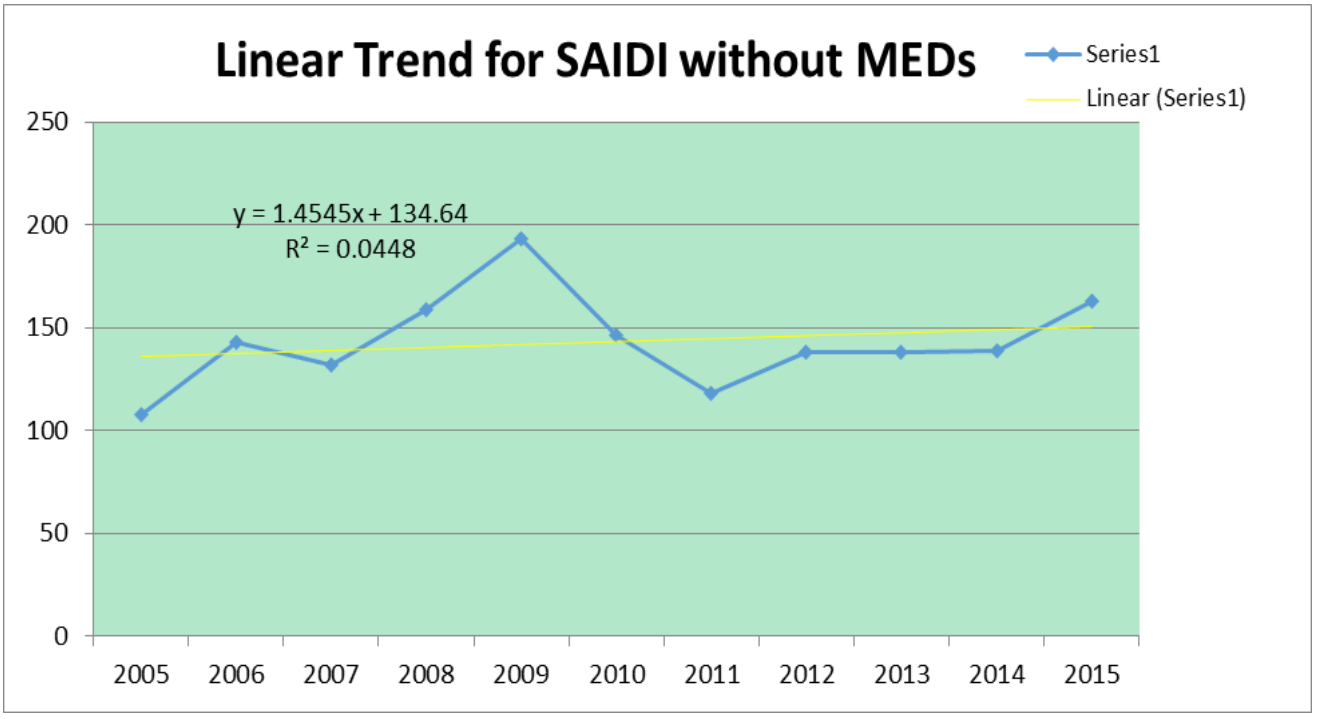
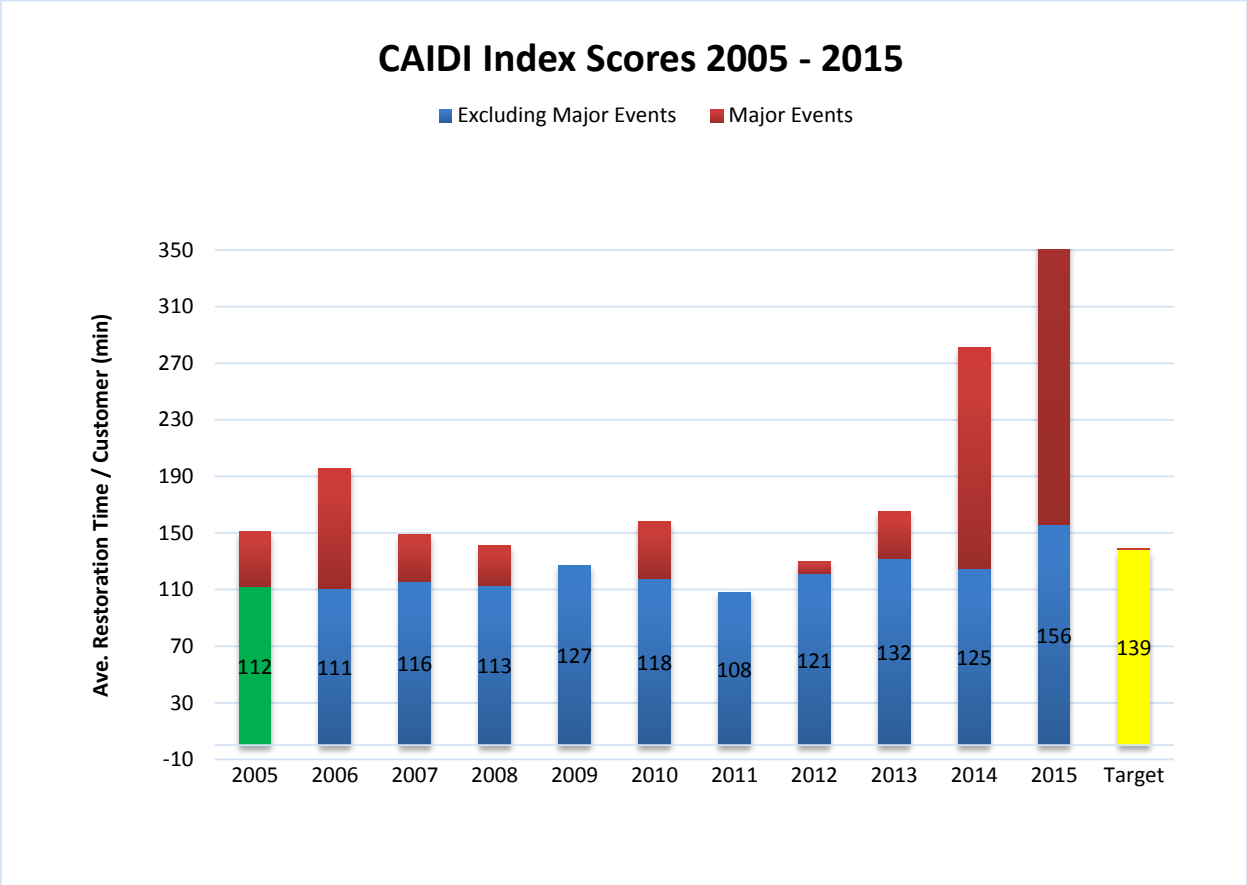


Chart – CAIDI – Average Restoration Time



4. Office Area Indices

Chart – Office Areas

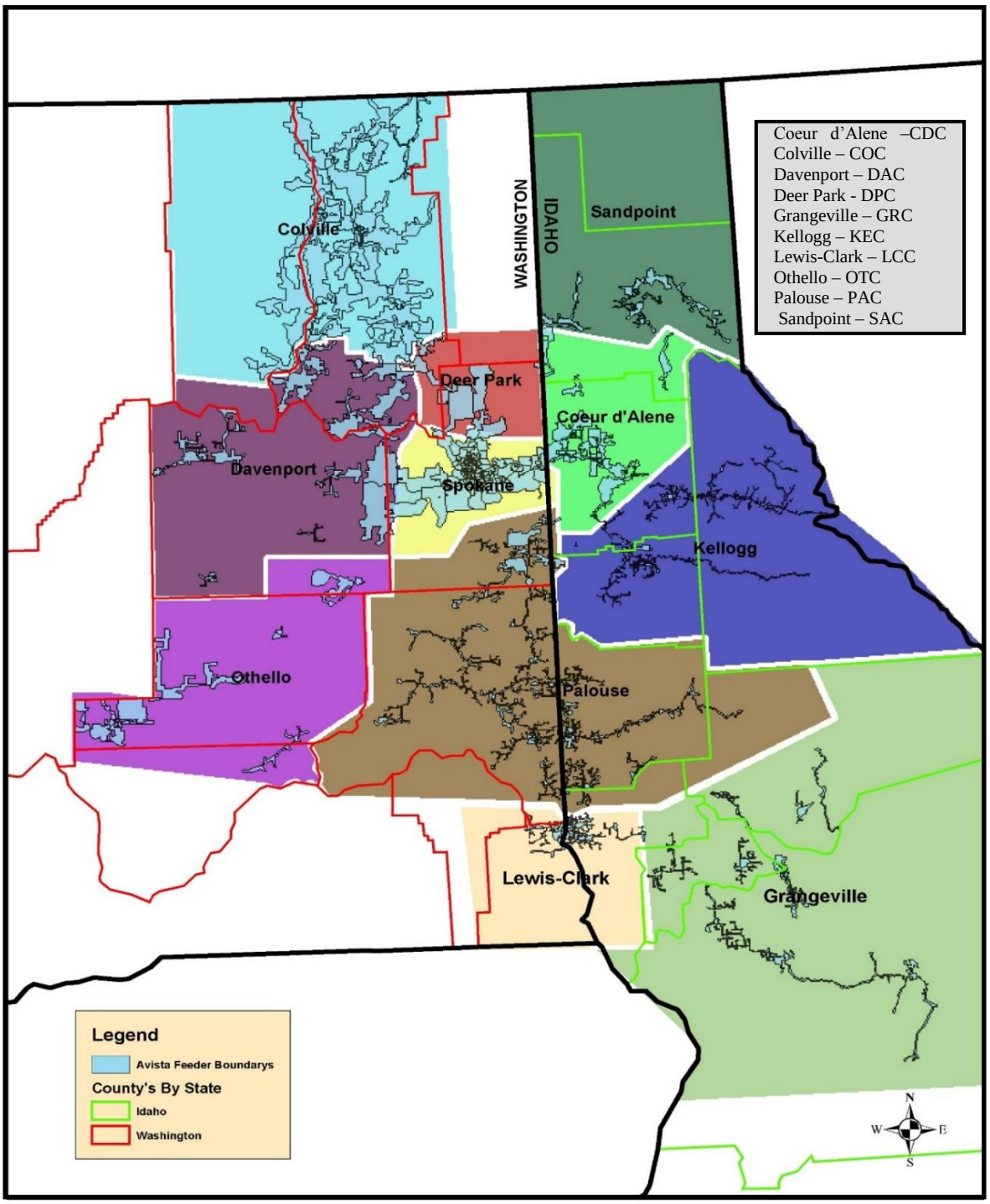


Table – Number of Customers Served by Office Area

The following numbers of customers were based on the customers served at the beginning of the year. These numbers were used to calculate indices for this report.

Office	Customers	% of Total
Coeur d'Alene	53,753	14.3%
Colville	19,616	5.2%
Davenport	6,038	1.6%
Deer Park	11,000	2.9%
Grangeville	10,341	2.7%
Kellogg/St. Maries	14,502	3.8%
Lewis-Clark	30,230	8.0%
Othello	6,924	1.8%
Palouse	40,219	10.7%
Sandpoint	15,010	4.0%
Spokane	169,073	44.9%
System Total	**371,165**	

Chart – SAIFI - Sustained Interruptions / Customer

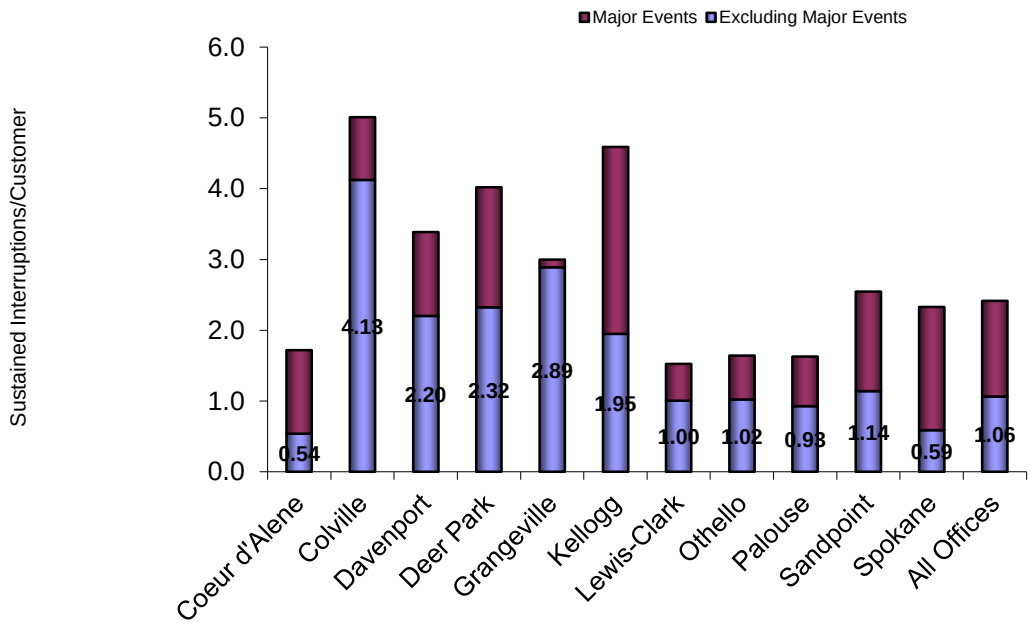


Chart - MAIFI Momentary Interruption Events / Customer

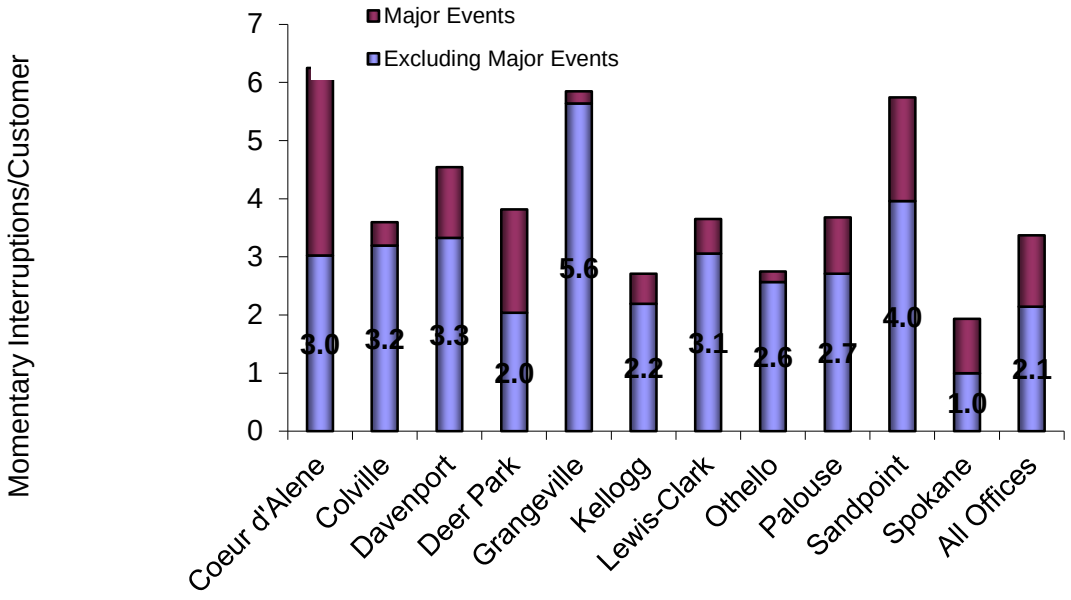


Chart - SAIDI – Average Outage Time / Customer

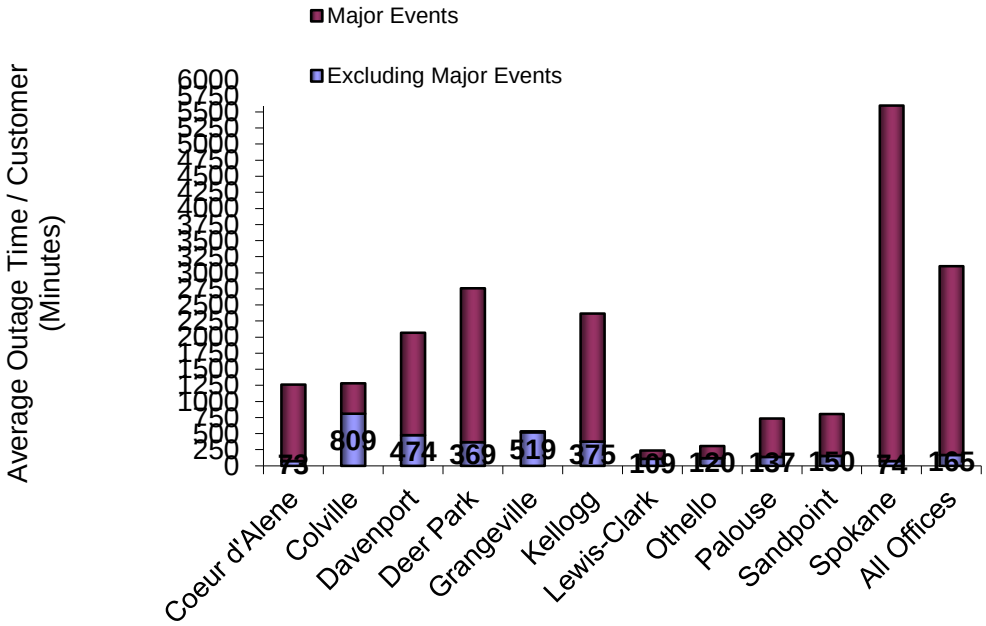
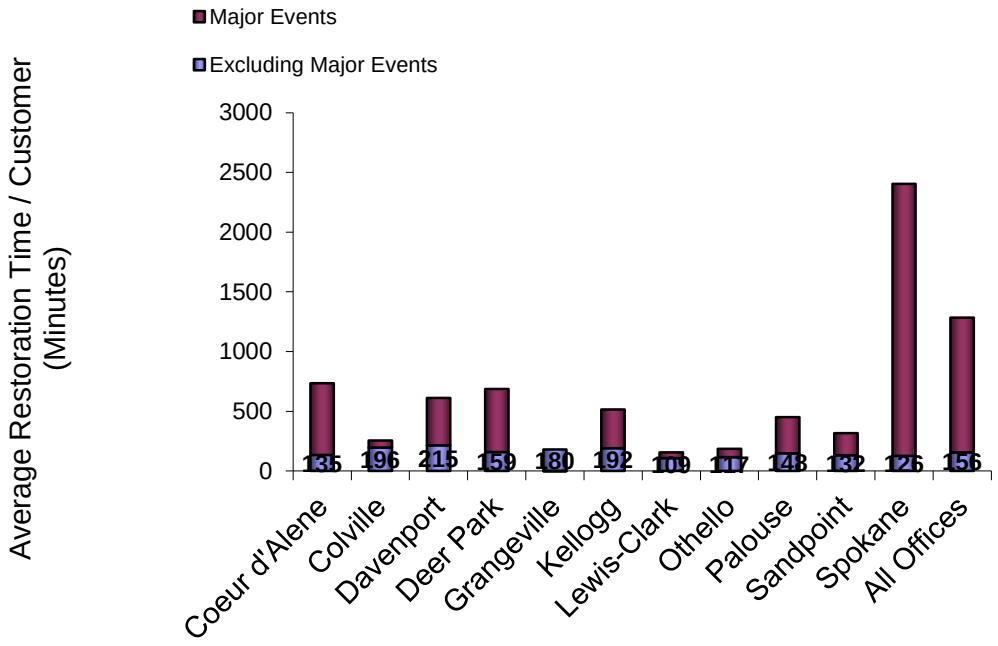


Chart - CAIDI – Average Restoration Time



5. Major Event Days

Major Events and Major Event Days as used in this report are defined per the IEEE Guide for Electric Power Distribution Reliability Indices, IEEE P1366-2012. The following definitions are taken from this IEEE Guide.

> **Major Event** – Designates an event that exceeds reasonable design and or operation limits of the electric power system. A Major Event includes at least one Major Event Day (MED).
>
> **Major Event Day** – A day in which the daily system SAIDI exceeds a threshold value, T_{MED}. For the purposes of calculating daily system SAIDI, any interruption that spans multiple calendar days is accrued to the day on which the interruption began. Statistically, days having a daily system SAIDI greater than T_{MED} are days on which the energy delivery system experienced stresses beyond that normally expected (such as severe weather). Activities that occur on major event days should be separately analyzed and reported.

The Company will use the process defined in IEEE P1366 to calculate the threshold value of T_{MED} and to determine MED's. All indices will be reported both including and excluding MED's. The comparisons of service reliability to the baseline statistics in subsequent years will be made using the indices calculated without MED's.

Table – 2015 Major Event Days

Major Event Days	SAIDI (Customer-Minutes)	Cause
2015 Major Event Day Threshold	8.22	
August 29, 2015	13.42	Wind
September 30, 2015	9.99	Public
November 17, 2015	2093.19	Wind
November 18, 2015	399.34	Wind
November 19, 2015	147.97	Wind
November 20, 2015	66.96	Wind
November 21, 2015	47.30	Wind
November 22, 2015	32.61	Wind
November 23, 2015	15.38	Wind
November 24, 2015	12.19	Wind
December 23, 2015	29.35	Snow/Ice
December 24, 2015	19.24	Snow/Ice

Avista's electric system experienced near hurricane force winds on the afternoon of November 17th, 2015. The devastation from the wind surge expanded across most of Avista's Spokane area service territory. As a result, Avista lost approximately half of our electric customers by the time the stork has finished. This storm caused MED's from November 17th through November 24th. The November 17th SAIDI MED value is by far the highest in company history. Avista had more than 100 electric line crews working to restore power from this storm. Additionally, outages that occurred in Spokane on November 25th, 26th, and 27th with the cause code of Weather/Wind were included as Major Event Days. These outages were part of the larger storm and weren't captured properly as staged restorations in our OMT system.

Chart – % SAIFI by Cause Code for the Major Event Days

The following chart shows the percentage SAIFI contribution by causes for outages during major event days.

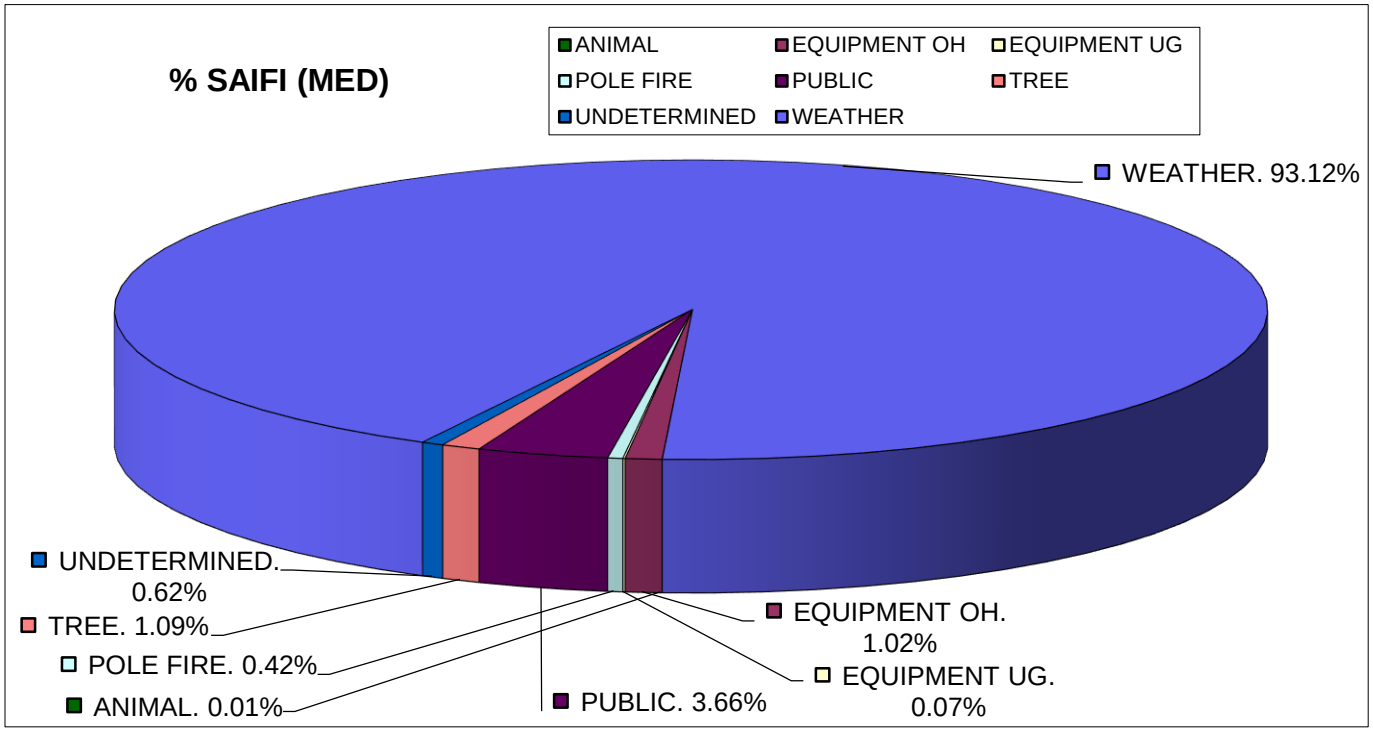


Table – % SAIFI by Sub Cause Code for the Major Event Days

The following table shows the SAIFI contribution and Customer hours by cause for the 2015 major event days.

Reason	Sum of Ni	Sum of ri x Ni
ANIMAL	26	53:08
COMPANY	0	0:00
EQUIPMENT OH	4940	81562:26
EQUIPMENT SUB	0	0:00
EQUIPMENT UG	323	1858:06
MISCELLANEOUS	0	0:00
PLANNED	0	0:00
POLE FIRE	2048	3012:04
PUBLIC	17825	110084:02
TREE	5307	50071:16
UNDETERMINED	3010	2427:58
WEATHER	452955	17847146:13
Total	486434	18096215:16

Table – Yearly Summary of the Major Event Days

The following table is provided as an initial review of Major Event Day information. The main premise of the IEEE Major Event Day calculation is that using the 2.5b method should classify 2.3 days each year as MED's. The following table shows the previous major event days, the daily SAIDI value and the relationship of the yearly T_{MED}.

Year	Date	SAIDI	T_{MED}
2004	05-21-2004	7.11	6.35
	08-02-2004	7.36	
	12-08-2004	31.00	
2005	06-21-2005	39.53	4.916
	06-22-2005	9.03	
	08-12-2005	19.60	
2006	01-11-2006	12.10	7.058
	03-09-2006	8.58	
	11-13-2006	30.79	
	12-14-2006	29.26	
	12-15-2006	158.31	
2007	01-06-2007	9.98	8.017
	06-29-2007	32.64	
	07-13-2007	12.79	
	08-31-2007	21.30	
2008	01-27-2008	17.57	9.224
	07-10-2008	36.74	

	08-18-2008	9.49	
2009	None		9.925
2010	5/3/2010	21.04	11.110
	11/16/2010	68.67	
2011	None		10.848
2012	1/19/2012	9.93	9.489
	12/17/2012	14.35	
2013	8/25/2013	24.97	8.956
	8/26/2013	11.78	
	9/15/2013	14.01	
	11/16/2013	11.09	
2014	7/23/14	92.95	8.719
	7/24/14	35.66	
	8/25/14	121.05	
	8/3/14	38.52	
	8/12/14	9.84	
2015	8/29/15	13.42	8.219
	9/30/15	9.99	
	11/17/15	2093.19	
	11/18/15	399.34	
	11/19/15	147.97	
	11/20/15	66.96	
	11/21/15	47.30	
	11/22/15	32.61	
	11/23/15	15.38	
	11/24/15	12.19	
	12/23/15	29.35	
	12/24/15	19.24	
2016			10.171

6. Customers Experiencing Multiple Interruptions

The IEEE Standard 1366P-2003 provides for two methods to analyze data associated with customers experiencing multiple momentary interruptions and/or sustained interruptions. Avista's Outage Management Tool (OMT) and Geographical Information System (GIS) provide the ability to geospatially associate an outage to individual customer service points. This association allows for graphically showing Customers Experiencing Multiple sustained Interruptions ($CEMI_n$) with Major Event Day data included onto GIS produced areas. Data can be exported to MS Excel to also create graphs representing different values of n. The calculation for $CEMI_n$ and Customers Experiencing Multiple Sustained and Momentary Interruptions $CEMSMI_n$ is provided in Attachment B.

Avista has used the data from the OMT system integrated with the GIS system to geospatially display reliability data for specific conditions. The specific conditions imply looking at the number of sustained interruptions for each service point (meter point). This would be similar to the SAIFI index, but would be related to a certain number of sustained interruptions. Avista includes all sustained interruptions including those classified under Major Event Days. This provides a view of what each customer on a specific feeder experiences on an annual basis. Momentary Interruptions are not included in the $CEMI_n$ index because by IEEE definition only applies to sustained outages. Other Momentary Indices are not included because of the lack of indication at many rural substations and line locations.

The first chart below provides a view of the percentage of customers served from the Avista system that have sustained interruptions. 42.7 % of Avista customers had one or fewer sustained interruptions and 7.6% of Avista customers had six or more sustained interruptions during 2015.

The remaining geographic plots show the sustained interruptions by color designation according to the legend on each plot for each office area. Note the office area is designated as the area in white for each plot and that there is overlap between adjacent office area plots. The adjacent office areas are shown in light yellow.

The plots provide a quick visual indication of varying sustained interruptions, but significant additional analysis is required to determine underlying cause(s) of the interruptions and potential mitigation.

Chart - Avista Service Territory - CEMI$_n$

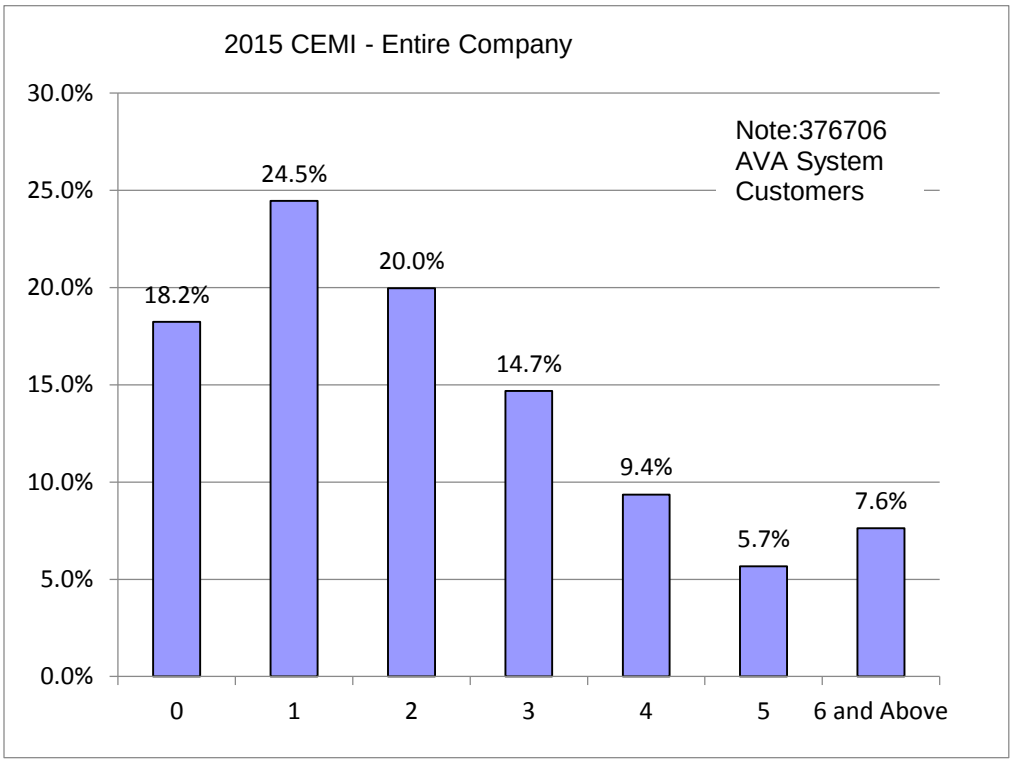


Chart - Colville Office - $CEMI_n$

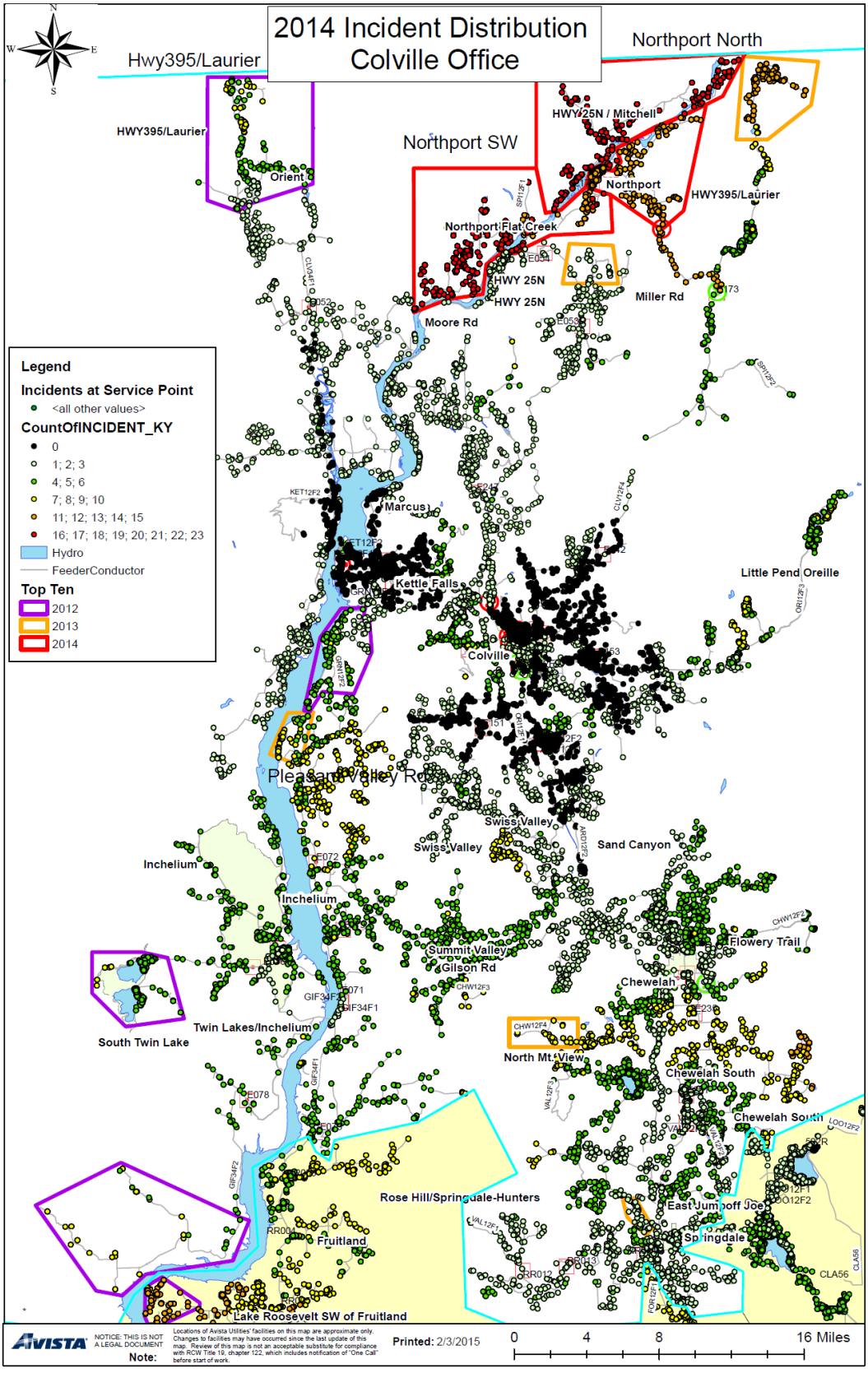


Chart - Davenport Office - $CEMI_n$

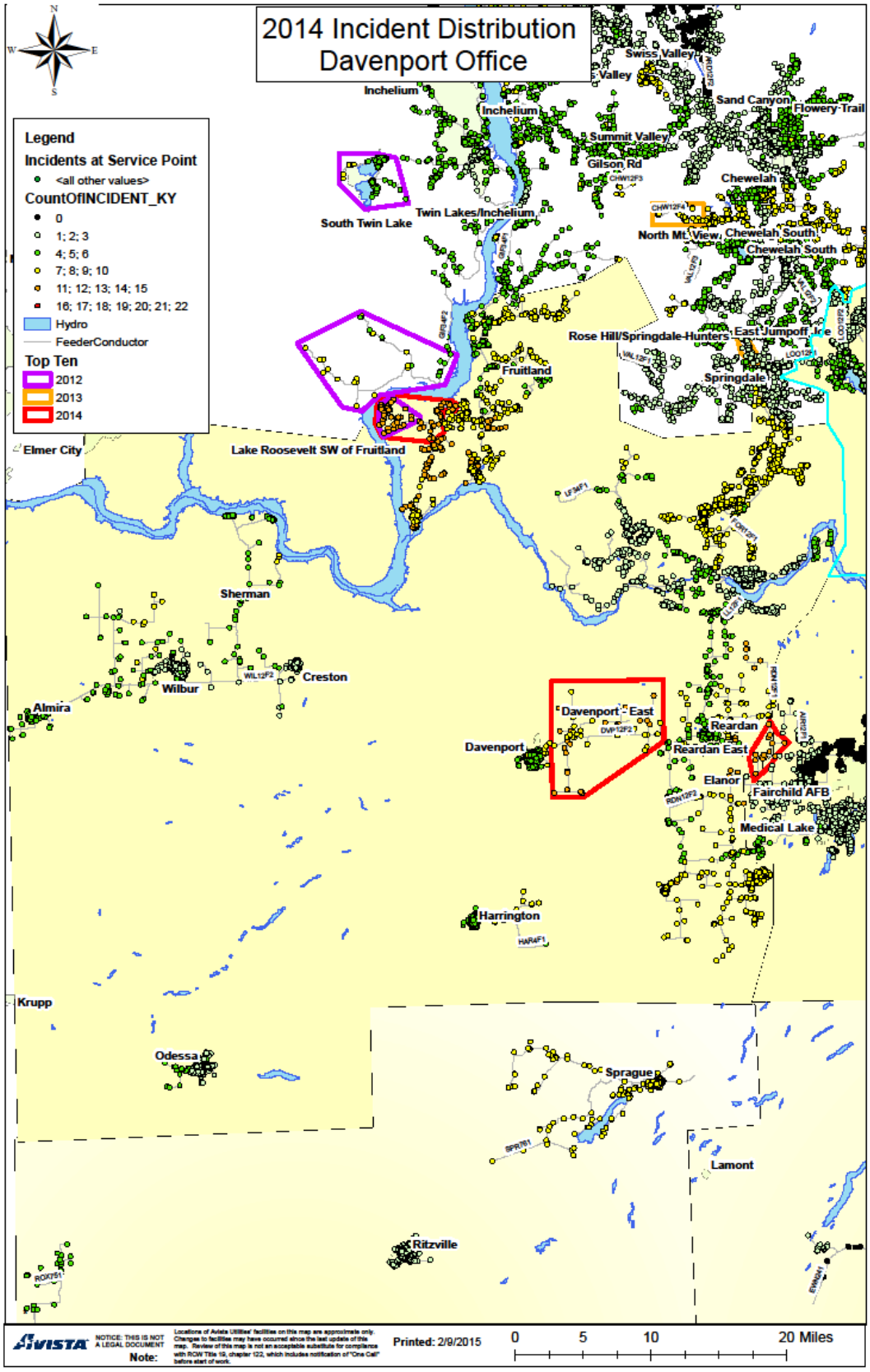


Chart - Deer Park Office - $CEMI_n$

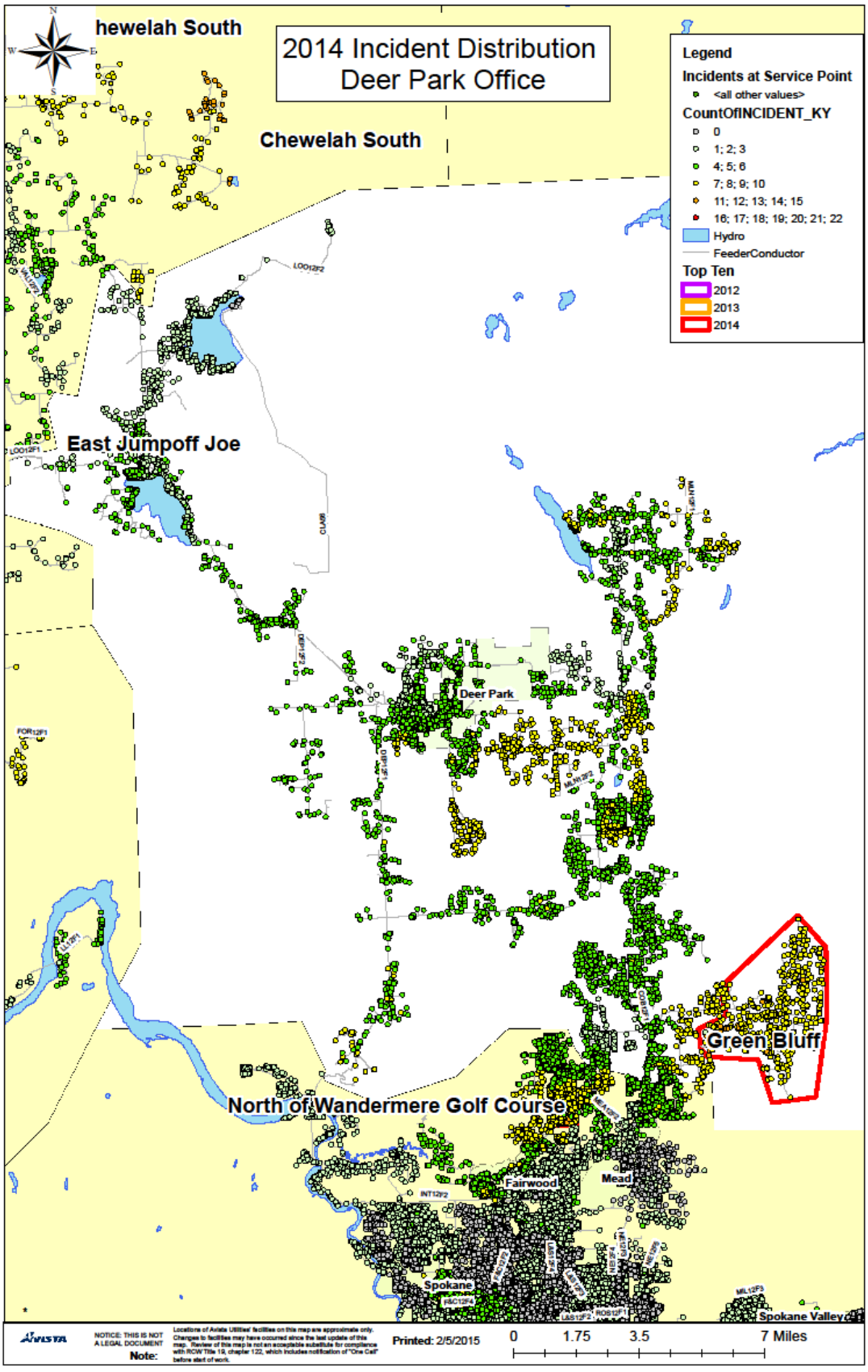


Chart - Othello Office - $CEMI_n$

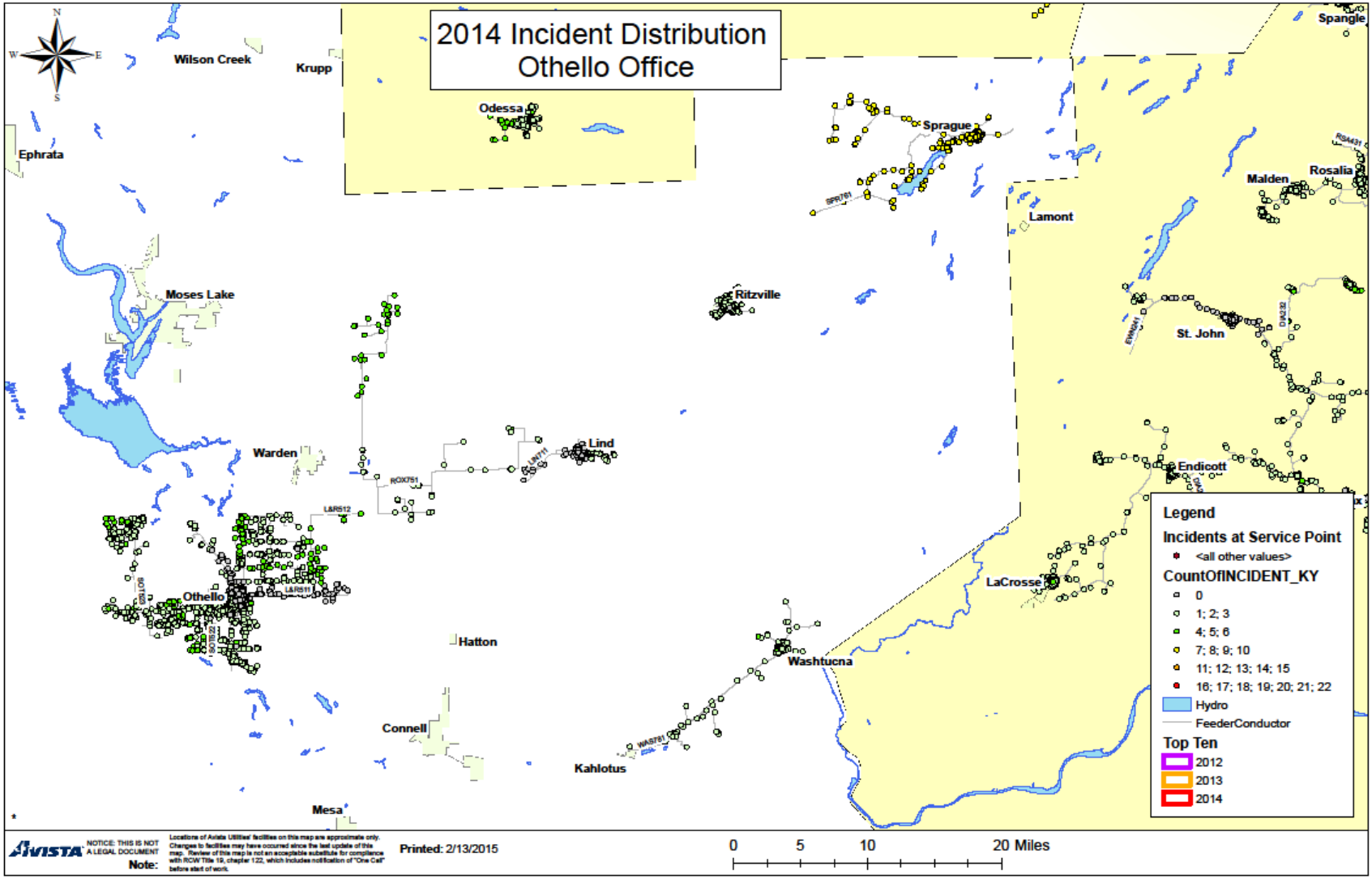


Chart - Palouse Office - $CEMI_n$

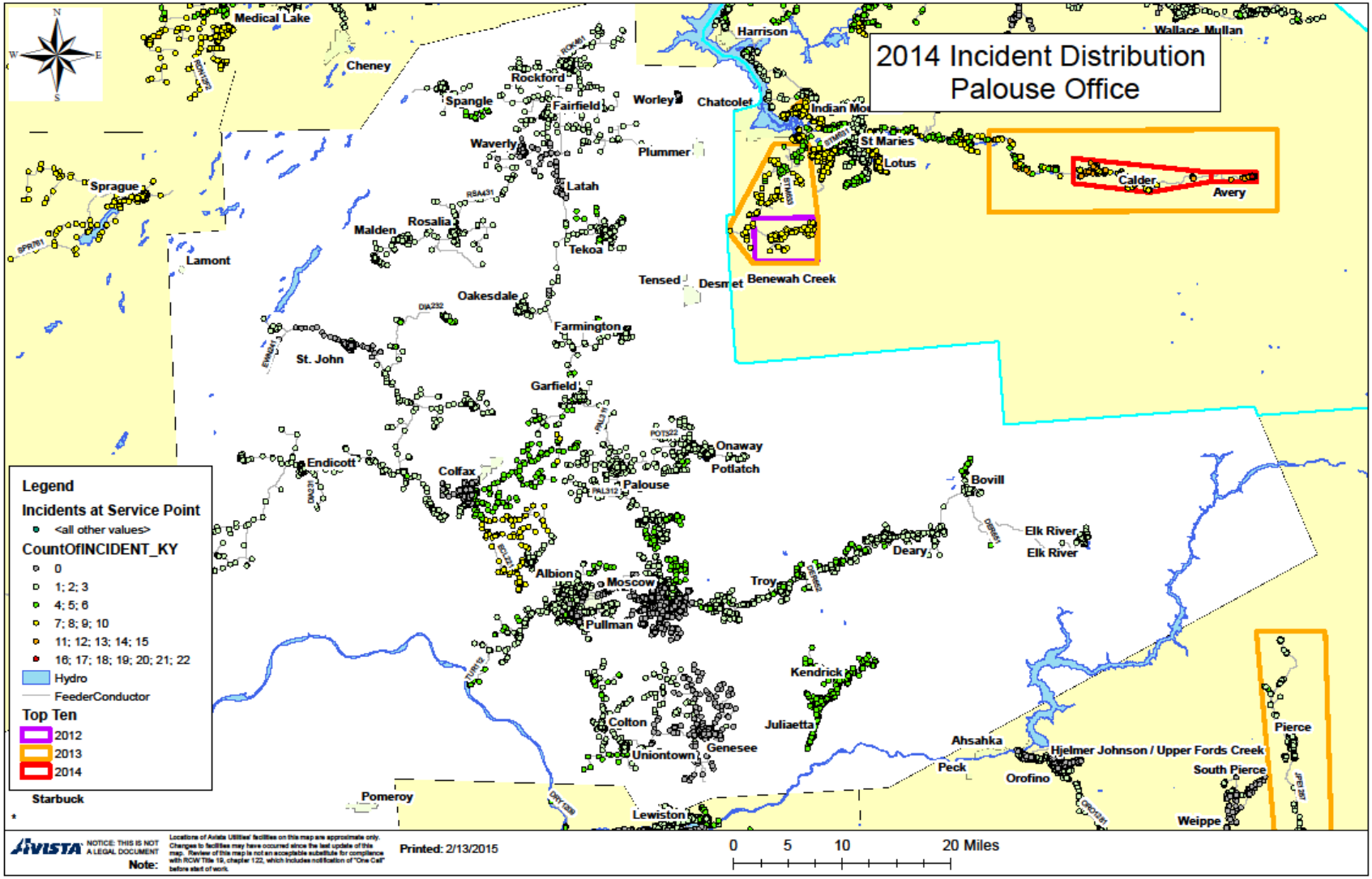


Chart - Lewis-Clark Office - $CEMI_n$

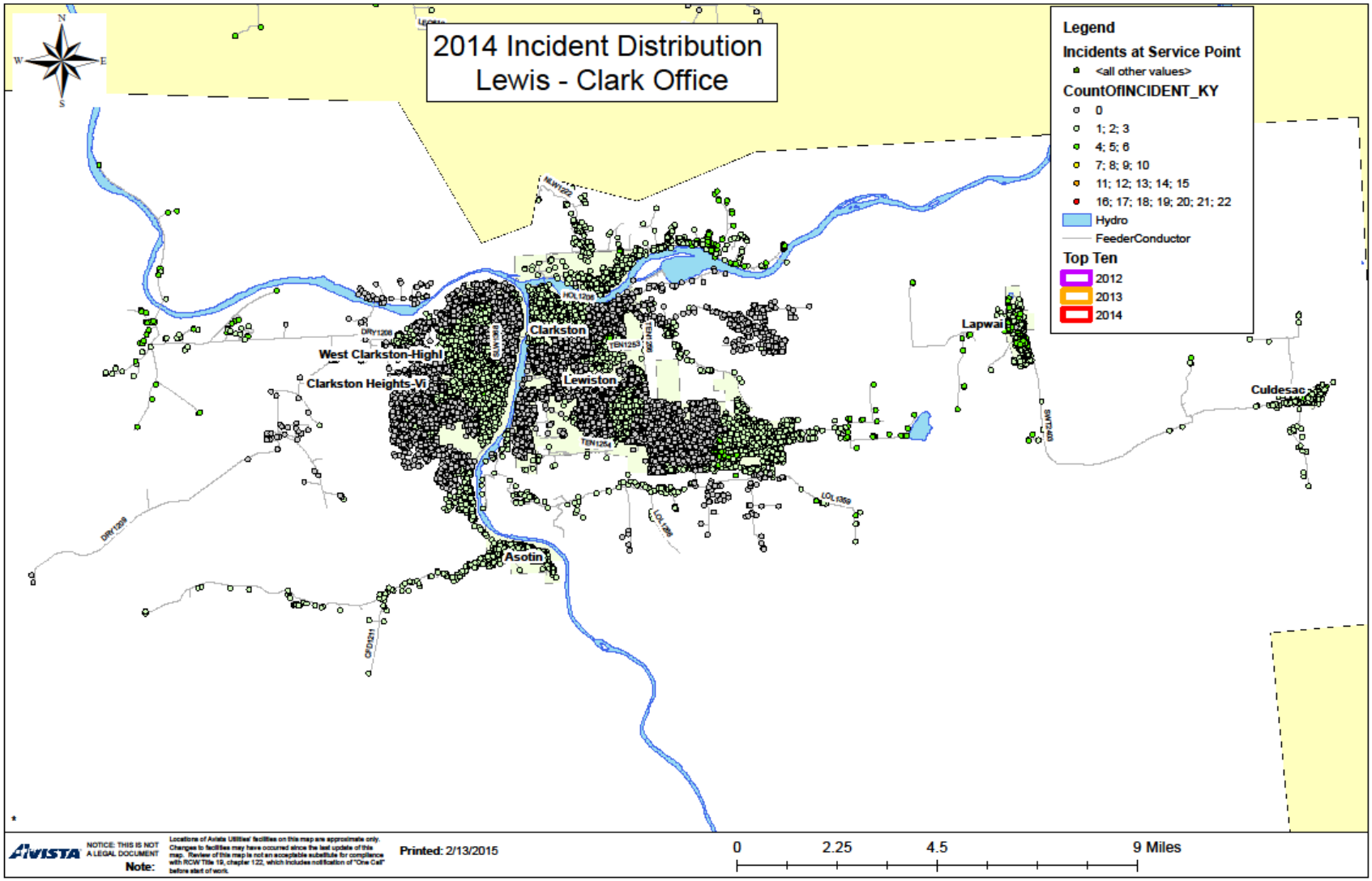


Chart - Spokane Office - $CEMI_n$

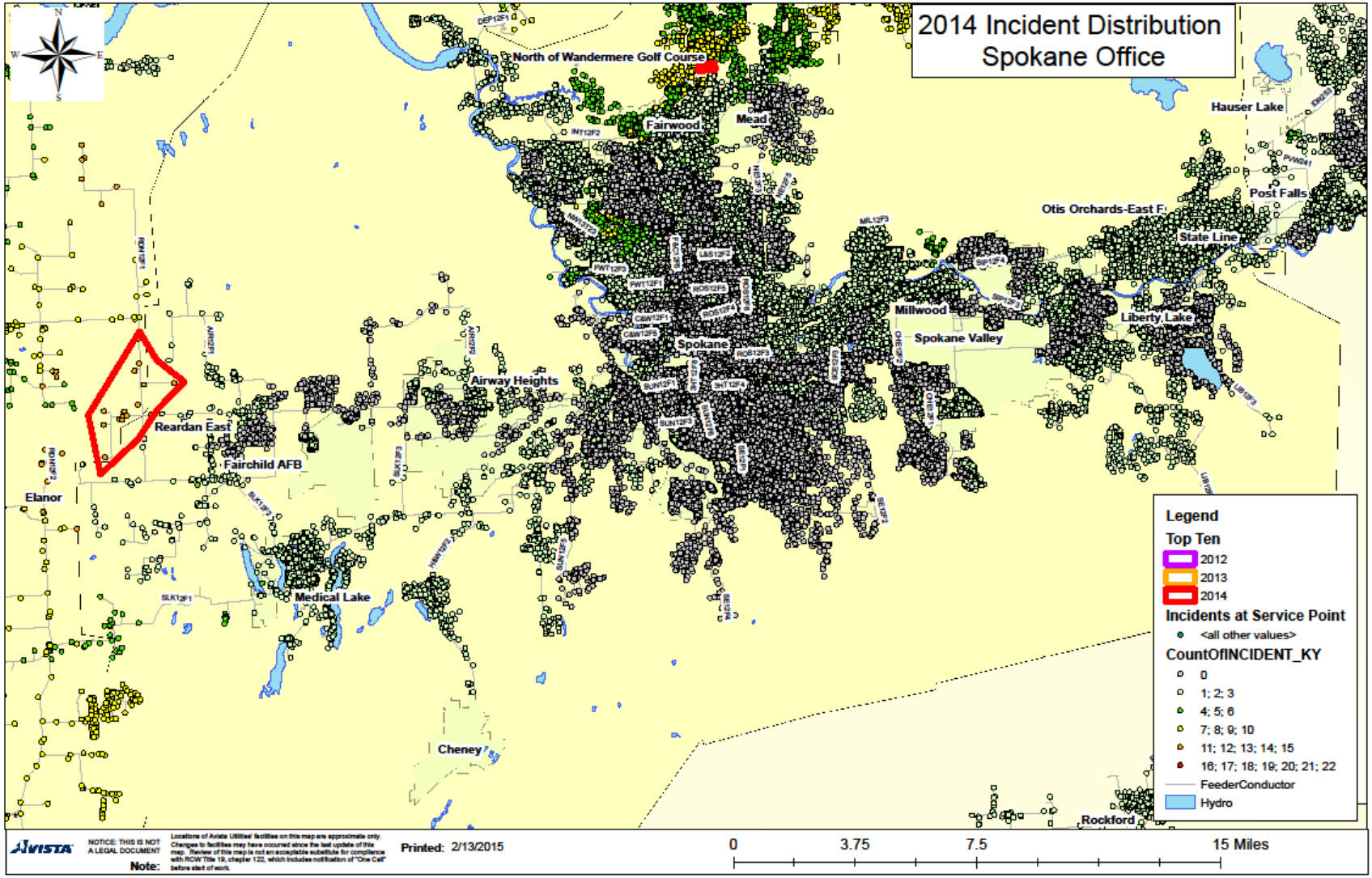


Chart - Sandpoint Office - $CEMI_n$

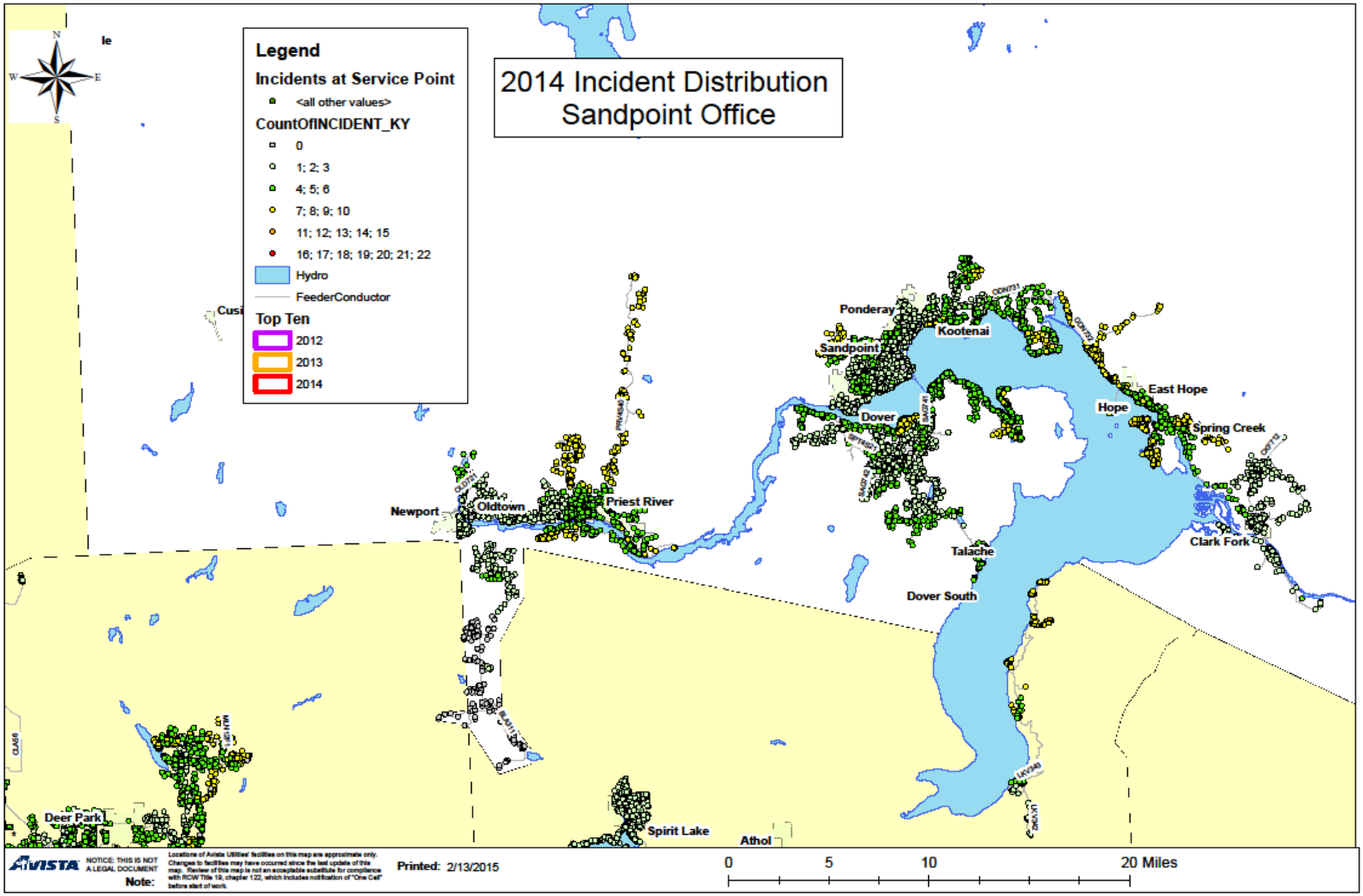


Chart - Kellogg Office - $CEMI_n$

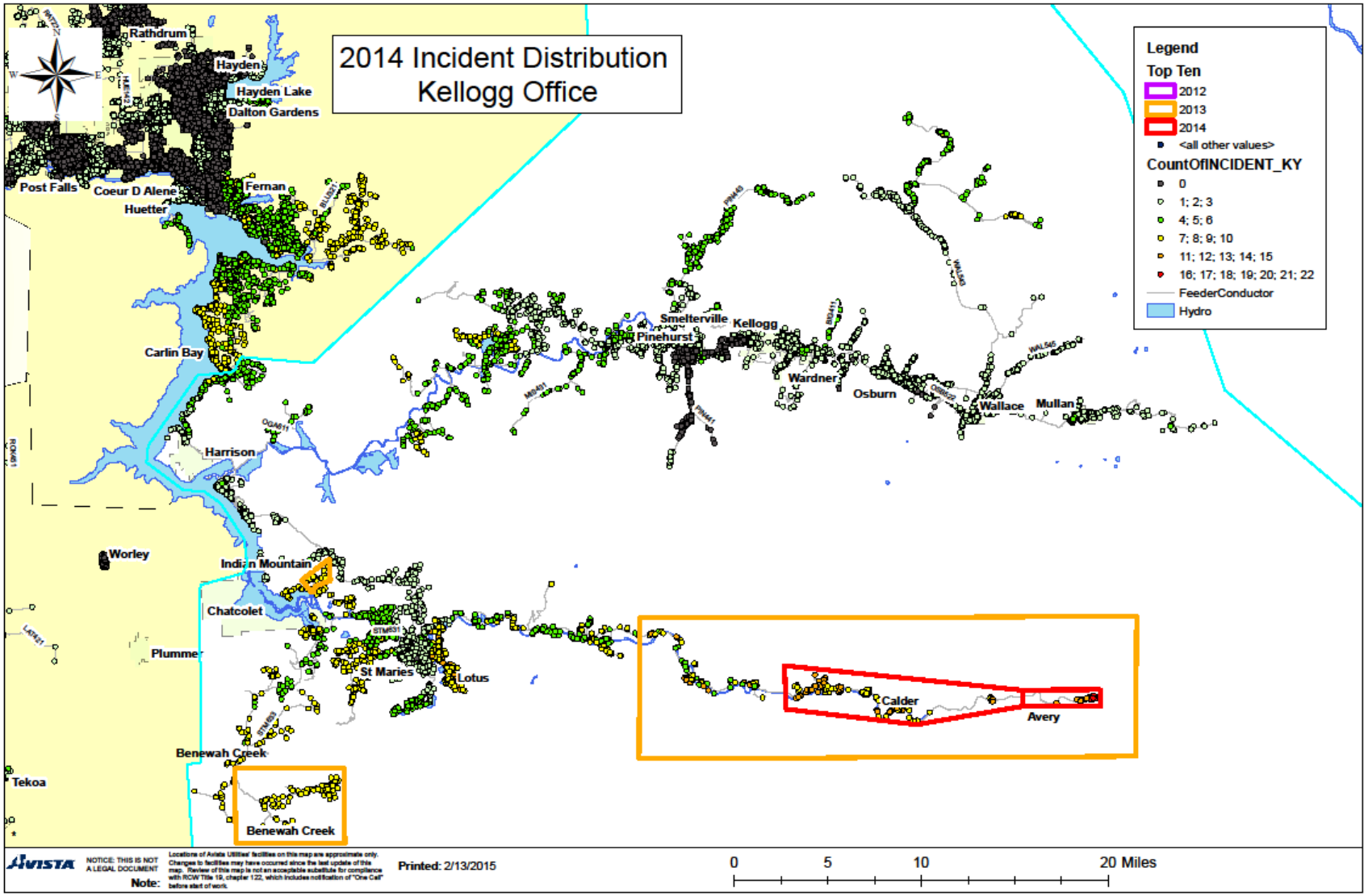


Chart - Coeur d'Alene - $CEMI_n$

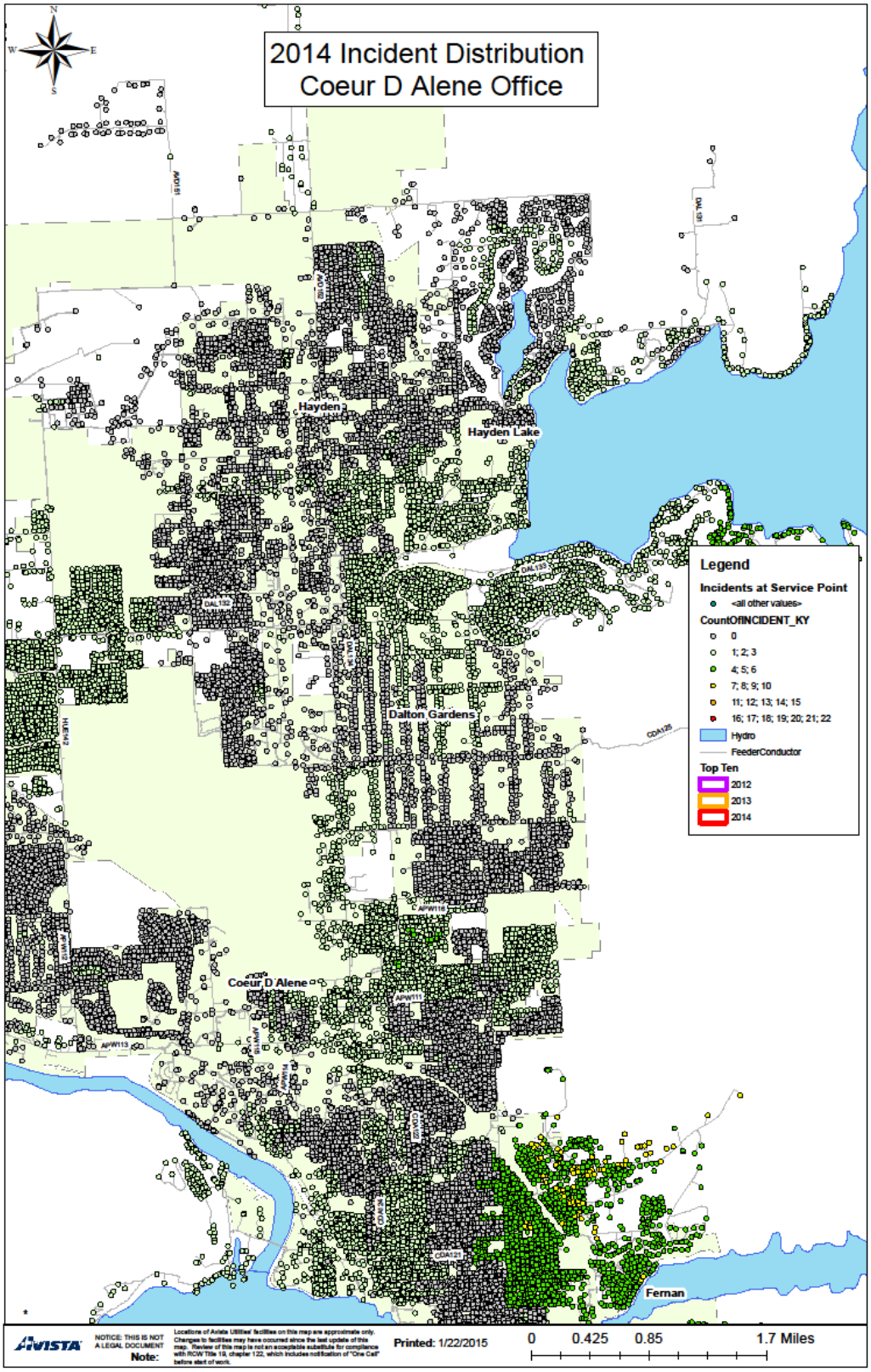
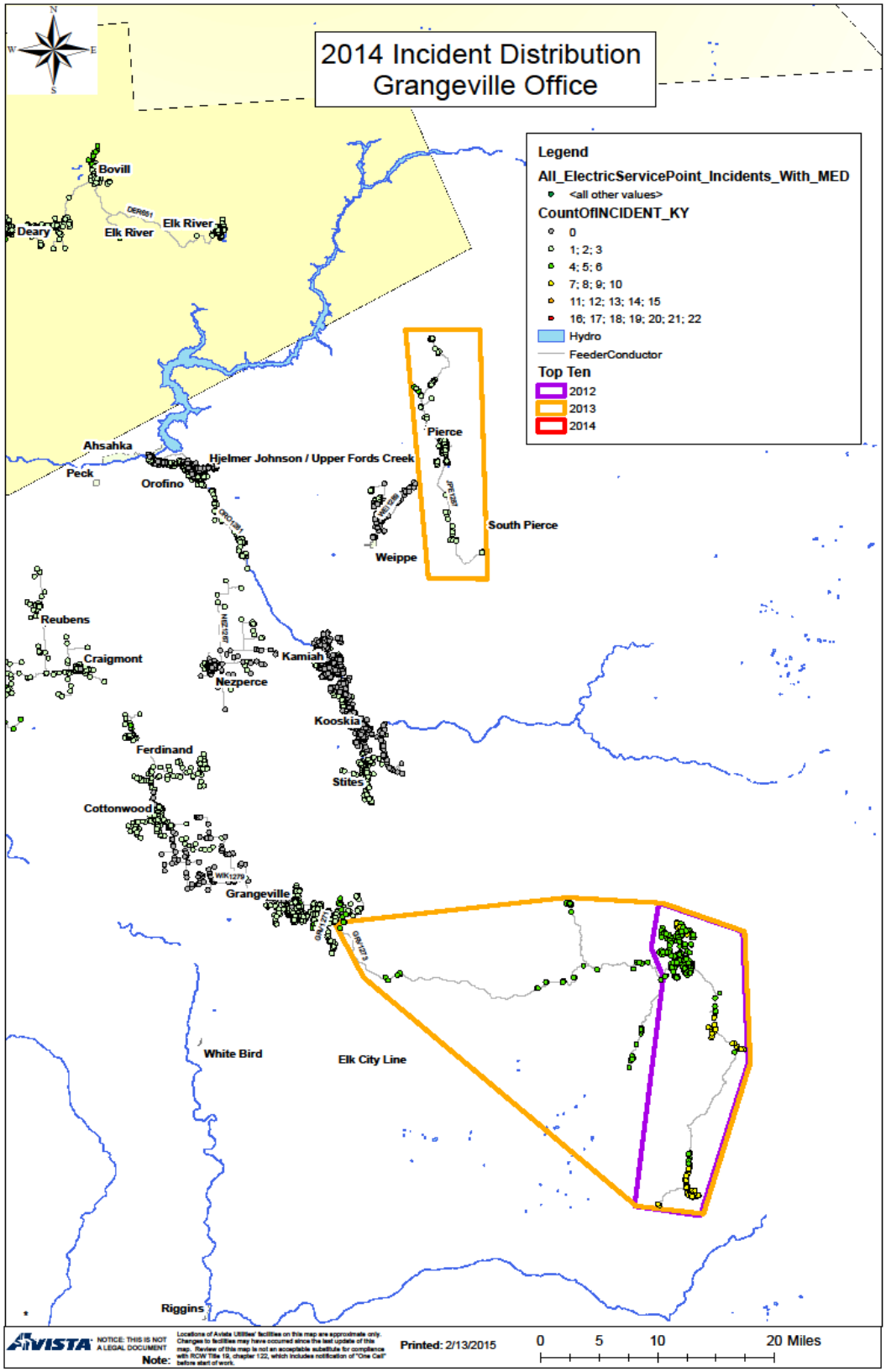


Chart - Grangeville Office - $CEMI_n$



7. Monthly Indices

Each of the following indices, reported by month, shows the variations from month to month. These variations are partially due to inclement weather and, in some cases, reflect incidents of winter snowstorms, seasonal windstorms, and mid- and late summer lightning storms. They also reflect varying degrees of animal activity causing disruptions in different months of the year.

Chart – SAIFI - Sustained Interruptions / Customer

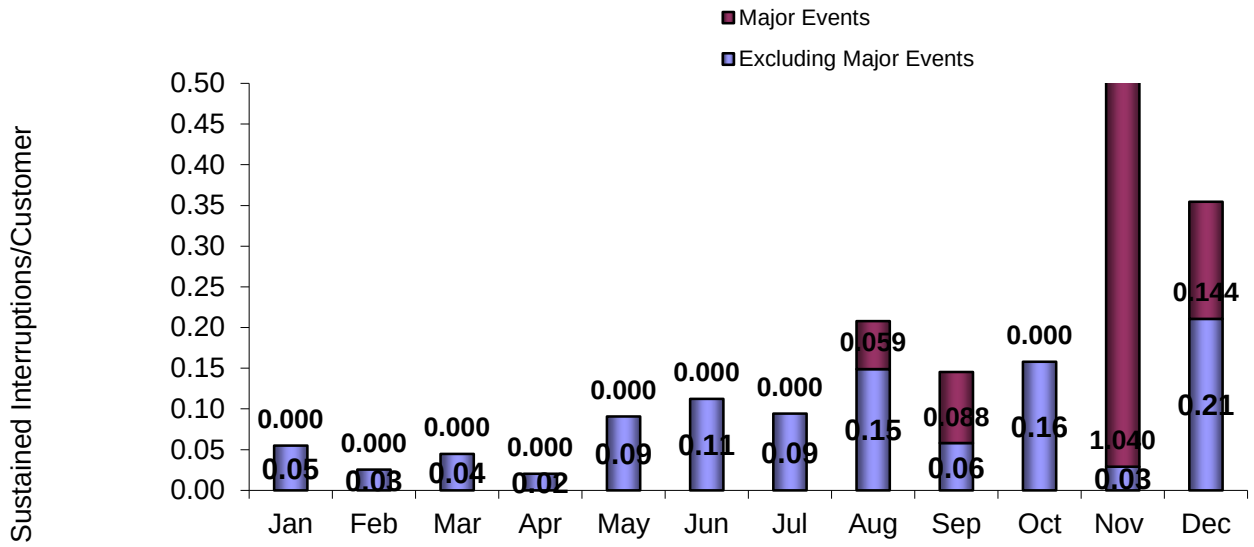


Chart - MAIFI Momentary Interruption Events / Customer

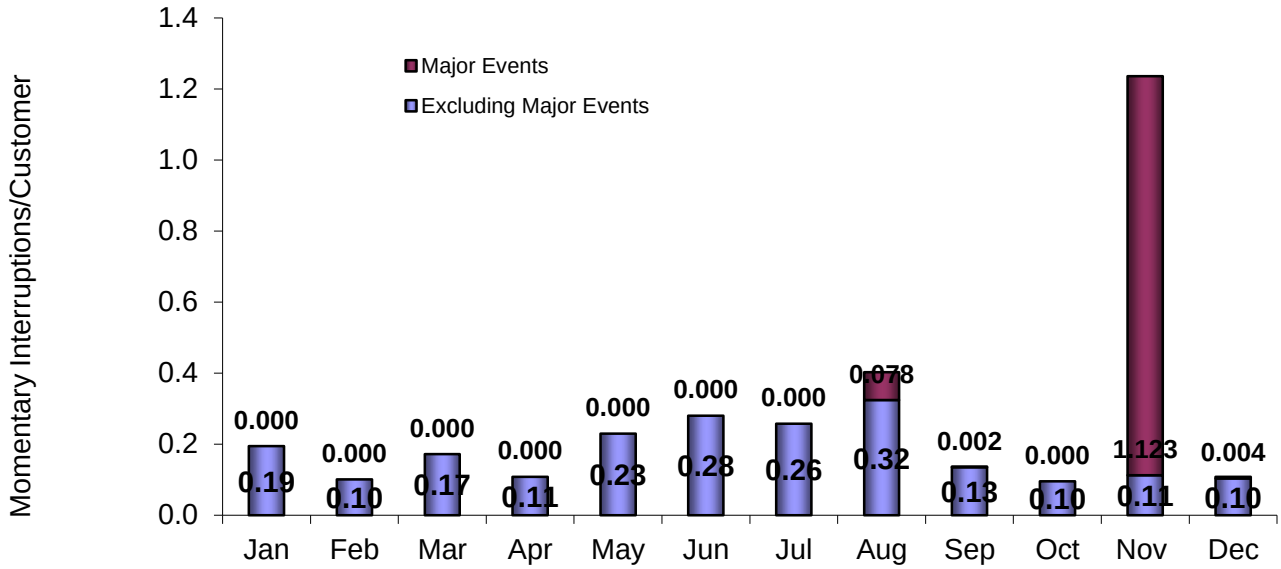


Chart - SAIDI – Average Outage Time / Customer

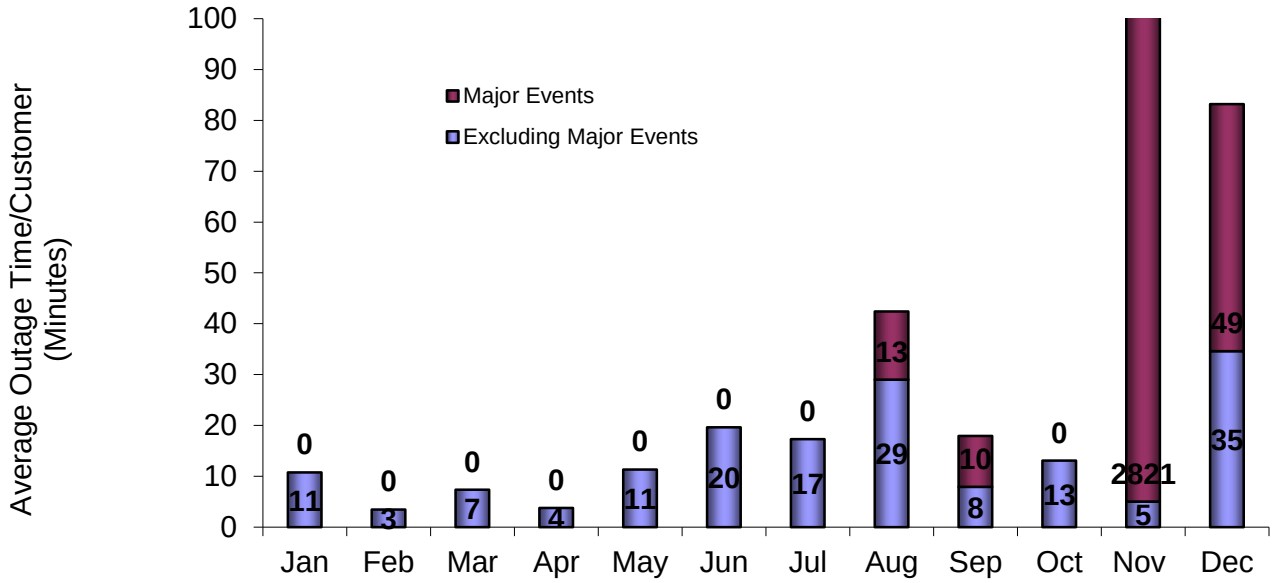
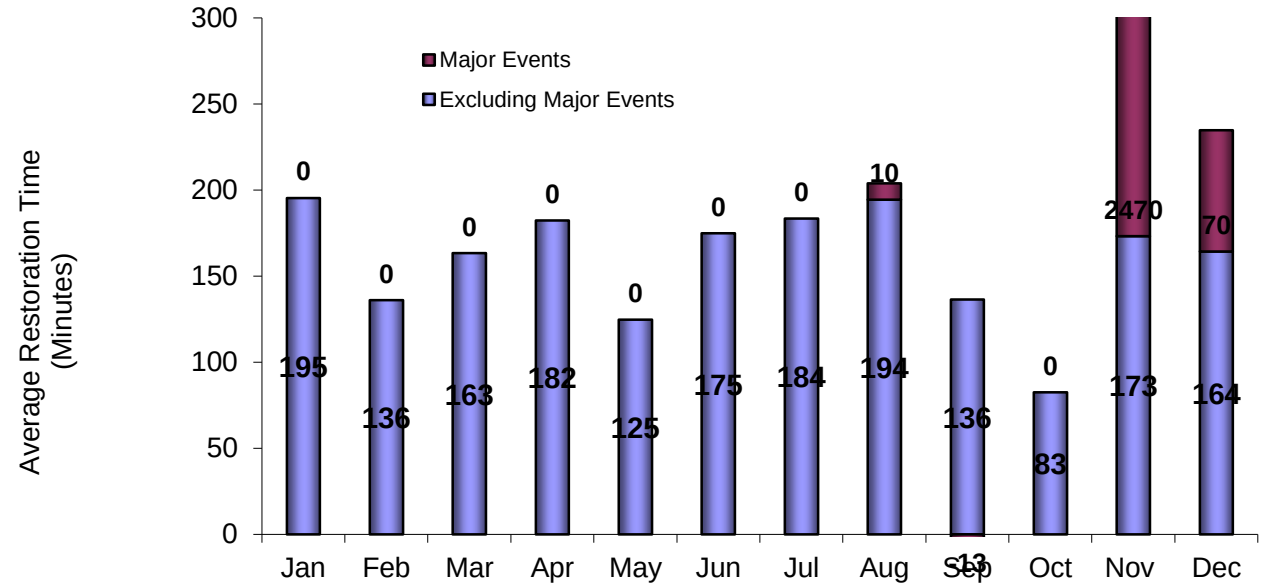


Chart - CAIDI – Average Restoration Time



8. Sustained Interruption Causes

Table - % SAIFI per Cause by Office

The following table lists the percentage SAIFI contribution by causes for outages excluding major event days.

Reason	CDC	COC	DAC	GRC	KEC	LCC	OTC	PAC	SAC	SPC	DPC	All Offices
ANIMAL	16.1%	0.7%	15.0%	0.3%	2.9%	2.2%	1.6%	15.4%	3.4%	9.1%	6.6%	6.5%
MISCELLANEOUS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%
POLE FIRE	6.8%	18.2%	8.3%	29.1%	3.0%	30.8%	44.8%	10.3%	2.9%	9.9%	16.5%	14.6%
WEATHER	49.8%	19.9%	31.0%	17.0%	21.8%	13.4%	18.5%	6.3%	25.8%	9.7%	52.4%	20.4%
UNDETERMINED	8.9%	13.9%	16.6%	4.7%	13.5%	17.8%	10.1%	9.6%	18.4%	4.9%	1.0%	9.9%
TREE	2.6%	10.7%	2.1%	7.5%	15.5%	8.8%	1.0%	16.8%	24.3%	9.1%	5.2%	10.0%
PUBLIC	6.3%	16.4%	1.4%	2.8%	10.1%	3.3%	7.3%	7.4%	4.1%	12.1%	16.4%	10.1%
COMPANY	0.1%	1.0%	0.0%	1.1%	0.0%	0.0%	0.2%	4.8%	0.5%	22.7%	0.0%	6.4%
EQUIPMENT OH	0.5%	12.0%	5.9%	13.0%	5.9%	5.0%	3.6%	7.5%	17.4%	10.0%	0.6%	8.5%
EQUIPMENT UG	1.6%	0.2%	1.3%	0.3%	0.1%	1.3%	0.1%	1.9%	0.1%	2.1%	0.1%	1.1%
EQUIPMENT SUB	0.0%	0.0%	0.0%	3.4%	3.2%	11.1%	0.0%	0.0%	0.0%	0.3%	0.0%	1.4%
PLANNED	7.3%	7.0%	18.4%	20.9%	24.1%	6.4%	12.7%	19.8%	3.1%	10.0%	1.2%	11.1%

CDC	Coeur d'Alene	LCC	Lewiston-Clarkston
COC	Colville	OTC	Othello
DAC	Davenport	PAC	Palouse
DPC	Deer Park	SAC	Sandpoint
GRC	Grangeville	SPC	Spokane
KEC	Kellogg/ St. Maries		

Chart - % SAIFI per Cause by Office

The following chart shows the percentage SAIFI contribution by causes for outages excluding major event days.

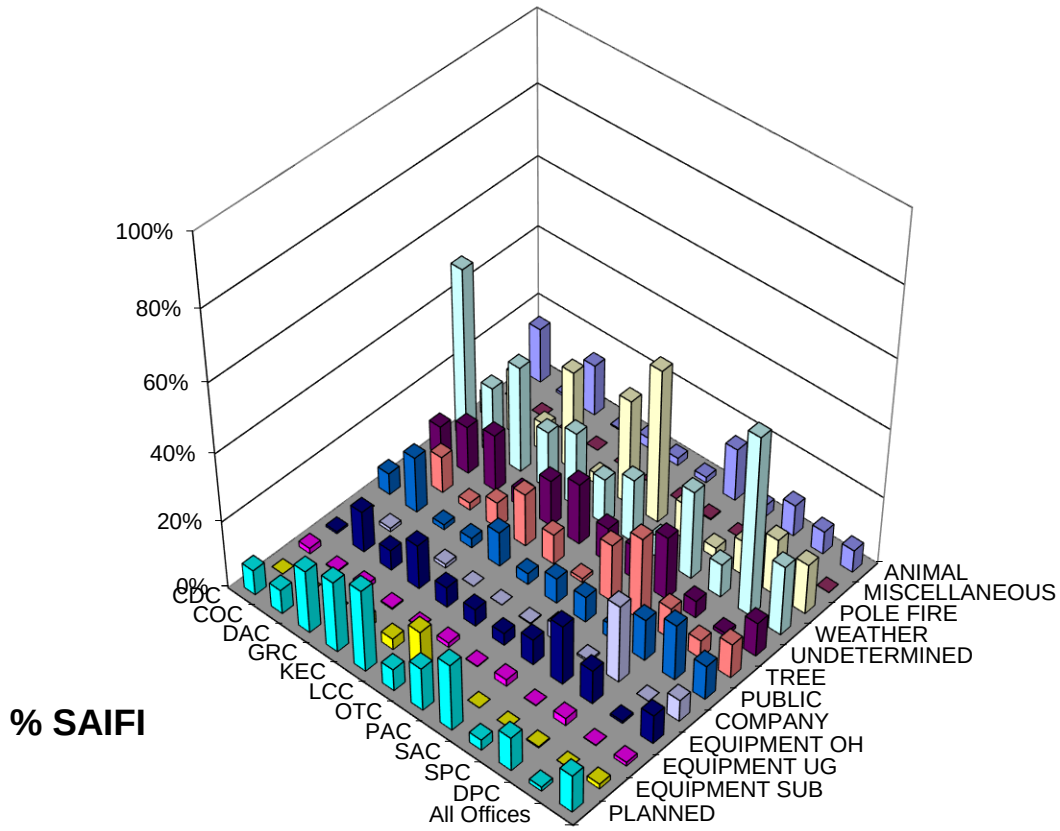


Table - % SAIDI per Cause by Office

The following table lists the percentage SAIDI contribution by causes for outages excluding major event days.

Reason	CDC	COC	DAC	GRC	KEC	LCC	OTC	PAC	SAC	SPC	DPC	All Offices
ANIMAL	6.1%	0.4%	11.8%	0.2%	1.6%	1.5%	1.8%	12.5%	1.6%	4.8%	7.6%	3.9%
MISCELLANEOUS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
POLE FIRE	3.0%	12.8%	10.2%	21.7%	3.1%	19.7%	36.8%	17.6%	3.8%	22.4%	15.4%	14.9%
WEATHER	70.0%	39.4%	25.2%	16.6%	35.6%	10.0%	13.5%	9.1%	37.1%	14.3%	42.5%	28.9%
UNDETERMINED	5.2%	6.2%	16.4%	4.3%	7.0%	14.2%	16.4%	5.3%	6.6%	5.6%	0.9%	6.6%
TREE	3.5%	11.8%	2.8%	14.6%	13.2%	14.1%	1.1%	6.3%	26.1%	10.8%	16.9%	11.4%
PUBLIC	5.3%	15.3%	2.6%	3.8%	7.0%	7.6%	19.4%	7.1%	3.3%	10.1%	14.7%	9.7%
COMPANY	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.1%	1.8%	0.0%	0.8%
EQUIPMENT OH	0.7%	8.4%	6.5%	9.2%	5.6%	8.0%	4.0%	8.1%	19.8%	12.6%	0.5%	8.3%
EQUIPMENT UG	1.4%	0.4%	0.9%	0.5%	0.2%	2.6%	0.2%	6.2%	0.2%	7.7%	0.1%	2.6%
EQUIPMENT SUB	0.0%	0.0%	0.0%	10.0%	1.8%	10.4%	0.0%	0.0%	0.0%	0.1%	0.0%	1.6%
PLANNED	4.7%	5.1%	23.6%	19.0%	24.9%	11.7%	6.8%	23.4%	1.4%	9.9%	1.2%	11.5%

CDC	Coeur d'Alene	LCC	Lewiston-Clarkston
COC	Colville	OTC	Othello
DAC	Davenport	PAC	Palouse
DPC	Deer Park	SAC	Sandpoint
GRC	Grangeville	SPC	Spokane
KEC	Kellogg/ St. Maries		

Chart – % SAIDI per Cause by Office

The following chart shows the percentage SAIDI contribution by causes for outages excluding major event days.

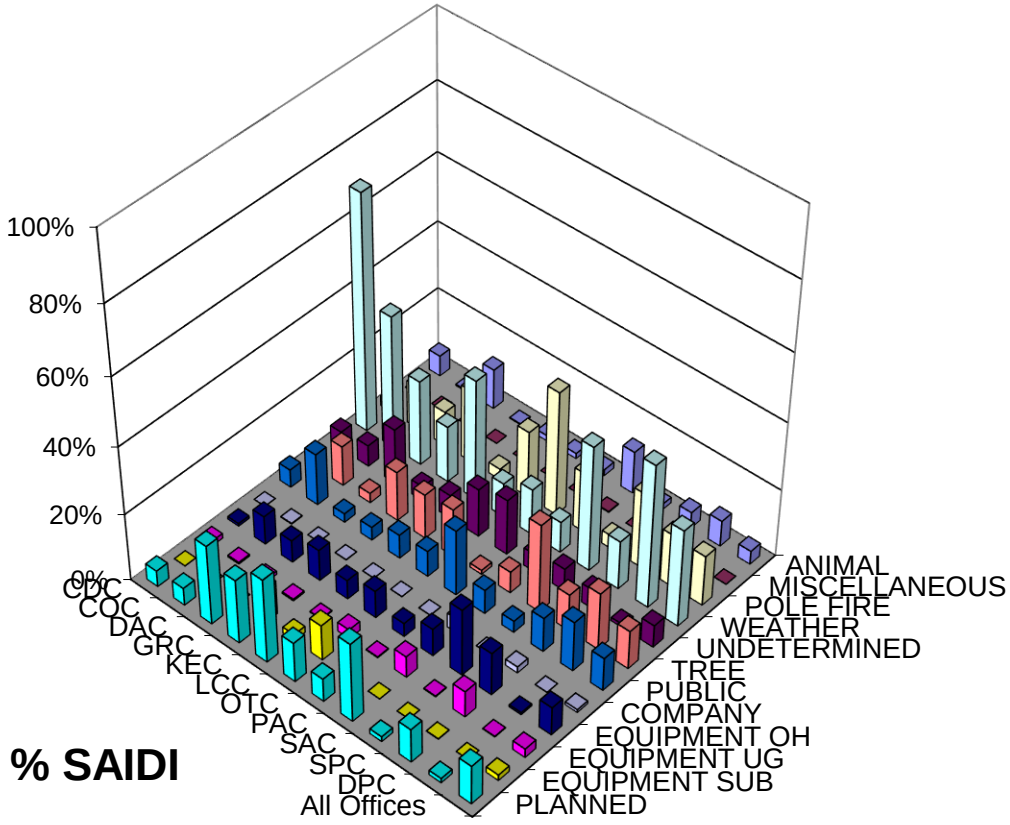


Table - % SAIFI per Cause by Month

The following table lists the percentage SAIFI contribution by causes for all outages, excluding major event days.

Reason	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Yearly
ANIMAL	4.4%	0.8%	12.7%	23.8%	11.2%	14.3%	4.0%	2.8%	16.5%	4.5%	1.6%	1.8%	6.5%
MISCELLANEOUS	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
POLE FIRE	0.2%	10.2%	9.2%	0.0%	15.8%	1.8%	25.6%	21.4%	26.4%	34.8%	0.8%	1.7%	14.6%
WEATHER	26.5%	1.7%	0.7%	2.7%	26.3%	27.9%	7.3%	12.4%	0.1%	0.4%	10.8%	53.8%	20.4%
UNDETERMINED	16.5%	9.0%	5.7%	9.3%	2.7%	9.1%	18.1%	3.4%	9.2%	8.4%	6.7%	15.4%	9.9%
TREE	16.9%	10.7%	25.8%	0.9%	14.0%	5.5%	18.1%	16.4%	3.5%	2.2%	16.7%	4.8%	10.0%
PUBLIC	3.9%	15.8%	17.4%	11.4%	7.5%	10.4%	13.0%	19.8%	22.9%	3.2%	3.2%	4.7%	10.1%
COMPANY	0.0%	0.2%	0.1%	0.2%	2.9%	8.5%	1.0%	0.0%	3.3%	31.9%	4.1%	0.0%	6.4%
EQUIPMENT OH	14.5%	7.1%	9.7%	19.8%	2.1%	14.7%	3.4%	5.4%	6.5%	2.1%	26.5%	12.6%	8.5%
EQUIPMENT UG	0.9%	5.7%	0.2%	0.6%	0.1%	3.3%	2.0%	0.7%	1.9%	0.4%	1.5%	0.0%	1.1%
EQUIPMENT SUB	4.3%	14.4%	0.0%	0.0%	5.7%	0.0%	2.9%	0.5%	0.0%	0.0%	0.0%	0.0%	1.4%
PLANNED	11.9%	24.5%	18.5%	29.9%	11.8%	4.4%	4.7%	17.1%	9.8%	12.2%	27.9%	5.2%	11.1%

Chart – % SAIFI per Cause by Month

The following chart shows the percentage SAIFI contribution by causes for all outages, excluding major event days.

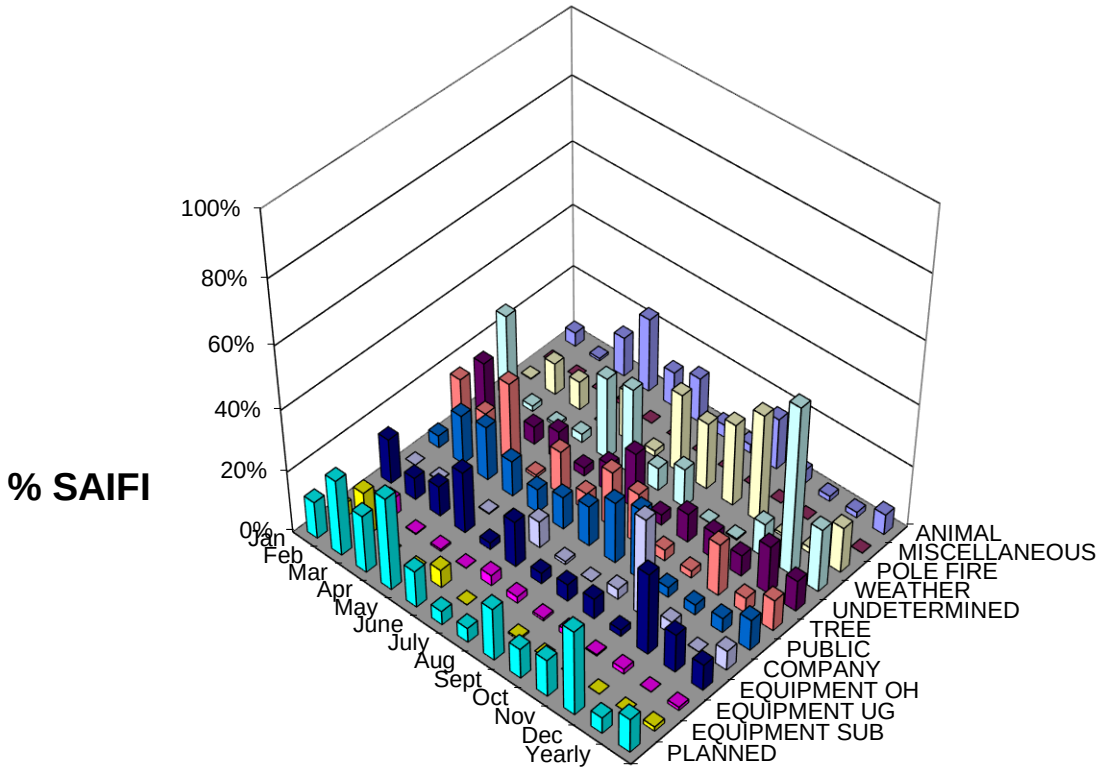


Table - % SAIDI per Cause by Month

The following table lists the percentage SAIDI contribution by causes for outages excluding major event days.

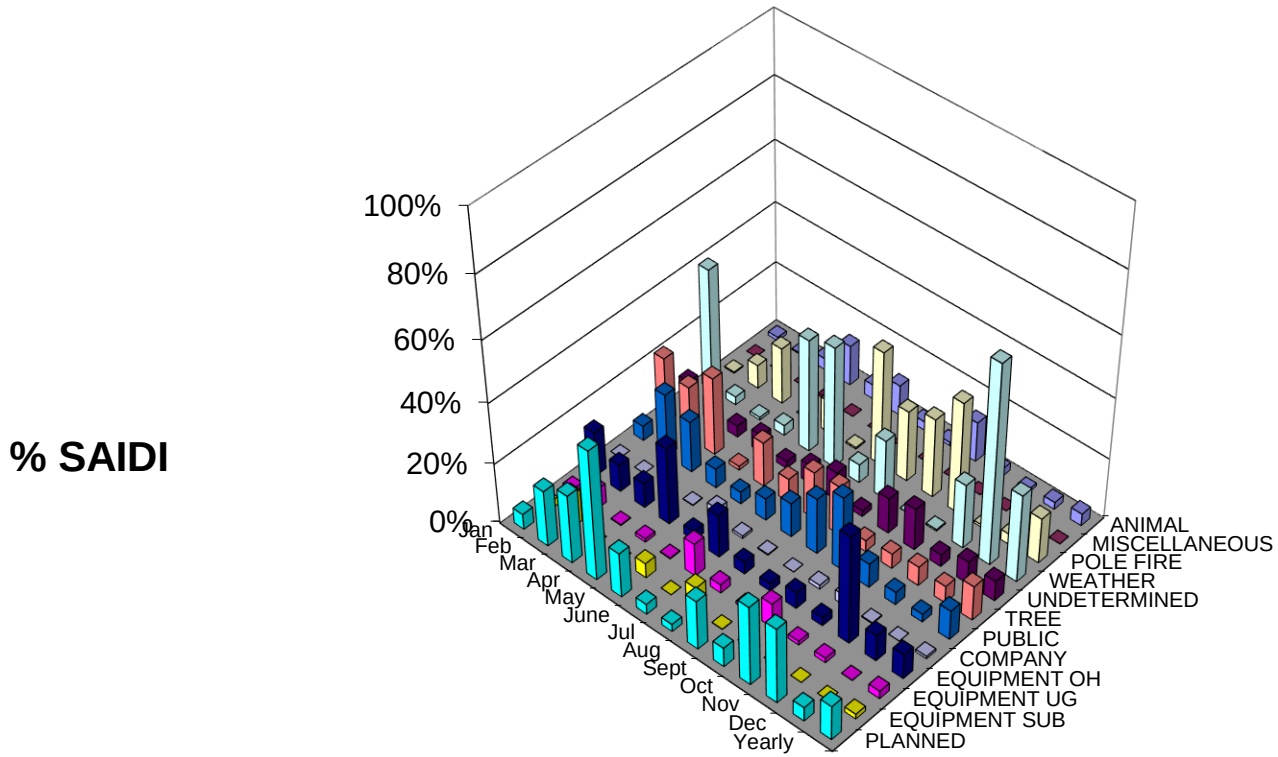
REASON	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Yearly
ANIMAL	1.2%	0.4%	3.7%	13.1%	4.7%	9.9%	2.8%	1.1%	13.1%	2.5%	0.9%	2.3%	3.9%
MISCELLANEOUS	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
POLE FIRE	0.3%	7.7%	18.5%	0.0%	10.5%	0.5%	37.6%	23.3%	26.0%	36.7%	0.7%	3.4%	14.9%
WEATHER	40.2%	2.7%	0.9%	3.3%	37.0%	39.7%	6.0%	19.4%	0.1%	0.5%	21.1%	65.5%	28.9%
UNDETERMINED	8.4%	7.2%	3.7%	5.8%	2.3%	6.1%	9.3%	1.9%	11.6%	13.7%	3.9%	7.3%	6.6%
TREE	22.0%	17.4%	25.5%	1.2%	14.6%	7.8%	15.5%	16.2%	3.7%	4.8%	6.2%	5.5%	11.4%
PUBLIC	4.8%	20.7%	16.8%	6.3%	4.0%	7.2%	11.2%	18.3%	24.4%	7.9%	4.1%	2.6%	9.7%
COMPANY	0.0%	0.0%	0.0%	0.2%	4.4%	0.8%	0.3%	0.0%	1.3%	3.3%	0.3%	0.0%	0.8%
EQUIPMENT OH	14.4%	8.8%	8.1%	25.4%	3.0%	14.0%	4.0%	2.5%	5.4%	2.8%	35.7%	8.7%	8.3%
EQUIPMENT UG	1.2%	6.3%	0.2%	1.1%	0.2%	10.8%	2.7%	0.9%	8.1%	1.3%	1.6%	0.1%	2.6%
EQUIPMENT SUB	2.4%	10.5%	0.0%	0.0%	4.8%	0.0%	8.2%	0.1%	0.0%	0.0%	0.0%	0.0%	1.6%
PLANNED	5.0%	18.4%	22.5%	42.8%	14.6%	3.3%	2.4%	16.3%	6.4%	26.5%	25.3%	4.6%	11.5%

Table – Average Outage Time (**HH:MM**)

REASON	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
ANIMAL	0:50	1:00	0:47	1:40	0:52	2:00	2:10	1:17	1:48	0:46	1:42	3:32	1:33
COMPANY	0:11	0:13	2:29	2:07	3:09	0:16	0:51	0:30	2:11	0:08	0:12	0:29	0:59
EQUIPMENT OH	3:14	2:48	2:15	3:53	2:54	2:46	3:32	1:31	2:44	1:50	15:37	1:54	4:19
EQUIPMENT SUB	1:50	1:39			1:43		8:48	0:31		0:11			2:57
EQUIPMENT UG	4:26	2:32	2:41	5:36	5:09	9:31	4:08	3:59	9:42	4:14	4:44	4:37	6:11
MISCELLANEOUS				1:43									1:43
PLANNED	1:22	1:42	3:18	4:21	2:35	2:11	1:34	3:05	1:35	3:00	10:52	2:24	3:21
POLE FIRE	6:43	1:42	5:28		1:22	0:45	4:29	3:13	2:14	1:27	2:49	5:19	2:35
PUBLIC	4:01	2:57	2:38	1:41	1:05	2:01	2:38	3:00	1:38	3:23	69:39	1:32	3:38
TREE	4:13	3:40	2:41	4:11	2:10	4:06	2:37	3:13	2:21	2:56	8:10	5:10	3:43
UNDETERMINED	1:39	1:48	1:46	1:53	1:47	1:57	1:33	1:49	2:52	2:14	0:57	1:17	1:39
WEATHER	4:56	3:37	3:14	3:41	2:55	4:08	2:30	4:20	1:56	1:44	45:30	4:31	34:01

Chart – % SAIDI per Cause by Month

The following chart shows the percentage SAIDI contribution by causes for outages excluding major event days.



9. Momentary Interruption Causes

The cause for many momentary interruptions is unknown. Because faults are temporary, the cause goes unnoticed even after the line is patrolled. Momentary outages are recorded using our SCADA system (System Control and Data Acquisition). On average, about 88% of Avista's customers are served from SCADA controlled stations.

Table - % MAIFI per Cause by Office

The following table lists the percentage MAIFI contribution by causes for outages excluding major event days.

Reason	CDC	COC	DAC	GRC	KEC	LCC	OTC	PAC	SAC	SPC	DPC	All Offices
ANIMAL	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.2%	0.0%	4.1%	0.0%	1.0%
EQUIPMENT	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
POLE FIRE	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	16.1%	0.0%	1.1%	22.2%	2.8%
WEATHER	57.3%	25.2%	50.7%	19.0%	12.5%	31.3%	7.3%	28.3%	28.4%	41.6%	71.0%	39.8%
TREE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
PUBLIC	0.7%	0.0%	0.0%	1.1%	2.4%	0.0%	0.0%	0.0%	1.5%	5.2%	0.0%	1.5%
COMPANY	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.3%
UNDETERMINED	40.5%	69.6%	49.3%	70.5%	85.0%	63.1%	63.8%	42.0%	64.0%	39.2%	6.8%	48.9%
EQUIPMENT UG	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
EQUIPMENT OH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	4.5%	0.0%	1.1%
PLANNED	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
FORCED OUTAGE/SWITCHING	0.0%	1.8%	0.0%	8.2%	0.0%	0.0%	0.0%	10.8%	6.0%	4.2%	0.0%	3.2%
FORCED	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.9%	0.0%	0.0%	0.0%	0.0%	0.5%
UNKNOWN	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
FORCED OUTAGE/ SWITCHING	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.2%

CDC	Coeur d'Alene	LCC	Lewiston-Clarkston
COC	Colville	OTC	Othello
DAC	Davenport	PAC	Palouse
DPC	Deer Park	SAC	Sandpoint
GRC	Grangeville	SPC	Spokane
KEC	Kellogg/ St. Maries		

Table 9.1.1 - % MAIFI per Cause by Office (Washington only)

The following table lists the percentage MAIFI contribution by causes for outages excluding major event days.

Reason	COC	DAC	DPC	LCC - WA	OTC	PAC - WA	SPC	All Offices
ANIMAL	0.0%	0.0%	0.0%	0.0%	0.7%	4.1%	0.0%	2.1%
EQUIPMENT	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
POLE FIRE	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	22.2%	1.7%
WEATHER	25.2%	52.4%	21.8%	7.3%	35.2%	41.6%	71.0%	36.9%
PUBLIC	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	2.6%
COMPANY	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
UNDETERMINED	69.6%	47.6%	74.6%	63.8%	58.4%	39.2%	6.8%	49.6%
EQUIPMENT UG	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.5%
EQUIPMENT OH	0.0%	0.0%	0.0%	0.0%	4.0%	4.5%	0.0%	2.5%
PLANNED	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
FORCED OUTAGE/SWITCHING	1.8%	0.0%	0.0%	0.0%	1.7%	4.2%	0.0%	2.5%
FORCED	0.0%	0.0%	0.0%	28.9%	0.0%	0.0%	0.0%	1.1%

COC	Colville	OTC	Othello
DAC	Davenport	PAC-WA	Palouse Washington
DPC	Deer Park	SPC	Spokane
LCC-WA	Lewiston-Clarkston Washington		

Chart – % MAIFI per Cause by Office

The following chart shows the percentage MAIFI contribution by causes for outages excluding major event days.

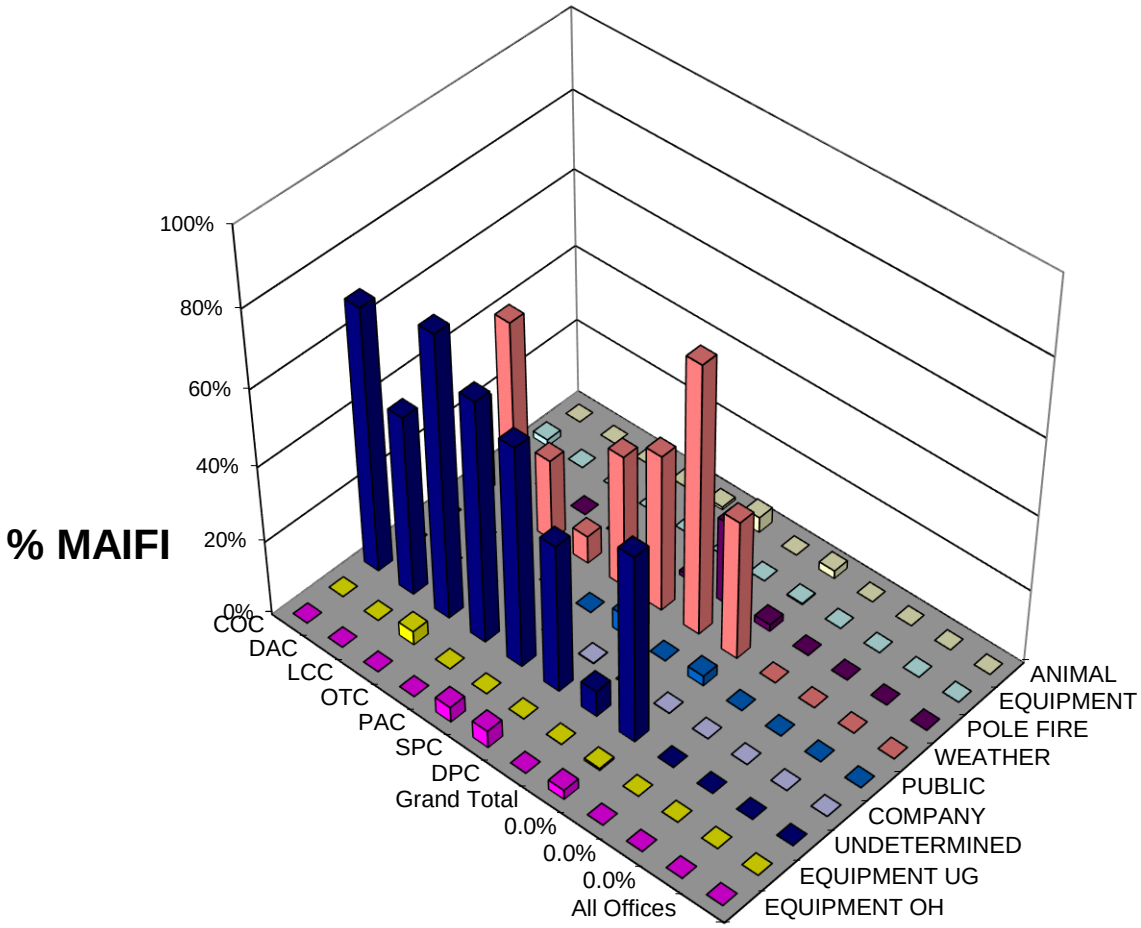


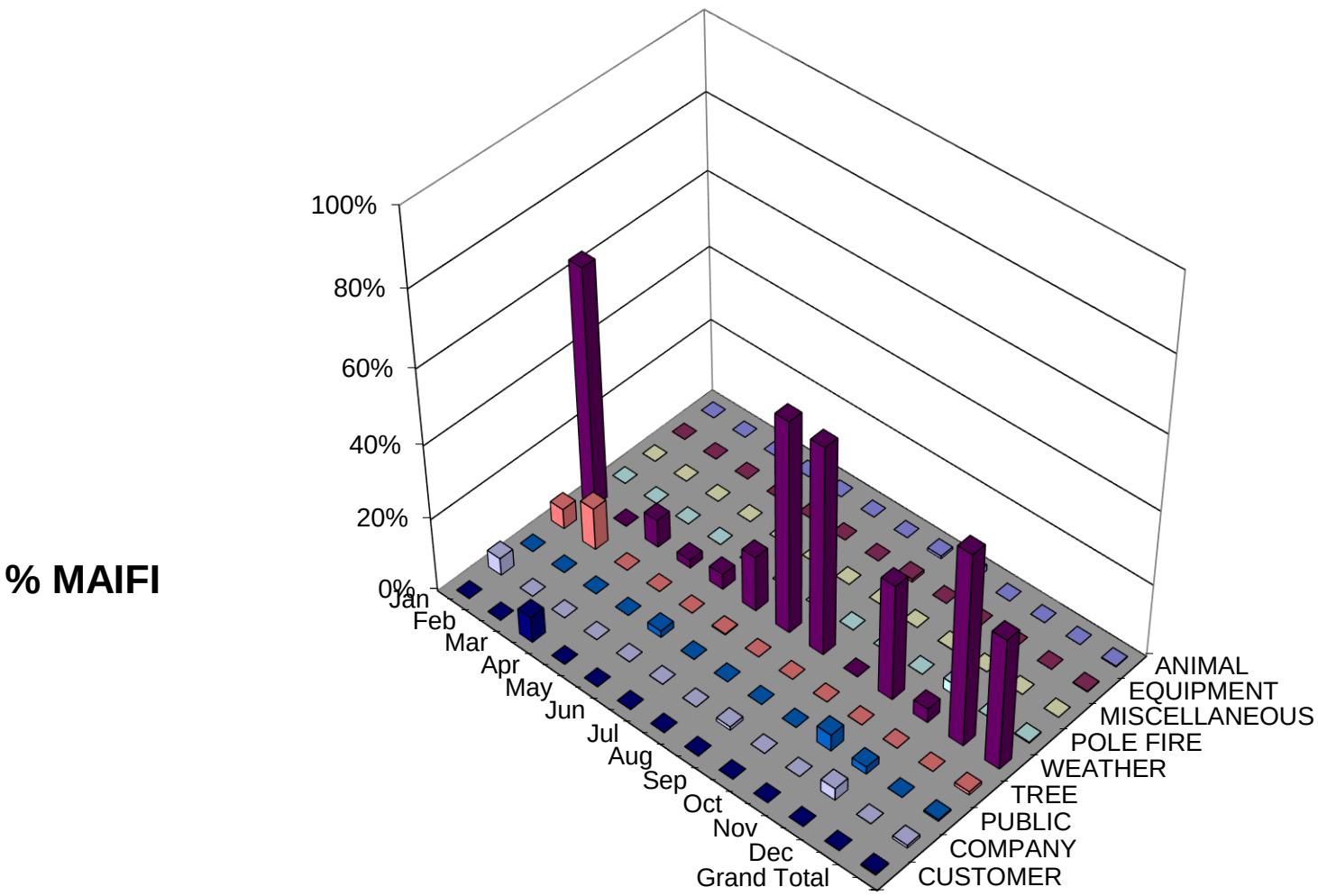
Table - % MAIFI per Cause by Month

The following table lists the percentage MAIFI contribution by causes for outages excluding major event days.

Reason	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
ANIMAL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.6%	0.0%	0.0%	0.0%	0.2%
EQUIPMENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.2%
MISCELLANEOUS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
POLE FIRE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.2%
WEATHER	64.3%	0.0%	7.5%	2.2%	4.1%	14.9%	57.1%	56.1%	0.0%	31.4%	3.8%	51.9%	35.6%
TREE	5.4%	11.4%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%
PUBLIC	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	4.4%	2.0%	0.0%	0.4%
COMPANY	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	3.3%	0.0%	0.7%
CUSTOMER	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
UNDETERMINED	15.4%	34.1%	85.4%	50.1%	67.4%	49.3%	25.6%	31.9%	97.7%	53.4%	53.6%	41.8%	41.7%
EQUIPMENT UG	0.0%	0.0%	0.0%	0.0%	5.7%	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%	0.0%	0.4%
EQUIPMENT OH	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	2.1%	2.8%	6.3%	1.5%
PLANNED	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UNKNOWN	4.8%	44.2%	0.0%	47.7%	13.1%	35.6%	13.2%	6.6%	0.6%	0.0%	29.7%	0.0%	15.4%
FORCED OUTAGE/SWITCHING	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FORCED	5.5%	0.0%	0.2%	0.0%	7.9%	0.0%	1.7%	3.0%	0.0%	4.8%	1.9%	0.0%	2.0%
TRANSMISSION	0.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%

Chart – % MAIFI per Cause by Month

The following chart shows the percentage MAIFI contribution by causes for outages excluding major event days.



10. Interruption Cause Codes

Cause code information is provided in this report to give readers a better understanding of outage sources. Further, the Company uses cause information to analyze past outages and, if possible, reduce the frequency and duration of future outages.

Since 2011, Avista has stopped using the subcategory "protected" under the "Animal" category. Almost all birds are considered protected, so there is little differentiation between the "Bird" and "Protected" subcategories. Avista will include additional information in the Remarks section as reported from the field personnel. .

Table – Interruption Cause Codes

MAIN CATEGORY Proposed **(Changes Only)**	**SUB CATEGORY** **Proposed** (Changes Only)	**Definition**
ANIMAL	Bird	Outages caused by animal contacts. Specific animal called out in sub category.
	Squirrel	
	Underground	
	Other	
PUBLIC	Car Hit Pad	Underground outage due to car, truck, construction equipment etc. contact with pad transformer, junction enclosure etc...
	Car Hit Pole	Overhead outage due to car, truck, construction equipment etc. contact with pole, guy, neutral etc.
	Dig In	Dig in by a customer, a customer's contractor, or another utility.
	Fire	Outages caused by or required for a house/structure or field/forest fire.
	Tree	Homeowner, tree service, logger etc. fells a tree into the line.
	Other	Other public caused outages
COMPANY	Dig in	Dig in by company or contract crew.
	Other	Other company caused outages
EQUIPMENT OH	Arrestors	Outages caused by equipment failure. Specific equipment called out in sub category.
	Capacitor	
	Conductor - Pri	
	Conductor - Sec	
	Connector - Pri	
	Connector - Sec	
	Crossarm- rotten	
	Cutout / Fuse	
	Insulator	
	Insulator Pin	
	Other	
	Pole - Rotten	
	Recloser	
	Regulator	
	Switch / Disconnect	
	Transformer - OH	
	Wildlife Guard	Wildlife guard failed or caused an outage

EQUIPMENT UG	URD Cable - Pri URD Cable- Sec Connector - Sec Elbow Junctions Primary Splice Termination Transformer - UG Other	Outages caused by equipment failure. Specific equipment called out in sub category.
EQUIPMENT SUB	High side fuse Bus Insulator High side PCB High side Swt / Disc Low side OCB/Recloser Low side Swt / Disc Relay Misoperation Regulator Transformer Other	
MISCELLANEOUS	SEE REMARKS	For causes not specifically listed elsewhere
NOT OUR PROBLEM (*Outages in this category are not included in reported statistics*)	Customer Equipment SEE REMARKS Other Utility	Customer equipment causing an outage to their service. If a customer causes an outage to another customer this is covered under Public. Outages when another utility's facilities cause an outage on our system.
POLE FIRE		Used when water and contamination causes insulator leakage current and fire. If insulator is leaking due to material failure list under equipment failure. If cracked due to gunfire use customer caused other.
PLANNED	Maintenance / Upgrade Forced	Outage, normally prearranged, needed for normal construction work Outage scheduled to repair outage damage
TREE	Tree fell Tree growth Service Weather	For outages when a tree falls into distribution primary/secondary or transmission during normal weather Tree growth causes a tree to contact distribution primary/secondary or transmission during normal weather. For outages when a tree falls or grows into a service. When snow and wind storms causes a tree or branch to fall into, or contact the line. Includes snow loading and unloading.
UNDETERMINED		Use when the cause cannot be determined
WEATHER	Snow / Ice Lightning Wind	Outages caused by snow or ice loading or unloading on a structure or conductor. Use weather tree for snow and ice loading on a tree. Lightning flashovers without equipment damage. Equipment failures reported under the equipment type. Outages when wind causes conductors to blow into each other, another structure, building etc.

11. Areas of Concerns

As in previous years, Colville continues to have the lowest reliability of Washington's operating areas. However, the Colville area continues to show improvement over previous years as work plans are implemented. Colville was judged lowest based on its performance in the yearly indices for SAIFI, SAIDI, CAIDI, and MAIFI. Within the Colville area, five feeders were identified as the Areas of Concern for 2015. Additionally two feeders in the Spokane area are included as areas of concern. These feeders are Gifford 34F1, Gifford 34F2, Orin 12F3, Colville 12F2, and Colville 34F1 in the Colville Area, and Ross Park 12F1 and Ross Park 12F6 in the Spokane area. Both Spokane area feeders are new areas of concern for 2015 while the remaining feeders have been identified in previous reports.

Cause Information

Generally, rural areas have a greater number of outages per customer. Colville is predominately rural and most feeders traverse forested areas. There are approximately 2,417 miles of distribution line exposed to weather, underground cable failures and tree problems. Unlike most of the Company's system, lines in this area are built on the narrow, cross-country rights-of-way, typical of PUD construction practices prior to Avista acquiring the system. These conditions make patrolling, tree trimming, rights-of-way clearing and other maintenance difficult. When cost effective, Avista moves sections of these overhead lines to road rights-of-way and/or converts them to underground.

Further, when outages occur in rural areas, the time required to repair damage is longer. More time is required for first responders to arrive and assess the damage and more time is required for the crew to reach the site. Often the damage is off road and additional time is required to transport materials and equipment to the site.

Snow loading on green healthy trees growing beyond the rights-of-way often causes them to bend or break and contact distribution lines. These trees are not cut as part of our vegetation management program because they are outside our rights-of-way and are considered healthy marketable timber.

Ross Park 12F1 becoming an area of concern in 2015 was primarily due to pole fires and public caused events. A single pole fire event leading to a long duration outage affecting the entire feeder led to Ross Park 12F6 being an area of concern for 2015. Both Ross Park feeders had large amounts of Company cause outages as well. Due to the nature of these events, neither of these feeders are expected to continue to be areas of concern in the future.

Listed below is a summary of the specific cause data for each feeder. This is a compilation of data from the Avista OMT and the reporting from our local servicemen to Distribution Dispatch. Data from the reporting system is shown as a percentage of total customer outage hours for that feeder.

Colville 12F2

ANIMAL	0.00%
COMPANY	0.00%
POLE FIRE	25.72%
PUBLIC	39.68%
TREE	21.13%
UNDETERMINED	0.01%
WEATHER	0.01%
EQUIPMENT OH	12.18%
EQUIPMENT UG	0.37%
PLANNED	0.91%

Colville 34F1

ANIMAL	0.09%
COMPANY	0.00%
POLE FIRE	38.71%
PUBLIC	17.02%
TREE	9.37%
UNDETERMINED	5.78%
WEATHER	5.71%
EQUIPMENT OH	7.23%
EQUIPMENT UG	0.42%
PLANNED	15.68%

Gifford 34F1

ANIMAL	14.03%
COMPANY	0.80%
POLE FIRE	4.74%
PUBLIC	1.03%
TREE	0.56%
UNDETERMINED	18.60%
WEATHER	49.83%
EQUIPMENT OH	2.41%
EQUIPMENT UG	0.02%
PLANNED	7.98%

Gifford 34F2

ANIMAL	0.20%
COMPANY	0.57%
POLE FIRE	3.11%
PUBLIC	9.91%
TREE	2.00%
UNDETERMINED	0.82%
WEATHER	82.42%
EQUIPMENT OH	0.06%
EQUIPMENT UG	0.77%
PLANNED	0.12%

Orin 12F3

ANIMAL	0.15%
COMPANY	0.00%
POLE FIRE	8.55%
PUBLIC	3.81%
TREE	13.34%
UNDETERMINED	2.58%
WEATHER	63.46%
EQUIPMENT OH	6.68%
EQUIPMENT UG	1.03%
PLANNED	0.40%

Ross Park 12F1

ANIMAL	0.02%
COMPANY	5.44%
POLE FIRE	14.23%
PUBLIC	26.19%
TREE	44.69%
UNDETERMINED	1.46%
WEATHER	6.86%
EQUIPMENT OH	0.05%
EQUIPMENT UG	0.00%
PLANNED	1.06%

Ross Park 12F6

ANIMAL	0.56%
COMPANY	1.94%
POLE FIRE	96.17%
PUBLIC	0.06%
TREE	0.28%
UNDETERMINED	0.05%
WEATHER	0.00%
EQUIPMENT OH	0.20%
EQUIPMENT UG	0.00%
PLANNED	0.74%

Colville Area Work Plans

The improvement work that has been accomplished or planned for historically low reliability feeders in the Colville area is listed below. The Company's reliability working group is continuing to study these feeders to develop additional work plans. Each of the identified feeders also had planned outages that correspond to the maintenance and replacement activities in the area.

Gifford 34F1

- Storm damage to lines led an effort to reconductor sections to 2/0 ACSR in 2012.

- A recloser is budgeted to be installed in 2014/2015 that will allow for better sectionalizing between the northern and southern sections of the feeder during outage events.
- $167k was spent in 2014 to replace 2 miles of overhead distribution line with underground cable.
- $250k is budgeted to reconductor 2 miles of overhead distribution line in 2015.
- Existing feeder will be split into two separate feeders; work to be completed in 2017.

Gifford 34F2

- Due to Cultural review issues on some of the Tribal lands only 3,000 feet of OH conductor was replaced in 2010. Continued work and negotiations for the remaining 5,000 feet occurred in 2011. Final work was completed in 2012.
- Vegetation Management work planned for 2012 was re-prioritized to 2011 after circuit assessment showed a large number of dead or dying trees within radius of contact of our lines. Line clearance crews trimmed 651 trees and removed 867 trees in 2011.
- $167k was spent in 2014 to reconductor 2 miles of overhead distribution line.
- $250k was budgeted to reconductor 2 miles of overhead distribution line in 2015; project has been moved to 2016.

Colville 34F1

- Vegetation Management crews were called to trim 3 trees and remove 59 trees as "unplanned" work on this circuit in 2011. A fall 2011 assessment of this circuit showed a significantly high mortality rate of trees within radius of contact of lines on the feeder. A line clearance crew began Risk Tree mitigation work on this circuit in February, 2012.
- $100k was budgeted in 2011 to replace outage prone overhead sections with URD cable.
- $62k was budgeted to install wild life guards in 2011. Approximately 65% of the CLV12F1 feeder was completed in 2011. Remaining work was completed in 2012.
- $250k was budgeted in 2013 to replace overhead line sections with URD cable to reduce tree exposure. Work was completed in 2013.
- $50k was budgeted in 2013 to install a recloser to allow for better outage sectionalizing. Work was completed in 2013.
- $250k was budgeted to reconductor 2 miles of overhead distribution line in 2015; project has been moved to 2016/2017.

Spirit 12F1

- Feeder was part of the Grid Modernization program for 2014. Additional Grid Modernization work on this feeder is scheduled to take place in 2016. Feeder will also have reconductor and fusing work performed as well as other upgrades that may improve reliability.

Table - Colville Area Major Reliability Projects by Feeder

Feeder	Decisions/ basis	2015	2016 and Beyond
Gifford 34F1	Reliability improvements	Reconductor work. Split into 2 shorter feeders.	No work planned in the next 5 years.
Gifford 34F2	Reliability improvements	Reconductor work	No work planned in the next 5 years.
Colville 34F1	Reliability improvements	Reconductor work	No work planned in the next 5 years.
SPI12F1	Reliability Improvements	Grid Modernization Program Feeder	Finish Grid Modernization in 2016

Table - Colville Area Historical & Proposed Future Reliability Projects by Feeder

Feeder Name	Last WPM Insp.	Proposed WPM Inspection	Proposed WPM Follow-up	Transformer Change-outs	Last Veg. Mgmt.	Veg. Mgmt. Proposed Year	Wildlife Guards Proposed Year
GIF34F1	2011-2014	25% per year for 4 yrs	25% in 2012 25% in 2013 25% in 2014 25% in 2015	18 in 2014	2009	2015	Last 2011 N/A on Proposed
GIF34F2	1995	Past 2018 Plan AM will need to project	N/A	69 in 2013/2014	2011	2016	N/A
CLV34F1	2007	2027 20 year cycle	2028	49 in 2015	2007	2013	Last 2011 N/A on Proposed
VAL12F1	2010	2030 20 year cycle	Completed in 2011 (except for WSDOT ROW poles)	188 in 2013/2014	2010	2016	N/A
SPI12F1	2013	2033 20 year cycle	Grid Modernization Project	6 in 2013	2011	2016	N/A
VAL12F3	1998	2019 20 year cycle	2020	22 changed out since 2010 38 more by end of 2016	2010	2015	N/A

12. System Wide Work Plans

Material records show that some wildlife guards were installed on new distribution transformers installations starting in the mid 1980's. With the recognition of increases in animal caused outages, new materials and improvements have been made in the construction standards for new distribution transformer installations to reduce these types of outages. Initial indications show that the outage reduction on a feeder after wildlife guards are installed is significant.

2009 was the start of the multiyear wildlife guard installation program to reduce the squirrel and bird related outages on approximately sixty feeders in Washington and Idaho. Most of the wildlife guards were installed with a hot stick on existing transformers that do not have an existing wildlife guard.

Chart – Squirrel Related Events

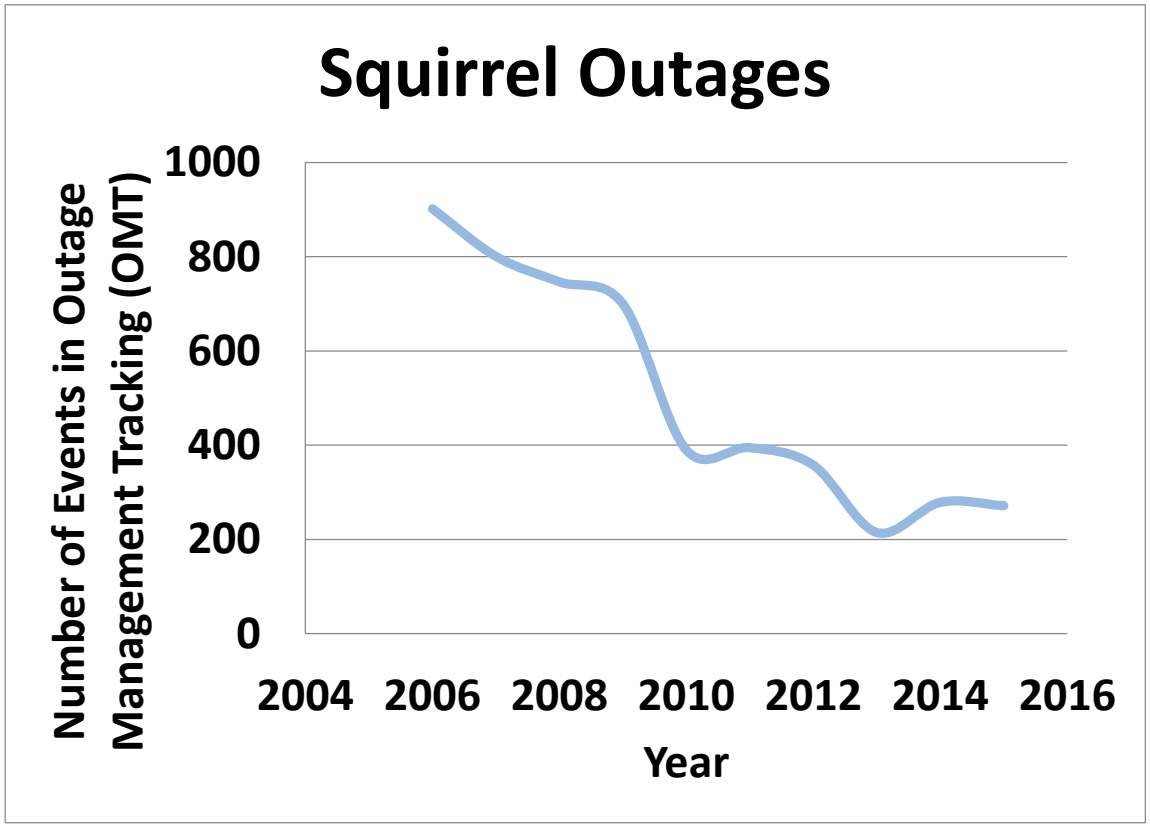
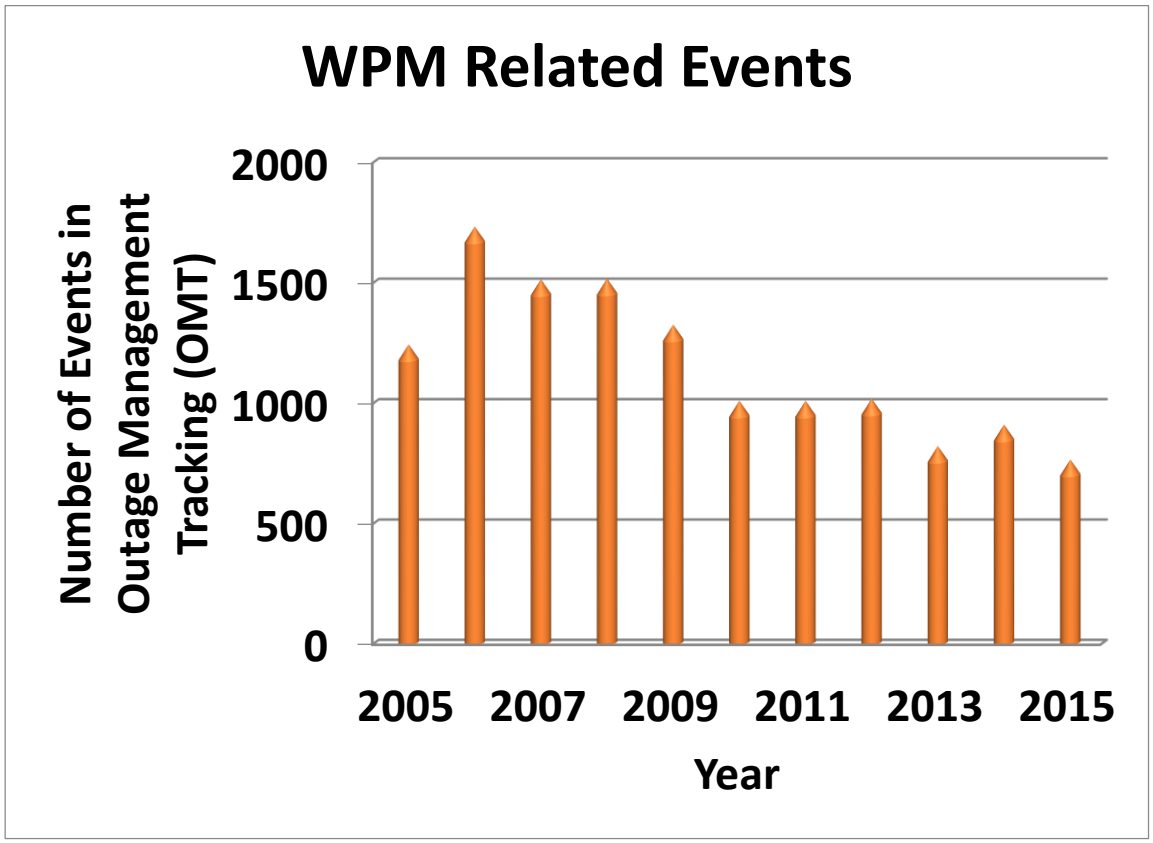
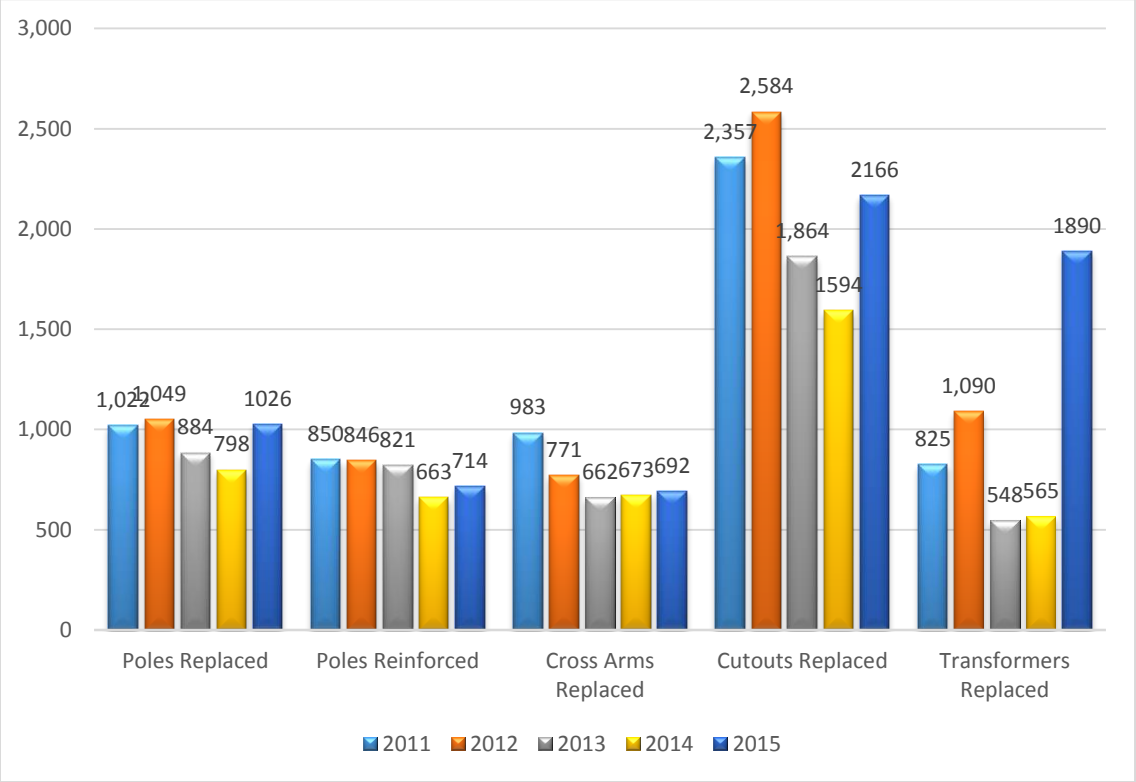


Chart – Wood Pole Management Related Events



Asset Management in conjunction with the Wood Pole Management Program over the last four years has stubbed/reinforced or replaced numerous poles, replaced numerous pole top transformers and associated cutouts/arresters. The impacts of the program are shown in the chart above. Below is a chart that summarizes the Wood Pole Management activities.

Chart – Wood Pole Management Actions



13. Grid Modernization Program Overview

Avista has initiated a Grid Modernization Program that is designed to reduce energy losses, improve operation, and increase the long-term reliability of its overhead and underground electric distribution system. The program will include replacing the following item: poles, transformers, cross arms, arresters, air switches with steel arms, grounds, cutouts, riser wire, insulators, and conductors to address concerns related to age, capacity, high electrical resistance, strength, and mechanical ability. Changes, including the addition of wildlife guards, smart grid devices, switch capacitor banks, balancing feeders, removing unauthorized attachments, replacing open wire secondary, and reconfigurations are included in the Program.

<u>Grid Modernization Program Objectives</u>

- Safety – Focus on safe practices for crew work by designing work plans to avoid safety risks.
- Reliability – Replacing aging and failed infrastructure that has a high likelihood of creating an unplanned crew call-out.

- Energy Savings – Replace equipment that has high energy losses with new equipment that is more energy efficient and improve the overall feeder energy performance.
- Operational Ability – Replace conductor and equipment that hinders outage detection and install smart grid devices that enable isolation of outages.

14. System Wide Vegetation Management Plan

Avista has an annual vegetation management plan and budget to accomplish the plan. The budget is allocated into distribution, transmission, administration, and gas line re-clearing.

Distribution

Avista's distribution system is managed by Avista's Utility Arborist. Every distribution circuit is scheduled to be line clearance pruned on a regular maintenance cycle of five years. The program also identifies risk trees system wide every two years. Risk tree management includes:

- Improved mid-cycle (two to three years after planned maintenance work is completed) Risk Tree assessment and mitigation on circuits in our more heavily vegetated areas (such as the Colville Division).
- Herbicide program to assess and address needed work on each circuit over a five year cycle (three years after line clearance work performed).

Transmission

The transmission system is managed by Avista's forester. All 230 kV lines are patrolled annually for hazard trees and other issues, and mitigation is done in that same year. Approximately one third of the 115 kV transmission system is patrolled annually for hazard tree identification and assessment of right-of-way clearing needs. Right-of-way clearing maintenance is scheduled and performed approximately every ten to fifteen years (for each line). Interim spot work is done as identified and needed. Engineering specifications for various voltages, line configurations are followed when clearing the right-of-way. Currently, the work is bid to a variety of contractors.

Appendix A - Definitions

"Baseline reliability statistic" – Avista will compare its reliability statistics to the year 2005.

"Commission Complaint" – When a customer is not satisfied with the Company as it relates to Electric Reliability and files a complaint directly with the Commission.

"Customer Complaint" - When a customer is not satisfied with the Company as it relates to Electric Reliability and makes a complaint directly to a Company representative.

"Electric Service Reliability" - The continuity of electric service experienced by retail customers.

"*Electric System Reliability Reporting Requirements*" – The minimum reporting requirements are as follows:

> *(1) The report must be consistent with the electric service reliability monitoring and reporting plan filed under WAC 480-100-393. As set forth in the plan, in an identified year, baseline reliability statistics must be established and reported. In subsequent years, new reliability statistics must be compared to the baseline reliability statistics and to reliability statistics from all intervening years. The utility must maintain historical reliability information necessary to show trends for a minimum of seven years.*
>
> *(2) The report must address any changes that the utility may make in the collection of data and calculation of reliability information after initial baselines are set. The utility must explain why the changes occurred and explain how the change is expected to affect comparisons of the newer and older information. Additionally, to the extent practical, the utility must quantify the effect of such changes on the comparability of new reliability statistics to baseline reliability statistics.*
>
> *(3) The report must identify the utility's geographic areas of greatest reliability concern, explain their causes, and explain how the utility plans to address them.*
>
> *(4) The report must identify the total number of customer complaints about reliability and power quality made to the utility during the year, and must distinguish between complaints about sustained interruptions and power quality. The report must also identify complaints that were made about major events.*

"Full-system" - All equipment and lines necessary to serve retail customers whether for the purpose of generation, transmission, distribution or individual service.

"Interruption Cause Code" – Used to describe the cause of an interruption (i.e., animal, tree, public, etc…).

"Major Event" – Designates an event that exceeds reasonable design and or operation limits of the electric power system. A Major Event includes at least one Major Event Day (MED).

"Major Event Day" – A day in which the daily system SAIDI exceeds a threshold value, T_{MED}. For the purposes of calculating daily system SAIDI, any interruption that spans multiple calendar days is accrued to the day on which the interruption began. Statistically, days having a daily system SAIDI greater than T_{MED} are days on which the energy delivery system experienced stresses beyond that normally expected (such as severe weather). Activities that occur on major event days should be separately analyzed and reported.

"Momentary Event Interruption" – An interruption(s) of duration 5 minutes or less. Each event consists of one trip and one reclose operation that occur within 5 minutes. For example, if an interrupting device operates three times and then holds, this would be counted as three events with the number of customers affected as three times the Ni.

"Power Quality" – Characteristics of electricity, primarily voltage and frequency, that must meet certain specifications for safe, adequate and efficient operations.

"*Reliability Statistic"* – Standard Statistics measures and calculation methods are per the IEEE Standard 1366-2003 (or latest version) Titled "IEEE Guide for Electric Power Distribution Reliability Indices". Same as Reliability Indices.

"Reliability Target" - A statistical method developed in 2004 for calculating the statistical range of variability for each baseline statistic that should encompass the annual result for each year 95% of the time. The method is defined as the average over a specific timeframe and 2 times the standard deviation. For 95% of the time. While over the years Avista has referred to this range as the "target," this term should not be interpreted as a "level of performance" that Avista is trying to achieve each year. Rather, it simply represents the range of variability that we could expect to see in our reliability results in most years.

"Sustained Interruption" - An interruption lasting longer than 5 minutes.

Appendix B - Index Calculations

SAIFI – System Average Interruption Frequency Index

- The average number of sustained interruptions per customer
- = The number of customers which had ***sustained interruptions***
  Total number of customers served
- = $\frac{\sum N_i}{N_T}$

$MAIFI_E$ – Momentary Average Interruption Event Frequency Index

- The average number of momentary interruption events per customer
- = The number of customers which had ***momentary interruption events***
  Total number of customers served
- = $\frac{\sum ID_E N_i}{N_T}$
- MAIFI can be calculated by one of two methods. Using the number of momentary interruptions or the number momentary events. This report calculates $MAIFI_E$ using momentary events. The event includes all momentary interruptions occurring within 5 minutes of the first interruption. For example, when an automatic interrupting device opens and then recloses two, or three times before it remains closed, it is considered a single event.

SAIDI – System Average Interruption Duration Index

- ✓ Average sustained outage time per customer
- = Outage duration multiplied by the customers effected for all ***sustained interruptions***
  Total number of customers served
- = $\frac{\sum r_i N_i}{N_T}$

CAIDI – Customer Average Interruption Duration Index

- Average restoration time
- = Outage duration multiplied by the customers effected for all ***sustained interruptions***
  The number of customers which had ***sustained interruptions***
- = $\frac{\sum r_i N_i}{\sum N_i}$

Quantities

i = An interruption event;

r_i *= Restoration time for each interruption event;*

T = Total;
ID_E = Number of interrupting device events;
N_i = Number of interrupted customers for each interruption event during the reporting period;
N_T = Total number of customers served for the area being indexed;

$CEMI_n$ – Customers Experiencing Multiple Sustained Interruptions more than n.

- $CEMI_n$
- = Total Number of Customers that experience more than *n* **sustained interruptions** / Total Number of Customers Served
- = $\frac{CN_{(k>n)}}{N_T}$

$CEMSMI_n$ – Customers experiencing multiple sustained interruption and momentary interruption events.

- CEMSMIn
- = Total Number of Customers experiencing more than *n* **interruptions** / Total Number of Customers Served
- = $\frac{CNT_{(k>n)}}{N_T}$

MED - Major Event Day
A major event day is a day in which the daily system SAIDI exceeds a threshold value. Its purpose is to allow major events to be studied separately from daily operation, and in the process, to better reveal trends in daily operation that would be hidden by the large statistical effect of major events.

T_{MED} is calculated (taken from the IEEE 1366-2003 Standard)
The major event day identification threshold value, T_{MED}, is calculated at the end of each reporting period (typically one year) for use during the next reporting period as follows:

a) Collect values of daily SAIDI for five sequential years ending on the last day of the last complete reporting period. If fewer than five years of historical data are available, use all available historical data until five years of historical data are available.
b) Only those days that have a SAIDI/Day value will be used to calculate the T_{MED} (do not include days that did not have any interruptions).
c) Take the natural logarithm (ln) of each daily SAIDI value in the data set.
d) Find a(Alpha), the average of the logarithms (also known as the log-average) of the data set.
e) Find b(Beta), the standard deviation of the logarithms (also known as the log-standard deviation) of the data set.
f) Compute the major event day threshold, TMED, using equation (25).

$$T_{MED} = e^{(a + 2.5\, b)} \quad (25)$$

g) Any day with daily SAIDI greater than the threshold value TMED that occurs during the subsequent reporting period is classified as a major event day. Activities that occur on days classified as major event days should be separately analyzed and reported.

When an event has reached the threshold to constitute a MED described in subpart (f) above, all outage incidents associated with the MED will be flagged in the Company's Outage Management Tool. As the Company further assesses damage in the field while making repairs, new subsequent outage incidents that were a result of the MED may be created as more accurate information is made available. The subsequent incidents will be flagged and included as part of original outage event and MED.

Appendix C - Customer Reliability Complaints

Commission Complaints

Commission Complaints are complaints received by the Washington Utilities and Transportation Commission specifically related to the Company's SQM Program, power quality, electric reliability, or Major Events.

City /State /Feeder	Complaint	Complaint Category	Resolution
Spokane WA 3HT12F4	The consumer lost power during the Nov. 17 storm and remains without power. Current restoration time is Wed. Nov. 25 by 6 p.m. The consumer states that Avista has not provided a reliable date for restoration. Also, Avista used local media to say they were prepared for the storm but Avista did not have the extra crews in place prior to the storm. Instead it took additional time for these crews to arrive from other locations. Consumer wants to know why crews were not in place prior to the storm as opposed to waiting until after. Please see first activity for consumer's text from online complaint. Also, is Avista's emergency preparedness plans available for public view?	Outages	Company Upheld - Avista advised WUTC that the Company did request additional crews prior to the windstorm however the service territory of other companies were hit by the storm as well. Some contract crews worked outage in their own service territories prior to transitioning to assist Avista.
Spokane WA FWT12F1	Consumer is dissatisfied with Avista's storm response (lack of strategic contingency planning, non-existent communication to its customers).	Outages	Company Upheld - Avista provided a list of customer outages for the past three years and discussed future circuit schedules and planned improvements with Commission Staff.
Lapwai ID SWT2403	We were without power for over twelve hours...that is ridiculous. I have 5 children, 2 who are 3 and 4. One is developmentally disabled and has epilepsy. Everyone who was without power for this long should be credited 100$ on their bill. Avista should have been better prepared for something like this.	Outages	Company Upheld – no resolution to be taken.

Lapwai ID SWT2403	We were without electricity for over 12 hours. Our little towns are always the last to be restored. I don't believe this outage should have lasted this long. I want all customers to be credited $100 for this inconvenience which was horrible. Then maybe Avista and Clearwater will be better prepared for emergencies.	Outages	Company Upheld – no resolution to be taken.
Rathdrum ID RAT233	We have been without electricity now for 60 hours. We have not seen a power company truck in our area from Avista Power since the outage began. We feel that because this company is based in Washington that they could really care less when they get around to restoring our power. We've reported our outage 2 or 3 times daily. We have yet to speak to a human being when we call. We are surrounded by Kootenai Electric Customers who have had their power restored over 30 hours ago! 1. We want to know WHY Avista (Washington Water Power) is just ignoring us. 2. We want to know if it is possible to have them removed as our source of power and have us hooked up to the Kootenai Electric grid? 3. We always seem to be ignored when there is a problem, and the very LAST customers to receive service. Again, if we're so unimportant to Avista and such a small problem because were not as densely populated as other areas (this is what we were told). We're not being fairly treated being from Idaho.	Outages	Company Upheld – no resolution to be taken.
Spokane WA MEA12F1	Customer writes she has been without service after a comparatively mild storm. She is dissatisfied with Avista's inadequate storm preparation and has suggestions for Avista to be better prepared. Customer writes Avista has provided inadequate education to customers, ignored a transformer laying in the back of a pickup truck blocking a road for days, and states that Avista's website is not user friendly, a customer should be able to find their own zip code and immediately discern estimated restoration times.	Outages	Company Upheld - Avista advised WUTC that a crew had been assigned to clean up the pole pieces and transformer, but that a specific clean up schedule was not available at that time.

Spokane WA F&C12F6	The customer is upset because every time she called Avista for updates she would receive a different story. The customer states that she was given multiple inaccurate estimates for the length of time it took for restoral. At one, time the customer called the company, she was told that she was not on a repair list. The customer called back and was told by the next representative that she should not have been told that. The customer is concerned because surrounding areas had power before her residence. The customer states that her residence was without service for 9 days. She does not think that is an acceptable amount of time. The customer would like to know what an acceptable time frame would be. The customer would like to know why every time she called the company she was given a different story regarding a restoral time frame.	Outages	Company Upheld - Avista advised WUTC that an estimated restoration time is an estimate and so is subject to change. Avista had 132 crews working in the field - more than 700 individuals, so it was doing everything possible to restore customers as quickly as possible.
Liberty Lake WA EFM12F2	Customer's power went out 11/17/15. She called Avista on 11/18/15 asking for an update for her area. She was directed to their website. Consumer's area states undefined. She called Avista again on 11/22/15, again was not told anything about her area and status remains undefined.	Outages	Company Upheld - Avista advised WUTC that the customer's outage was due to a Pine tree taking out a pole and transformer near the customer.
Spokane WA F&C12F4	The consumer has been without power for 8 days. She was originally told the power would be restored by midnight on Nov. 22, it was not restored. Consumer states that others nearby have power. Consumer states that their area is always the first one to lose power and the last to have power restored. Consumer is wondering why that is. Since Nov. 22 when the consumer calls Avista to report her outage she cannot speak with a person and only gets a recorded message that says the company knows about the outage. Consumer is unable to access the outage map online since she has no power.	Outages	Company Upheld - Avista advised WUTC that an estimated restoration time is an estimate and so is subject to change. Avista had 132 crews working in the field - more than 700 individuals, so it was doing everything possible to restore customers as quickly as possible.
Clarkston WA CFD1210	Customer writes that he has continued problems with his electric service provided by Avista. He has "trip/reclose" problems. Service was out on September 6, 11 and October 2. Avista says it's a problem with squirrels, birds, trees, and weather. Customer believes the number of trip/reclose problems to be unreasonable.	Outages	Company Upheld – No resolution to be taken.

Customer Complaints

Customer Complaints are complaints received by the Company specifically related to the Company's SQM Program, power quality, electric reliability, or Major Events.

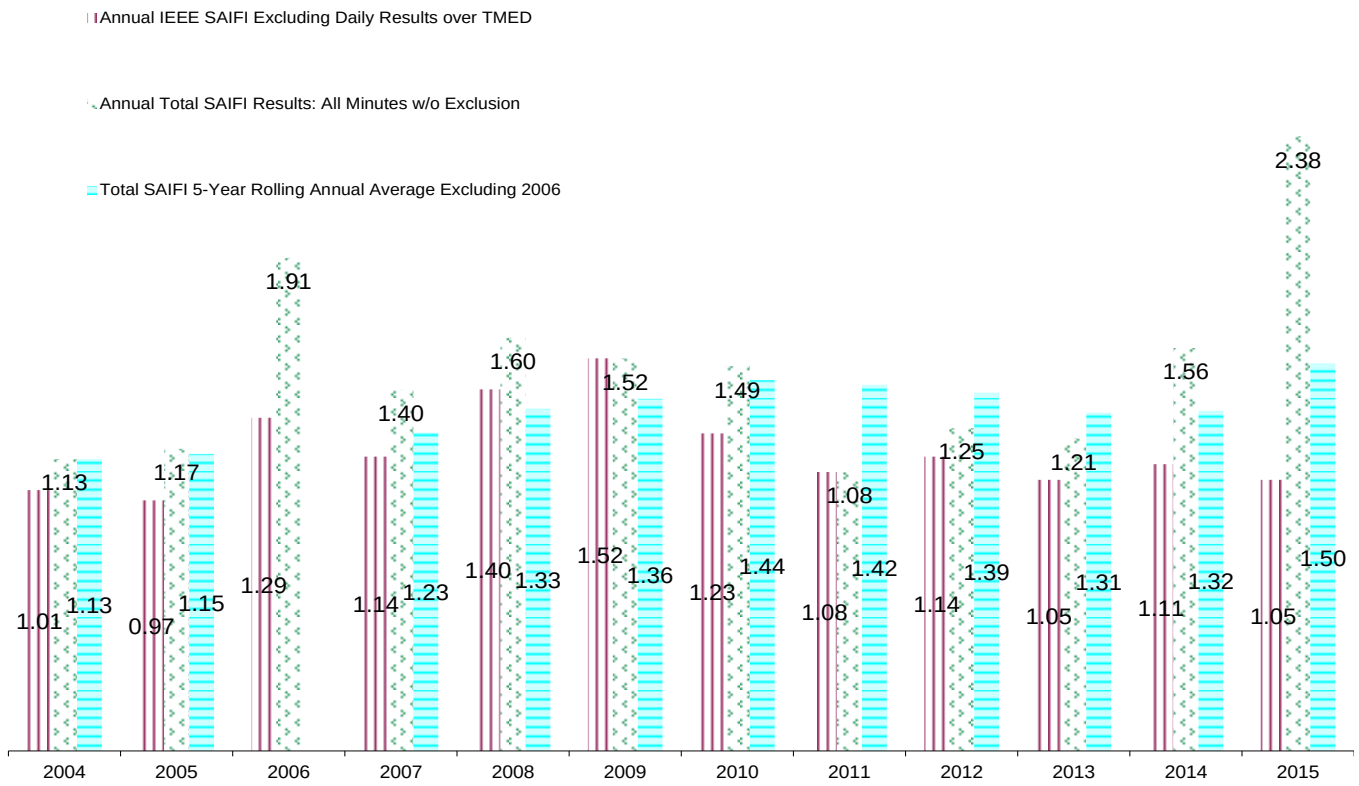
City /State /Feeder	Complaint	Complaint Category	Resolution
Harrison ID OGA611	Customer is concerned about continuous outages. He would like to discuss reliability. Why has his home experienced so many outages recently? What will be done to prevent outages in the future?	Outages	Manager called and discussed customer's outage history. No pattern exists that points to a need for further research, has just had several outages for various reasons.
Almira WA WIL12F2	Customer complaining about constant outages especially at night wants us to do planned outages during the day. Customer wants to know now why we are doing another planned outage also complaint about rates etc. She said gets cold and we could have done this during summer etc. Phone dropped off in mid conversation Customer asked to get an adjustment on the bill or something	Outages	Attempted call back - Outages are non-planned, BPA transmission issues.
Chattaroy WA MLN12F1	Customer says power is not reliable. She has lived here for 10 years. Experienced 2008-2009 winter heavy snow no outages. Now outages after outages. Feels Avista is not maintaining equipment. Says uses generator for freezer. Looking at ways to get off the grid.	Outages	Offered to have manager call her back. Customer declined.

Rathdrum ID RAT233	I am getting tired of losing the power to my house. I have lost it multiple times over the last month and a half. I will be contacting my attorney and the Idaho Public Utilities commission in regards to the customer service that I am receiving, and the constant power outages. If the power lines and equipment cannot be kept free and clear of trees and debris falls, that falls under failure to provide proper customer service.	Outages	No resolution as customer contacted IPUC.
Saint Maries ID STM633	Customer upset about repeated power outages. Says Avista is not putting money into the system to make it reliable. Says questions asked when calling in to report an outage are ridiculous.	Outages	Customer does not want a call back just wants system to be more reliable not have questions asked when she calls in to report no power.
Elk City ID GRV1273	Customer is upset about continuous trip and recloses	Outages	Offered to have manager call customer back. Customer declined.
Liberty Lake WA LIB12F1	Customer is upset about repeated power outages in the past four months. He feels inferior materials are being used for repairs or employees do not know what they are doing.	Outages	Manager called back to discuss outages
Elk City ID GRV1273	Customer had another T & R. Had 13 T&R today. When it happened at night he fell and hit his head. He would like a manager to call him back to discuss problem. He is 85 years old this is an inconvenience for him to reset everything. He is on o2 24x7.	Outages	Manager called back to discuss outages. Emailed CARES to notify of oxygen.
Spokane WA NW12F1	Customer is tired that every time the wind blows he has an outage. Wants to know if/when we are going to be updating infrastructure in his area? He would like a call back from a construction manager with specific details for his area.	Outages	Manager called back to discuss outages for his service point
Liberty Lake WA LIB12F1	Customer upset about repeated power outages. Would like line repaired. "Crew that is not fixing line should be fired". He does not want a call back wanted his comment passed to crew manager.	Outages	No resolution.

Appendix D – SAIFI and SAIDI Historical Summary

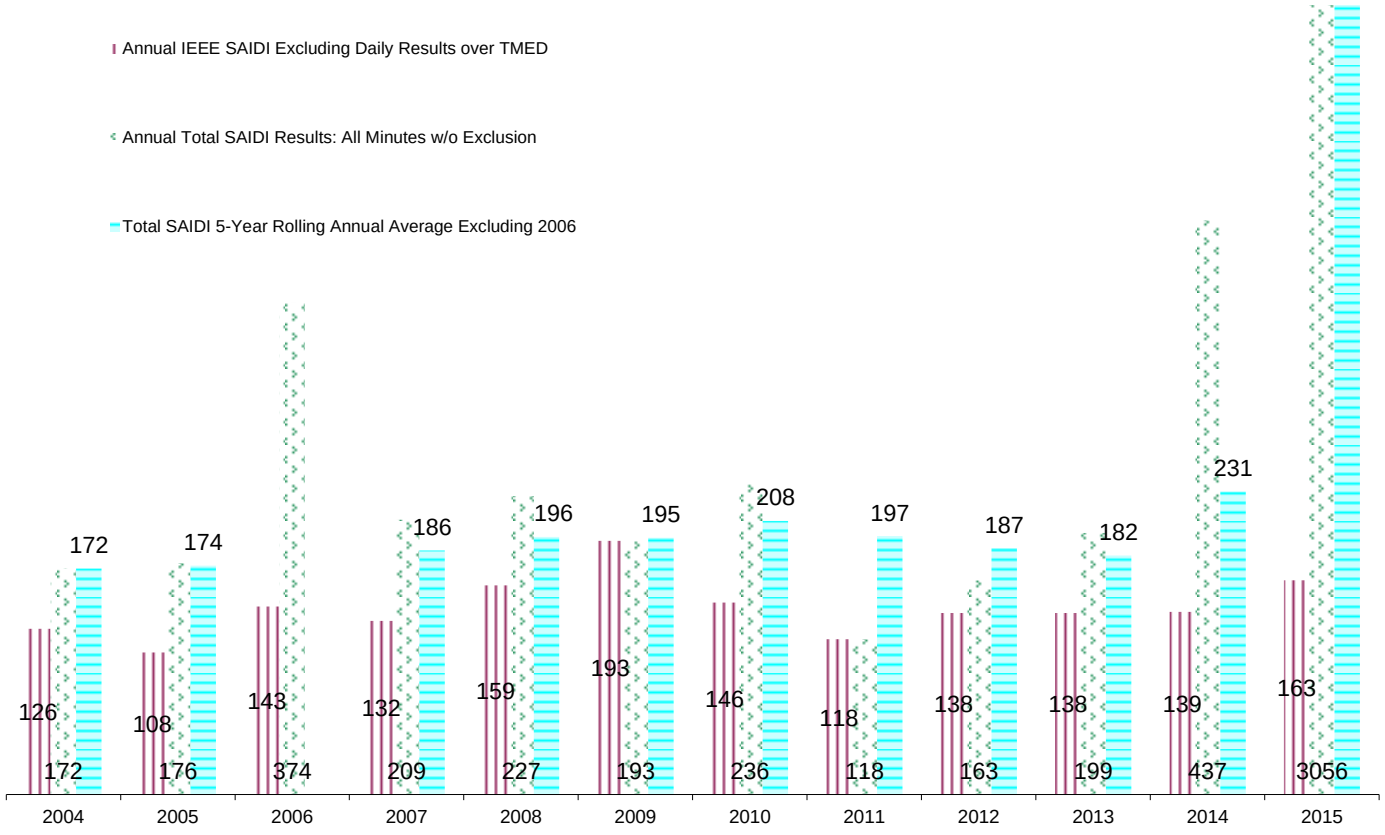
2004 - 2015 AVA SAIFI Performance by Measurement by Year

Year	Calendar Year	Annual IEEE SAIFI Excluding Daily Results over TMED	Annual Total SAIFI Results: All Minutes w/o Exclusion	Annual Total SAIFI Results Excluding 2006	Total SAIFI 5-Year Rolling Annual Average Excluding 2006	
1	2004	1.01	1.13	1.13	1.13	
2	2005	0.97	1.17	1.17	1.15	Baseline
3	2006	1.29	1.91			
4	2007	1.14	1.40	1.40	1.23	
5	2008	1.40	1.60	1.60	1.33	
6	2009	1.52	1.52	1.52	1.36	
7	2010	1.23	1.49	1.49	1.44	
8	2011	1.08	1.08	1.08	1.42	
9	2012	1.14	1.25	1.25	1.39	
10	2013	1.05	1.21	1.21	1.31	
11	2014	1.11	1.56	1.56	1.32	
12	2015	1.05	2.38	2.38	1.50	
		1.54				Target



2004-2015 AVA SAIDI Performance by Measurement by Year

Year	Calendar Year	Annual IEEE SAIDI Excluding Daily Results over T_{MED}	Annual Total SAIDI Results: All Minutes w/o Exclusion	Annual Total SAIDI Results Excluding 2006	Total SAIDI 5-Year Rolling Annual Average Excluding 2006	
1	2004	126	172	172	172	
2	2005	108	176	176	174	Baseline
3	2006	143	374			
4	2007	132	209	209	186	
5	2008	159	227	227	196	
6	2009	193	193	193	195	
7	2010	146	236	236	208	
8	2011	118	118	118	197	
9	2012	138	163	163	187	
10	2013	138	199	199	182	
11	2014	139	437	437	231	
12	2015	163	3056	3056	795	
		196				Target



Appendix E – Service Quality Measures Report Card

2015 Service Quality Report Card

Each year Avista measures how well we performed in meeting our goal to provide the best customer service possible. In line with that tradition, we recently established a set of Service Quality Measures in collaboration with the Washington Utilities and Transportation Commission (WUTC) and others. We will be providing an annual report card to customers showing how we did on meeting our goals. For more information, visit **www.avistautilities.com.**

Customer Service Measures	Benchmark	2015 Performance	Achieved
Percentage of customers satisfied with our Contact Center services	At least 90%	96.1%	✓
Percentage of customers satisfied with our field services	At least 90%	96.8%	✓
Number of complaints filed with the WUTC annually per 1,000 customers	Less than 0.40	0.17	✓
Percentage of calls answered live within 60 seconds by our Contact Center	At least 80%	80.7%	✓
Average time from customer call to arrival of field technicians in response to electric system emergencies	No more than 80 minutes	44 Minutes	✓
Average time from customer call to arrival of field technicians in response to natural gas system emergencies	No more than 55 minutes	51 Minutes	✓

Electric System Reliability	5-Year Average (2011-2015)	2015 Performance	Change in 5-Year Average
Number of non-major storm power outages annually per customer	1.09	1.05	-0.03
Length of non-major storm-related power outages annually per customer	139 Minutes	163 Minutes	+3 Minutes

Customer Service Guarantees	Successful	Missed	$ Paid
Keep service appointments scheduled with our customers			
Restore service within 24 hours of a customer reporting an outage (excluding major storm events)			
Turn on power within a business day of receiving the request			
Provide a cost estimate for new electric or natural gas service within 10 business days of receiving the request			
Investigate and respond to a billing inquiry within 10 business days if unable to answer a question on first contact			
Investigate a reported meter problem or conduct a meter test and report the results within 20 business days			
Notify customers at least 24 hours in advance of a planned power outage lasting longer than 5 minutes			

Avista began offering Customer Service Guarantees in Washington on January 1, 2016. A $50 bill credit is provided for not living up to our guarantee. Annual results will be included in our report card beginning in 2017.

2015 Performance Highlights

On November 17, 2015, Spokane and surrounding areas experienced an unprecedented wind storm which severely damaged a substantial portion of Avista's electric system. Storm damage caused outages for nearly half of our residential customers (178,210 total) throughout Avista's entire service territory. About 70 percent of these outages occurred in Spokane County alone.

AVA1931

Power restoration required round-the-clock efforts for nearly 10 days by up to 132 electric construction crews comprised of Avista personnel, electrical contractors, and mutual aid crews from utilities in six western states and Canada. Crews worked 16-hour shift rotations through Thanksgiving. As a wind storm of this size is considered a major event, it is not reflected in the average Electric System Reliability results above.

Other major weather-related events also played a significant factor in 2015 customer outages. Specifically, large snow storms in January, lightning and wildfires in August, and heavy snow in December all contributed to customer outages.

Avista met all six Customer Service Measures in 2015 (see chart above). Our employees will strive to continue to provide the best service possible to our customers in 2016.