



**WASHINGTON**

**SERVICE QUALITY**

**REVIEW**

**January 1 – December 31, 2013**

**Annual Report**

**WASHINGTON**
**TABLE OF CONTENTS**

EXECUTIVE SUMMARY.....	3
1 Service Standards Program Summary .....	3
1.1 Pacific Power Customer Guarantees .....	4
1.2 Pacific Power Performance Standards.....	5
1.3 Reliability Definitions .....	6
1.4 Service Territory .....	9
2 CUSTOMER GUARANTEES SUMMARY .....	10
3 RELIABILITY PERFORMANCE .....	11
3.1 Multi-Year Historical Performance.....	11
3.2 System Average Interruption Duration Index (SAIDI).....	13
3.3 System Average Interruption Frequency Index (SAIFI).....	15
3.4 Operating Area Metrics.....	16
3.5 Cause Code Analysis .....	17
3.6 Areas of Greatest Concern.....	21
3.7 Reduce CPI for Worst Performing Circuits by 20% .....	22
3.8 Restore Service to 80% of Customers within 3 Hours.....	23
3.9 Telephone Service and Response to Commission Complaints.....	23
4 CUSTOMER RELIABILITY COMMUNICATIONS .....	24
4.1 Reliability Complaint Process Overview .....	24
4.2 Customer Complaint Tracking.....	25
4.3 Customer Complaints Recorded During the Period .....	25
5 WASHINGTON RELIABILITY RESULTS DURING 2013.....	26
5.1 State Reliability.....	27
5.2 5W2: Memorial Feeder.....	29
5.3 5Y382: Occidental Feeder.....	31
5.4 5Y380: Tampico Feeder.....	33
5.5 5Y437: 10 <sup>th</sup> Street Feeder .....	35
5.6 5Y99: Gravel Feeder .....	38
APPENDIX A: 2013 MAJOR EVENT FILINGS .....	40

## **EXECUTIVE SUMMARY**

During January 1 through December 31, 2013, Pacific Power & Light Company (Pacific Power or Company) delivered reliable service to its Washington customers. The level of performance met established baselines. Also, the Customer Guarantee program continued to deliver high quality results consistent with the prior year's performance. The Company has noted in the past that the service it delivers ranks high when compared across the industry.

The company's service reliability can be impacted by uncontrollable interference events, such as car-hit-pole accidents, and by significant events that exceed the normal underlying level of interruptions but that do not reach the qualifying major event threshold for exclusion from the company's underlying performance metrics. To provide a perspective on their impact during the reporting period, the significant events experienced during 2013 are listed in Section 3.2. Consideration of the root causes of these significant days is important when evaluating year-on-year performance. When the Company develops reliability improvement projects it evaluates these root causes and prepares plans that reflect the certainty of repetition of these events. The outcomes are reflective of the plans outlined in the Areas of Great Concern, shown in Section 3.6.

### **1 Service Standards Program Summary**

Pacific Power has a number of Customer Service Standards and Service Quality Measures with performance reporting mechanisms currently in place. These standards and measures define Pacific Power's target performance (both personnel and network reliability performance) in delivering quality customer service. The Company developed these standards and measures using relevant industry standards for collecting and reporting performance data. In some cases, Pacific Power has expanded upon these standards. In other cases, largely where the industry has no established standards, Pacific Power has developed metrics, targets and reporting. While industry standards are not focused around threshold performance levels, the Company has developed targets or performance levels against which it evaluates its performance. These standards and measures can be used over time, both historically and prospectively, to measure the service quality delivered to our customers. In its entirety, these measures comply with WAC 480-100-393 and 398 requirements for routine reliability reporting.

In UE-042131, the company applied for, and received approval, to extend the core program through March 31, 2008. During the MidAmerican acquisition of Pacific Power, in UE-051090, the program was extended again through 2011. While the term of this program has lapsed, the Company has continued to perform all programs as performed historically. No actions have been taken by the Company to recommend any suspension or changes to the program as was extended in UE-042131.

## 1.1 Pacific Power Customer Guarantees

<u>Customer Guarantee 1:</u> Restoring Supply After an Outage	The company will restore supply after an outage within 24 hours of notification from the customer with certain exceptions as described in Rule 25.
<u>Customer Guarantee 2:</u> Appointments	The company will keep mutually agreed upon appointments which will be scheduled within a two-hour time window.
<u>Customer Guarantee 3:</u> Switching on Power	The company will switch on power within 24 hours of the customer or applicant's request, provided no construction is required, all government inspections are met and communicated to the company and required payments are made. Disconnections for nonpayment, subterfuge or theft/diversion of service are excluded.
<u>Customer Guarantee 4:</u> Estimates For New Supply	The company will provide an estimate for new supply to the applicant or customer within 15 working days after the initial meeting and all necessary information is provided to the company.
<u>Customer Guarantee 5:</u> Respond To Billing Inquiries	The company will respond to most billing inquiries at the time of the initial contact. For those that require further investigation, the company will investigate and respond to the Customer within 10 working days.
<u>Customer Guarantee 6:</u> Resolving Meter Problems	The company will investigate and respond to reported problems with a meter or conduct a meter test and report results to the customer within 10 working days.
<u>Customer Guarantee 7:</u> Notification of Planned Interruptions	The company will provide the customer with at least two days' notice prior to turning off power for planned interruptions.

*Note: See Rules for a complete description of terms and conditions for the Customer Guarantee Program.*

## 1.2 Pacific Power Performance Standards<sup>1</sup>

<u>Network Performance Standard 1:</u> Improve System Average Interruption Duration Index (SAIDI)	The company will maintain SAIDI commitment target.
<u>Network Performance Standard 2:</u> Improve System Average Interruption Frequency Index (SAIFI)	The company will maintain SAIFI commitment target.
<u>Network Performance Standard 3:</u> Improve Under Performing Circuits	The company will reduce by 20% the circuit performance indicator (CPI) for a maximum of five under-performing circuits on an annual basis within five years after selection.
<u>Network Performance Standard 4:</u> Supply Restoration	The company will restore power outages due to loss of supply or damage to the distribution system within three hours to 80% of customers on average.
<u>Customer Service Performance Standard 5:</u> Telephone Service Level	The company will answer 80% of telephone calls within 30 seconds. The company will monitor customer satisfaction with the company's Customer Service Associates and quality of response received by customers through the company's eQuality monitoring system.
<u>Customer Service Performance Standard 6:</u> Commission Complaint Response/Resolution	The company will: a) respond to at least 95% of non-disconnect Commission complaints within two working days per state administrative code <sup>2</sup> ; b) respond to at least 95% of disconnect Commission complaints within four working hours; and c) resolve 95% of informal Commission complaints within 30 days.

*Note: Performance Standards 1, 2 & 4 are for underlying performance days, excluding days classified as Major Events.*

<sup>1</sup> The Company committed to Service Standards Programs that expired on 12/31/2011; during the program all elements committed to were delivered successfully. By terms of the commitment any changes to the program required the approval of the Commission. The Company has proposed no changes to the program, but continues at this time, to operate consistently with its historical program. State reliability reporting rules establish requirements that the Company interprets as generally encompassing the requirements of Network Performance Standards 1-3.

<sup>2</sup> Although the Performance Standard indicates that complaints will be responded to within 3 days, the Company acknowledges and adheres to the requirements set forth in 480-100-173(3)(a).

### 1.3 Reliability Definitions

This section will define the various terms<sup>1</sup> used when referring to interruption types, performance metrics and the internal measures developed to meet performance plans. A map of Pacific Power's service territory is included.

#### **Interruption Types**

##### ***Sustained Outage***

A sustained outage is defined as an outage of equal to or greater than 5 minutes in duration.

##### ***Momentary Outage***

A momentary outage event is defined as an outage equal to or less than 5 minutes in duration, and comprises all operations of the device during the momentary duration; if a breaker goes to lockout (it is unable to clear the faulted condition after the equipment's prescribed number of operations) the momentary operations are part of the ensuing sustained interruption. This sequence of events typically occurs when the system is trying to re-establish energy flow after a faulted condition, and is associated with circuit breakers or other automatic reclosing devices. Pacific Power uses the locations where SCADA (Supervisory Control and Data Acquisition) exists and calculates consistent with IEEE 1366-2003/2012. Where no substation breaker SCADA exists fault counts at substation breakers are to be used.

#### **Reliability Indices**

##### ***SAIDI***

SAIDI (system average interruption duration index) is an industry-defined term to define the average duration summed for all sustained outages a customer experiences in a given period. It is calculated by summing all customer minutes lost for sustained outages (those exceeding 5 minutes) and dividing by all customers served within the study area. When not explicitly stated otherwise, this value can be assumed to be for a one-year period.

##### ***Daily SAIDI***

In order to evaluate trends during a year and to establish Major Event Thresholds, a daily SAIDI value is often used as a measure. This concept was introduced in IEEE Standard P1366-2003/2012. This is the day's total customer minutes out of service divided by the static customer count for the year. It is the total average outage duration customers experienced for that given day. When these daily values are accumulated through the year, it yields the year's SAIDI results.

##### ***SAIFI***

SAIFI (system average interruption frequency index) is an industry-defined term that attempts to identify the frequency of all sustained outages that the average customer experiences during a given period. It is calculated by summing all customer interruptions for sustained outages (those exceeding 5 minutes in duration) and dividing by all customers served within the study area.

##### ***CAIDI***

CAIDI (customer average interruption duration index) is an industry-defined term that is the result of dividing the duration of the average customer's sustained outages by the frequency of outages for that average customer. While the Company did not originally specify this metric under the umbrella of the Performance Standards Program within the context of the Service Standards Commitments, it has since been determined to be valuable for reporting purposes. It is derived by dividing PS1 (SAIDI) by PS2 (SAIFI).

---

<sup>1</sup> IEEE1366-2003/2012 was first adopted by the IEEE Commissioners on December 23, 2003. The definitions and methodology detailed therein are now industry standards, which have since been affirmed in recent balloting activities.

**WASHINGTON*****CEMI***

CEMI is an acronym for Customers Experiencing Multiple (Sustained and Momentary) Interruptions. This index depicts repetition of outages across the period being reported and can be an indicator of recent portions of the system that have experienced reliability challenges. This metric is used to evaluate customer-specific reliability in Section 4 Customer Reliability Communications.

***MAIFI<sub>E</sub>***

MAIFI<sub>E</sub> (momentary average interruption event frequency index) is an industry standard index that quantifies the frequency of all momentary interruption events that the average customer experiences during a given time-frame. It is calculated by counting all momentary interruptions which occur within a 5 minute time period, as long as the interruption event did not result in a device experiencing a sustained interruption.

***CPI99***

CPI99 is an acronym for Circuit Performance Indicator, which uses key reliability metrics of the circuit to identify underperforming circuits. It excludes Major Event and Loss of Supply or Transmission outages. The variables and equation for calculating CPI are:

$$\text{CPI} = \text{Index} * ((\text{SAIDI} * \text{WF} * \text{NF}) + (\text{SAIFI} * \text{WF} * \text{NF}) + (\text{MAIFI} * \text{WF} * \text{NF}) + (\text{Lockouts} * \text{WF} * \text{NF}))$$

Index: 10.645

SAIDI: Weighting Factor 0.30, Normalizing Factor 0.029

SAIFI: Weighting Factor 0.30, Normalizing Factor 2.439

MAIFI: Weighting Factor 0.20, Normalizing Factor 0.70

Lockouts: Weighting Factor 0.20, Normalizing Factor 2.00

Therefore,  $10.645 * ((3\text{-year SAIDI} * 0.30 * 0.029) + (3\text{-year SAIFI} * 0.30 * 2.439) + (3\text{-year MAIFI} * 0.20 * 0.70) + (3\text{-year breaker lockouts} * 0.20 * 2.00)) = \text{CPI Score}$

***CPI05***

CPI05 is an acronym for Circuit Performance Indicator, which uses key reliability metrics of the circuit to identify underperforming circuits. Unlike CPI99 it includes Major Event and Loss of Supply or Transmission outages. The calculation of CPI05 uses the same weighting and normalizing factors as CPI99.

**Performance Types & Commitments**

Pacific Power recognizes two categories of performance: underlying performance and major events. Major events represent the atypical, with extraordinary numbers and durations for outages beyond the usual. Ordinary outages are incorporated within underlying performance. These types of events are further defined below.

***Major Events***

Pursuant to WAC 480-100-393 Electric Reliability Annual Monitoring and Reporting Plan, modified February 2011, the company recognizes two types of major events in Washington:

- A SAIDI-based Major Event is defined as a 24-hour period where SAIDI exceeds a statistically derived threshold value, as detailed in IEEE Distribution Reliability Standard 1366-2003/2012<sup>1</sup>.
- A SAIFI-Based Major Event is defined as an event in which more than 10% of an operating area's customers are simultaneously without service as a result of a sustained interruption.

<sup>1</sup> During calendar 2013, the calculated threshold for a major event was 10.56 minutes; for 2014, it will be 8.06 minutes.

**WASHINGTON**

***Underlying Events***

Within the industry, there has been a great need to develop methodologies to evaluate year-on-year performance. This has led to the development of methods for segregating outlier days. Those days which fall below the statistically derived threshold represent “underlying” performance, and are valid (with some minor considerations for changes in reporting practices) for establishing and evaluating meaningful performance trends over time.

***Performance Targets***

The Company and Commission, in the MidAmerican transaction docket, UE05-01590, agreed to extend Service Standards through 12/31/2011. Within Washington, because performance delivered by the Company falls within industry second quartile performance levels, the Company committed that it would achieve performance by 12/31/2011 that maintains performance targets set in prior Merger Commitment Periods. Additionally in WAC 480-100-393 the Company is required to set baseline metrics and when performance deviates from those baselines, explain the reasons for that deviation and any action plans which may result from that level of performance.

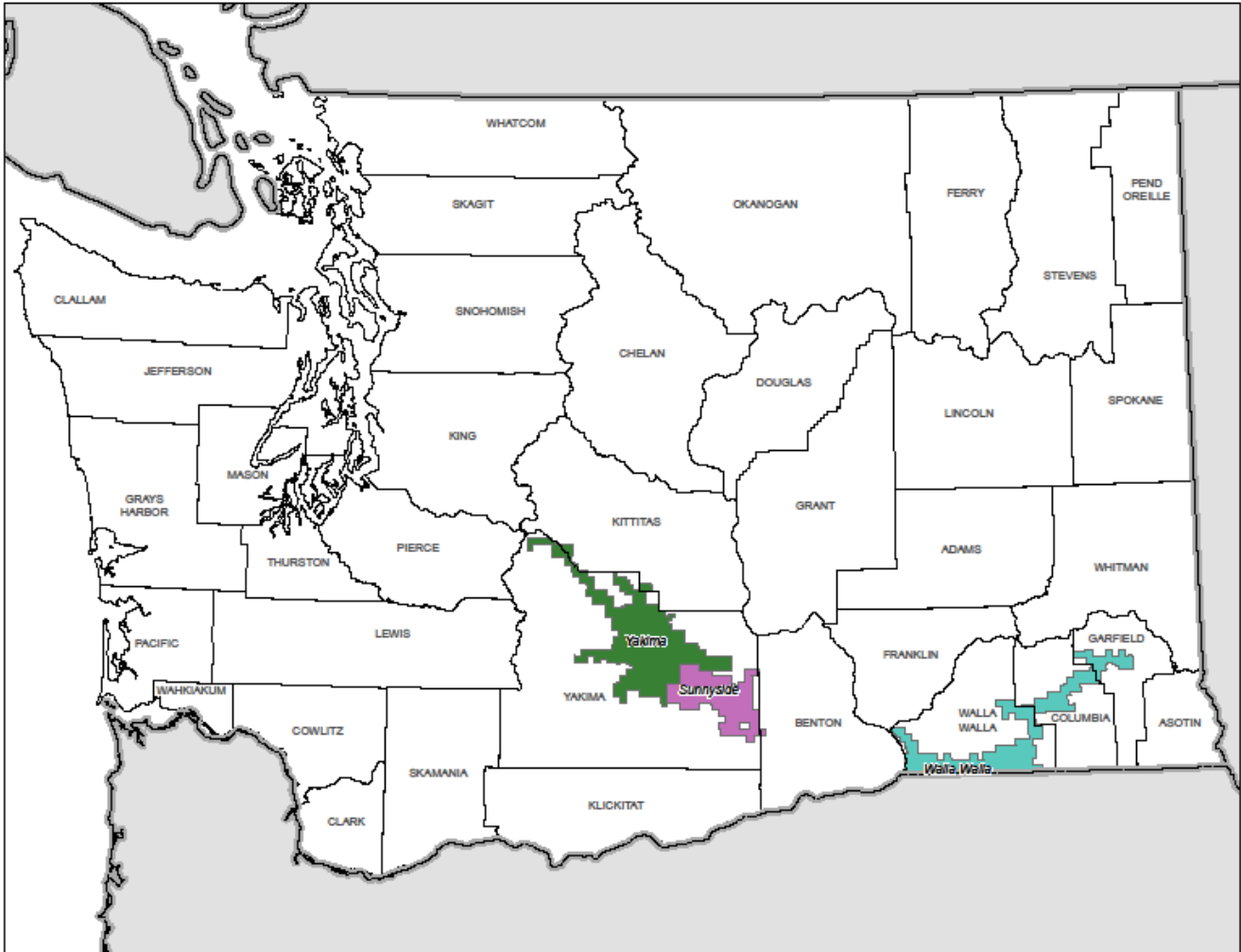


**WASHINGTON**

**1.4 Service Territory**

**Service Territory Map**

Contained below is a graphic of the Company's Washington service territory, colored by operating area.



## 2 CUSTOMER GUARANTEES SUMMARY

### customer *guarantees*

January to December 2013

*Washington*

Description	2013				2012			
	Events	Failures	%Success	Paid	Events	Failures	%Success	Paid
CG1 Restoring Supply	98,836	0	100.0%	\$0	87,172	0	100.0%	\$0
CG2 Appointments	1,770	4	99.8%	\$200	1,737	5	99.7%	\$250
CG3 Switching on Power	3,770	4	99.9%	\$200	3,606	7	99.8%	\$350
CG4 Estimates	264	18	93.2%	\$900	224	8	96.4%	\$400
CG5 Respond to Billing Inquiries	269	0	100.0%	\$0	358	1	99.7%	\$50
CG6 Respond to Meter Problems	144	0	100.0%	\$0	151	1	99.3%	\$50
CG7 Notification of Planned Interruptions	2,304	2	99.9%	\$100	1,708	4	99.8%	\$200
	<b>107,357</b>	<b>28</b>	<b>99.9%</b>	<b>\$1,400</b>	<b>94,956</b>	<b>26</b>	<b>99.9%</b>	<b>\$1,300</b>

Overall guarantee performance remains above 99%, demonstrating Pacific Power's continued commitment to customer satisfaction.

Customer Communications: The Customer Guarantee program was highlighted throughout the year in customer communications as follows:

- performance reports are included in June's billing statements
- the program is highlighted in Voices
- the program is highlighted in the company's newsletter
- each new customer is mailed a welcome aboard pamphlet that features the program and how to file a claim
- Pacific Power's website features the program with information for our customers

(Major Events are excluded from the Customer Guarantees program.)

**WASHINGTON**

### 3 RELIABILITY PERFORMANCE

During the reporting period, the company's reliability compared favorably to its baseline performance level as established in 2003. The year's "Major Events Excluded As Reported" SAIDI performance of 107 minutes was much better than the approved SAIDI baseline of 150 minutes, while the year's "Major Events Excluded As Reported" SAIFI performance of 0.760 events was also much better than the approved SAIFI baseline of 0.975 events. Various reliability metrics are shown below providing a historical perspective, including an additional 5-year rolling average metric.

#### 3.1 Multi-Year Historical Performance

Year	Major Events Included <sup>1</sup>		SAIDI Based Major Events Excluded 2.5 beta		SAIFI Based Major Events Excluded 10% Op Area <sup>2</sup>		SAIDI & SAIFI-Based Major Events Excluded As Reported <i>(2.5 beta effective 2005)</i>		Normalized Historic Performance <sup>3</sup>		5 Year Rolling Average Performance	
	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
2002	183	0.881	86	0.691	109	0.726	107	0.795	86	0.691	99	0.741
2003	126	1.062	91	0.933	89	0.539	98	0.954	89	0.539	97	0.761
2004	172	1.024	87	0.712	119	0.726	123	0.851	87	0.712	93	0.736
2005	128	0.851	110	0.810	121	0.761	111	0.812	110	0.761	103	0.808
2006	242	1.259	120	0.980	187	0.891	122	0.985	120	0.891	112	0.879
2007	146	1.169	122	1.116	114	0.853	122	1.115	114	0.853	115	0.943
2008	329	1.756	127	1.323	124	0.881	131	1.331	124	0.881	122	1.019
2009	182	1.128	161	1.042	162	0.857	161	1.044	161	0.857	129	1.057
2010	107	0.862	107	0.862	97	0.601	103	0.688	97	0.601	128	1.033
2011	91	0.587	80	0.549	91	0.587	80	0.550	80	0.549	119	0.946
2012	158	0.986	100	0.664	100	0.664	100	0.664	100	0.664	115	0.855
2013	198	1.048	113	0.791	192	1.017	107	0.760	107	0.760	110	0.741

<sup>1</sup>Customer requested and pre-arranged outages are not reported in these metrics

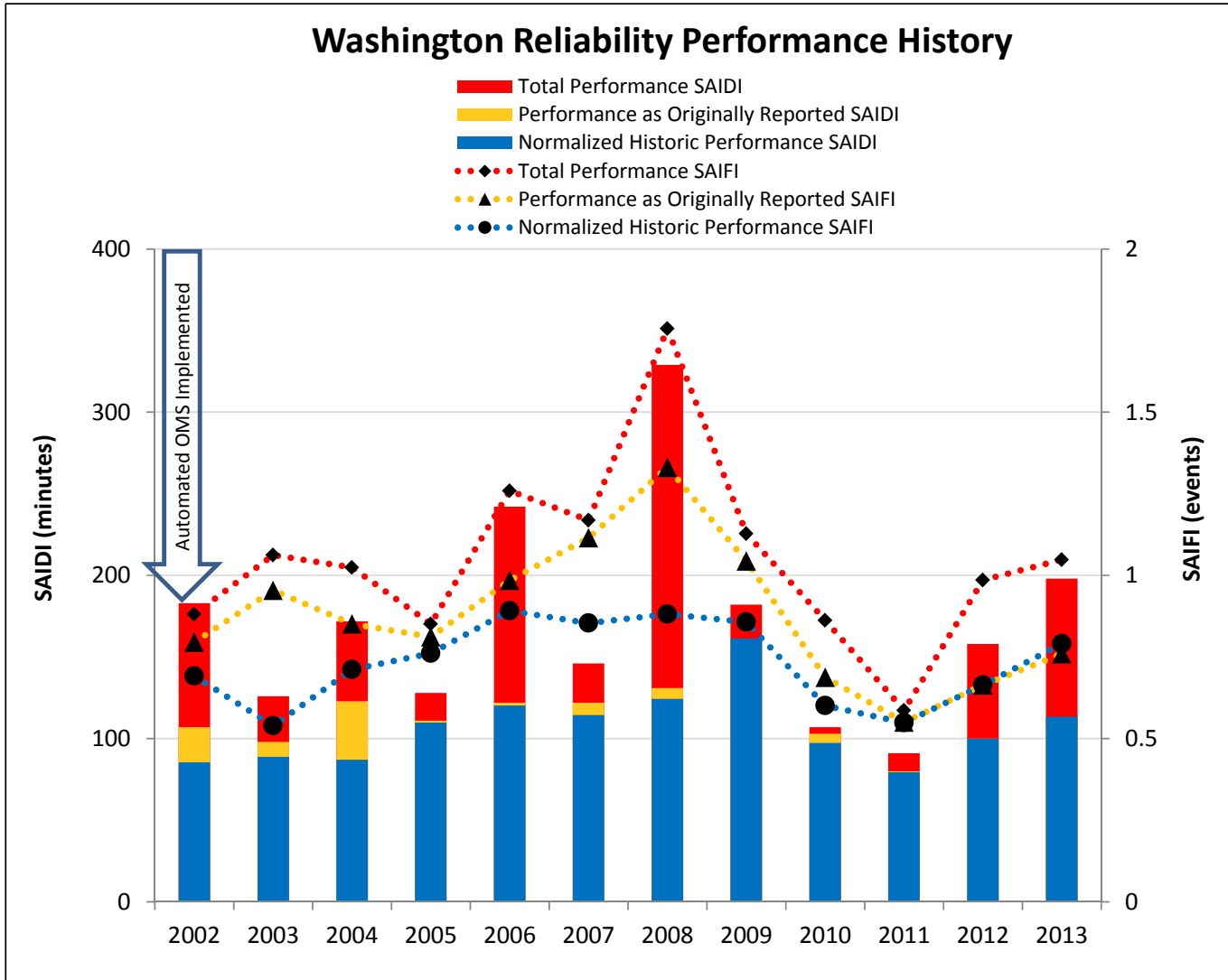
<sup>2</sup>If a 10% op area major event also qualified as a 2 1/2 beta major event it was associated only with the 2 1/2 beta major event.

<sup>3</sup>Normalized performance is the result of applying both SAIDI and SAIFI-based major events to establish underlying performance

<sup>4</sup>Performance baselines were established in June 2003. See page 3 of Reporting Plan.

SAIDI performance baseline of 150 minutes and SAIFI performance baseline of 0.975 events.

**WASHINGTON**



**WASHINGTON**
**3.2 System Average Interruption Duration Index (SAIDI)**

During the reporting period, the company delivered reliability results better than baseline for both outage duration (SAIDI) and outage frequency (SAIFI); the performance compared to baselines is identified in Section 3.1 above.

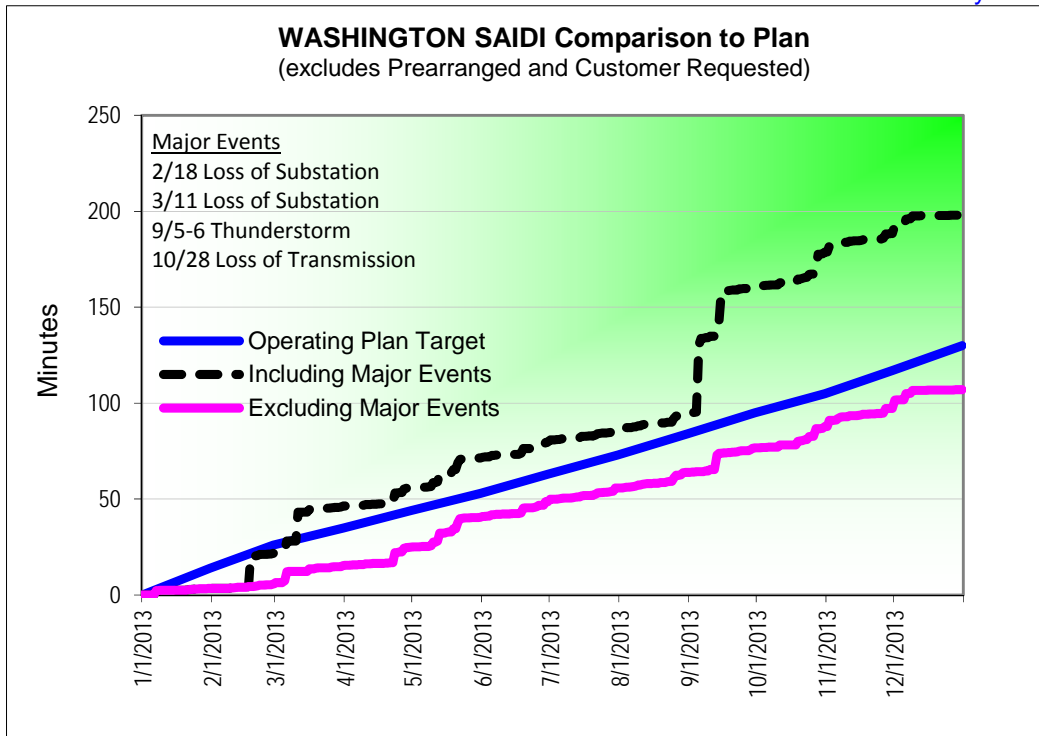
During the year, there were four SAIDI-based major events: loss of substation February 18 and March 11, and thunderstorms September 5-6 and September 15. There was one SAIFI-based major event: October 28 due to windstorm. These events excluded 91 minutes from underlying SAIDI. (As noted in the Definitions section of this report, the company records two major event types and reports reliability metrics reflecting results under both methods.) Copies of the Company's filed major events are included in the Appendix of this report.

During the period, there were twelve significant event days<sup>1</sup> (daily underlying SAIDI of 2.12 minutes or more). These twelve days account for 47 SAIDI minutes, representing 44% of the total underlying SAIDI results for the year.

Significant Event Days		
Date	Primary Cause	SAIDI
01/07/2013	Trees (Wind)	2.29
03/06/2013	Equipment	4.81
04/23/2013	Trees	5.35
05/13/2013	Trees	4.23
05/21/2013	Pole Fire	3.33
06/19/2013	Trees	2.43
09/13/2013	Animal	7.48
10/27/2013	Transmission Pole Fire	3.82
11/02/2013	Trees	3.21
11/27/2013	Vehicle Interference	2.32
12/01/2013	Unknown Lockout	4.29
12/06/2013	Equipment	3.15
<b>Total</b>		<b>46.72</b>

January 1 through December 31, 2013	
2013 SAIDI Goal = 130	SAIDI Actual
Total Performance	198
SAIDI-based Major Events Excluded	114
Reported Major Events Excluded	107

<sup>1</sup> On a trial basis, the Company established a variable of 1.75 times the standard deviation of its natural log SAIDI results.

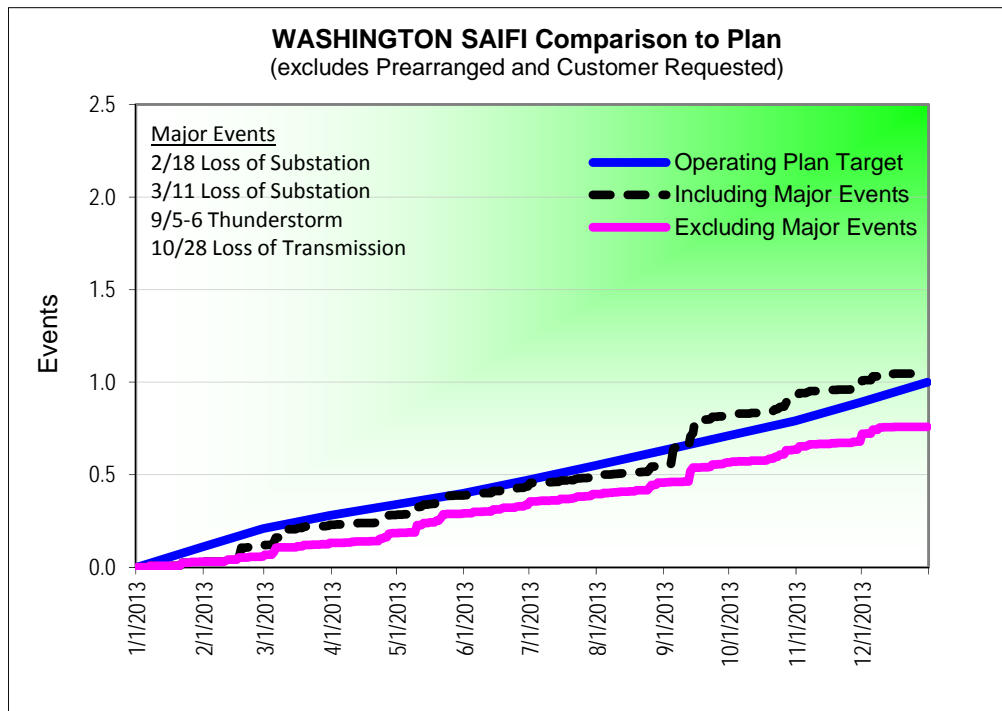


**WASHINGTON**

### 3.3 System Average Interruption Frequency Index (SAIFI)

Like outage duration, outage frequency was better than baseline and internal goal in 2013.

January 1 through December 31, 2013	
2013 SAIFI Goal = 1.000	SAIFI Actual
Total Performance	1.048
SAIDI-based Major Events Excluded	0.791
Reported Major Events Excluded	0.760



**WASHINGTON**

### 3.4 Operating Area Metrics

Washington operating area performance for the reporting period is listed in the table below.

January 1 – December 31, 2013	Including Major Events			Excluding SAIDI-based Major Events			Reported Major Events Excluded		
	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
SUNNYSIDE	189	1.241	152	109	1.014	107	103	0.846	121
WALLA WALLA	296	1.214	244	77	0.756	102	77	0.756	102
YAKIMA	186	0.985	189	124	0.765	163	124	0.765	163

2013 Sunnyside Customer Count: 24,630  
 2013 Walla Walla Customer Count: 27,370  
 2013 Yakima Customer Count: 81,709



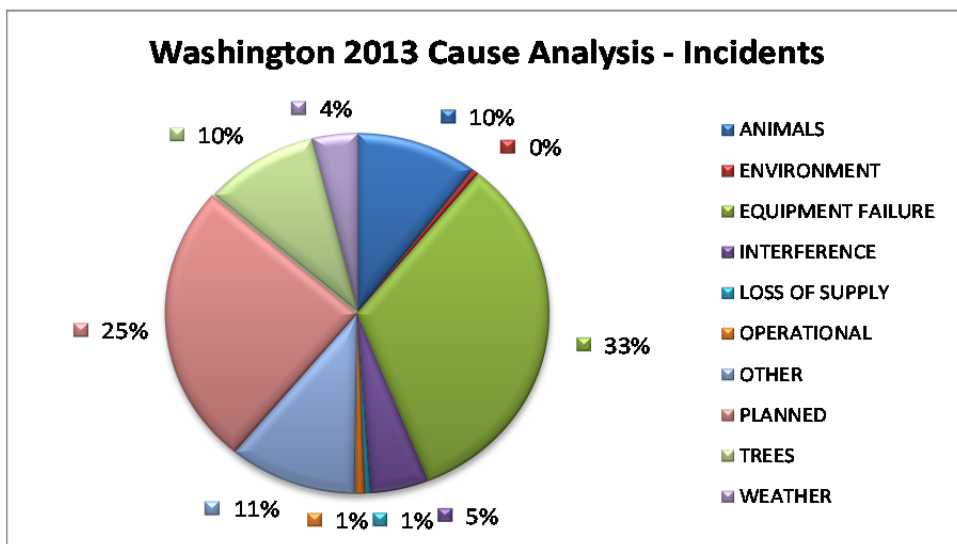
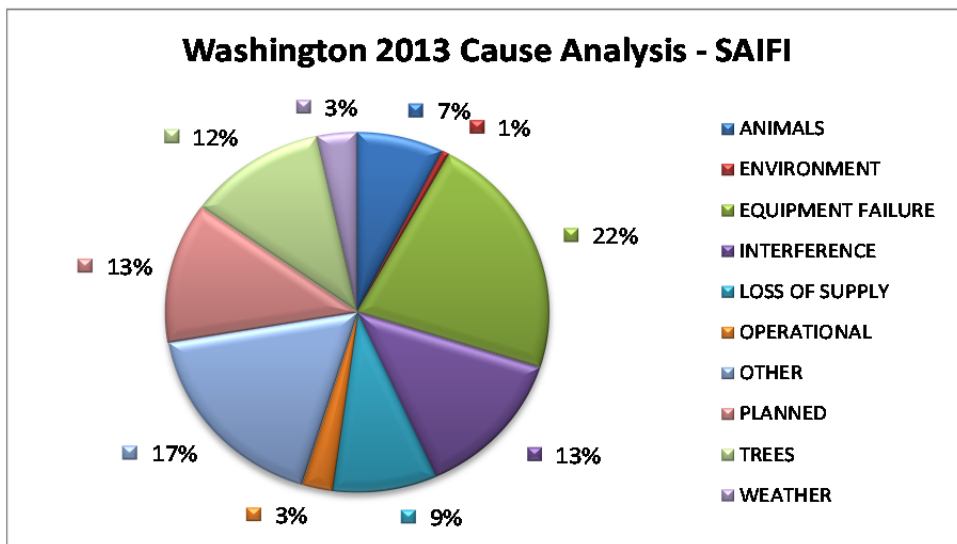
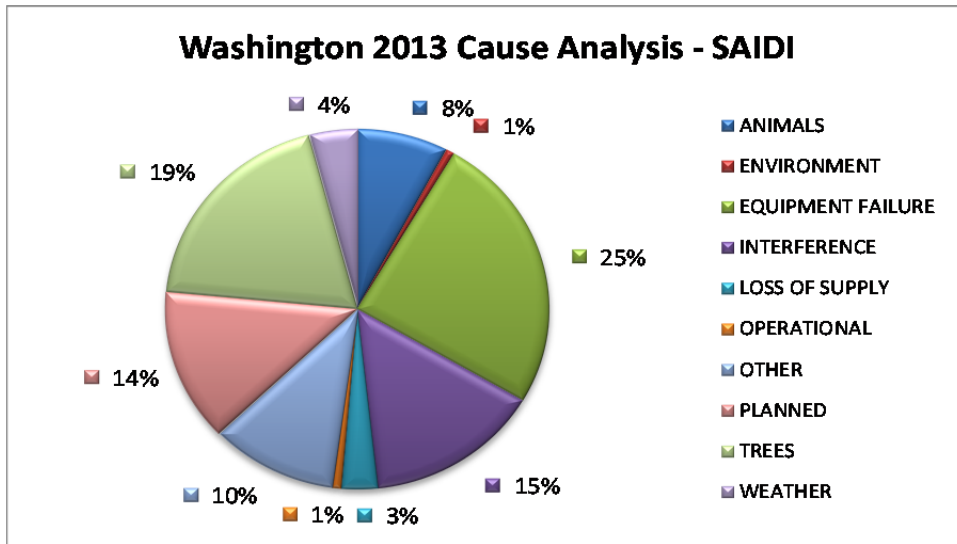
**WASHINGTON**

### 3.5 Cause Code Analysis

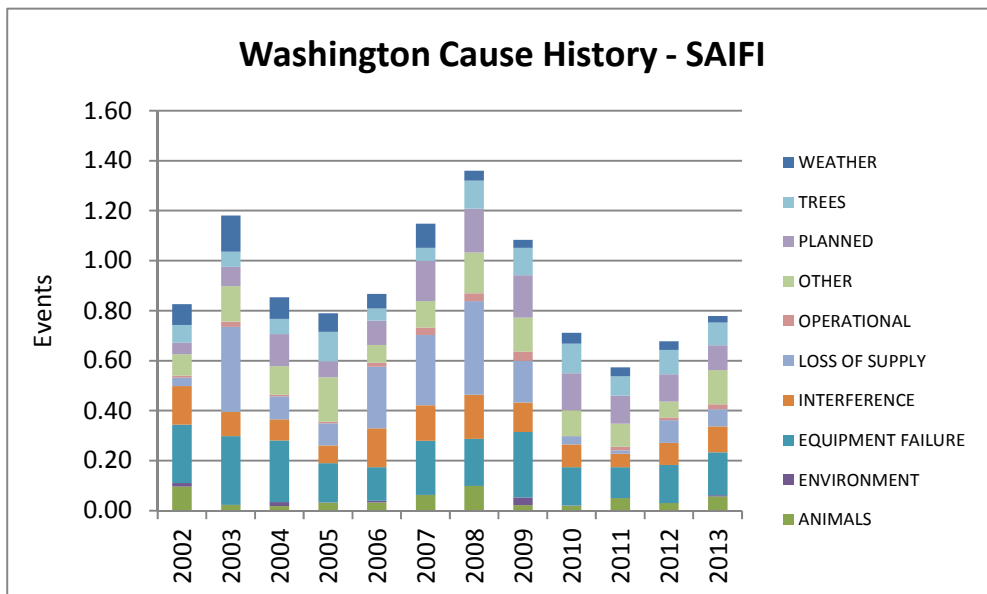
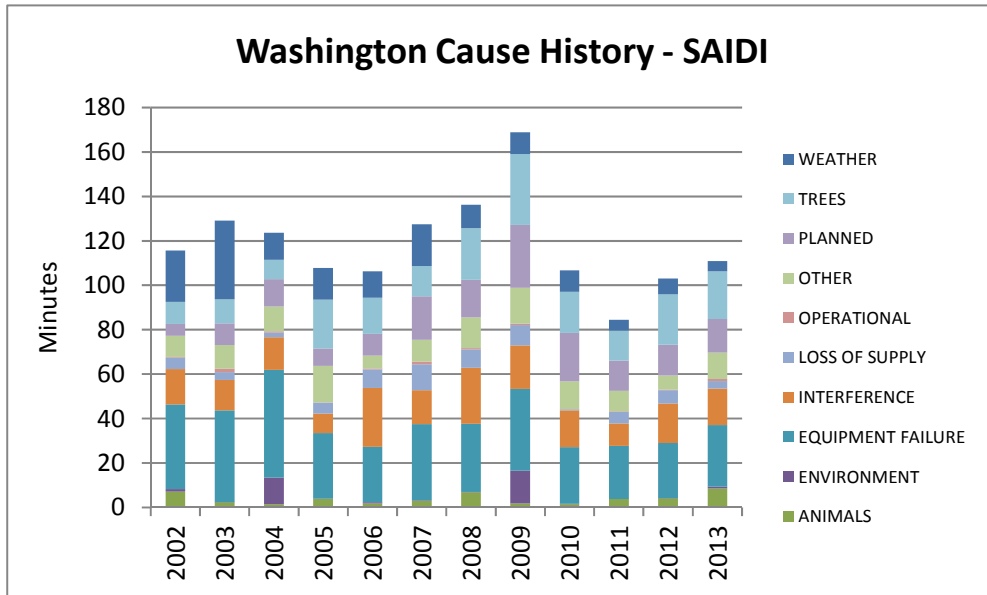
The table and charts below break out the number of incidents, customer hours lost, and sustained interruptions by cause code. Customer Minutes Lost is directly related to SAIDI (average outage duration); Sustained Interruptions is directly related to SAIFI (average outage frequency). Certain types of outages typically result in high duration, but are infrequent, such as Loss of Supply outages. Others tend to be more frequent, but are generally shorter duration. The pie charts depict the breakdown of performance results by percentage of each cause category. Following the pie charts, a cause category table lists the direct causes with definitions and examples. Thereafter is a historical view of cause codes, as they summarize to annual SAIDI and SAIFI performance.

Direct Cause Category	Direct Cause	Customer Minutes Lost for Incident	Customers In Incident Sustained	Sustained Incident Count
ANIMALS	ANIMALS	107,368.87	1,236	86
	BIRD MORTALITY (NON-PROTECTED SPECIES)	1,002,720.00	6,072	125
	BIRD MORTALITY (PROTECTED SPECIES) (BMTS)	1,243.65	19	6
	BIRD NEST (BMTS)	19,121.03	255	6
	BIRD SUSPECTED, NO MORTALITY	25,873.85	155	25
ENVIRONMENT	FIRE/SMOKE (NOT DUE TO FAULTS)	99,992.23	606	13
	FLOODING	6,118.97	44	1
EQUIPMENT FAILURE	B/O EQUIPMENT	1,742,161.33	9,968	354
	DETERIORATION OR ROTTING	1,016,634.40	6,107	385
	OVERLOAD	4,580.18	25	7
	POLE FIRE	996,892.21	7,129	51
INTERFERENCE	DIG-IN (NON-PACIFICORP PERSONNEL)	11,199.47	42	15
	OTHER INTERFERING OBJECT	4,226.13	29	11
	OTHER UTILITY/CONTRACTOR	327,041.79	4,292	30
	VANDALISM OR THEFT	4,229.03	70	6
	VEHICLE ACCIDENT	1,878,230.96	9,601	56
LOSS OF SUPPLY	FAILURE ON OTHER LINE OR STATION	0.00	0	1
	LOSS OF SUBSTATION	180,368.00	3,112	4
	LOSS OF TRANSMISSION LINE	280,837.30	6,259	9
OPERATIONAL	FAULTY INSTALL	1,224.52	10	6
	INCORRECT RECORDS	511.55	6	6
	INTERNAL CONTRACTOR	120,148.80	2,703	3
	PACIFICORP EMPLOYEE - FIELD	78.33	1	1
	UNSAFE SITUATION	481.20	4	3
OTHER	OTHER, KNOWN CAUSE	202,955.33	1,681	25
	UNKNOWN	1,399,521.23	16,851	236
PLANNED	CONSTRUCTION	34,668.98	83	38
	CUSTOMER NOTICE GIVEN	482,409.78	2,365	242
	CUSTOMER REQUESTED	20,601.80	191	156
	EMERGENCY DAMAGE REPAIR	1,496,475.54	10,416	160
	INTENTIONAL TO CLEAR TROUBLE	21,164.50	246	14
	MAINTENANCE	0.00	0	1
TREES	TREE - NON-PREVENTABLE	2,839,589.96	12,033	220
	TREE - TRIMMABLE	69,020.03	295	14
WEATHER	FREEZING FOG & FROST	189.45	3	1
	ICE	28,579.22	124	2
	LIGHTNING	332,644.00	2,062	62
	SNOW, SLEET AND BLIZZARD	0.00	0	1
	WIND	255,492.34	1,402	28

**WASHINGTON**



Cause Category	Description and Examples
<b>Environment</b>	Contamination or Airborne Deposit (i.e., salt, trona ash, other chemical dust, sawdust, etc.); corrosive environment; flooding due to rivers, broken water main, etc.; fire/smoke related to forest, brush or building fires (not including fires due to faults or lightning).
<b>Weather</b>	Wind (excluding windborne material); snow, sleet or blizzard; ice; freezing fog; frost; lightning.
<b>Equipment Failure</b>	Structural deterioration due to age (incl. pole rot); electrical load above limits; failure for no apparent reason; conditions resulting in a pole/cross arm fire due to reduced insulation qualities; equipment affected by fault on nearby equipment (i.e. broken conductor hits another line).
<b>Interference</b>	Willful damage, interference or theft; such as gun shots, rock throwing, etc.; customer, contractor or other utility dig-in; contact by outside utility, contractor or other third-party individual; vehicle accident, including car, truck, tractor, aircraft, manned balloon; other interfering object such as straw, shoes, string, balloon.
<b>Animals and Birds</b>	Any problem nest that requires removal, relocation, trimming, etc.; any birds, squirrels or other animals, whether or not remains found.
<b>Operational</b>	Accidental Contact by Pacific Power or Pacific Power's Contractors (including live-line work); switching error; testing or commissioning error; relay setting error, including wrong fuse size, equipment by-passed; incorrect circuit records or identification; faulty installation or construction; operational or safety restriction.
<b>Loss of Supply</b>	Failure of supply from Generator or Transmission system; failure of distribution substation equipment.
<b>Planned</b>	Transmission requested, affects distribution sub and distribution circuits; company outage taken to make repairs after storm damage, car hit pole, etc.; construction work, regardless if notice is given; rolling blackouts.
<b>Trees</b>	Growing or falling trees.
<b>Other</b>	Cause Unknown.



**WASHINGTON**

### 3.6 Areas of Greatest Concern

During 2013, reliability enhancement efforts continue to focus on improved system hardening and protection. Through history this has included replacement of hydraulic reclosers, upgrades of substation breakers and/or relays and coordination of circuit protection devices, such as fuses and reclosers. The company regularly finds some of its most cost-effective reliability improvements can be achieved by focusing on circuits that do not appear to be well coordinated, which it finds through data mining of its outage reporting data. A well-coordinated circuit will minimize how many customers experience an interruption as the result of a fault event.

Additionally, it has continued its circuit hardening efforts by strategic deployment of circuit inspection, pole and/or crossarm replacement and vegetation hot-spotting. Along with circuit hardening and protection efforts, it has reviewed opportunities for localized activities such as feeder ties and cable replacement activities.

In this year's improvement plans, replacement of mechanical relays with electronic relays is planned. These devices have fault memories which allow for targeted inspection when faults occur. They also provide better coordination between the substation circuit equipment and down-line protective equipment, such as reclosers and fuses.

Additional devices that help diagnose the location of circuit's fault events are planned with the installation of fault indicators. These allow for faster restoration after an event as well as targeting specific hardening opportunities for segments where the fault indicators exist.

Another area of concern within Yakima and Sunnyside, particularly around Toppenish and Selah substations, has been animal-caused interruptions. With the encroachment of new species into the area these two substations have experienced significant interruption activity which precipitated the initiation of projects designed to animal-guard substation equipment. While this activity is no guarantee that future animal outages will not occur, it should result in improved performance against such intrusion.

Finally, the implementation of a web-based notification tool, which alerts when interrupting devices (such as substation breakers, line reclosers or fuses) have exceeded proscribed performance thresholds has helped to promptly focus field investigative activities; this new capability has delivered substantial improvements to customers.

The table below lists reliability projects identified and currently underway for Washington's Areas of Greatest Concern; these circuits will be subsequently reported as Program Year 14 circuits in Section 3.7.

Sub	Circuit Name	Circuit	2014 Project	Baseline CPI05
CENTRAL (WA)	Memorial	5W2	Install 3 sets of remote fault indicators. 2 at reclosers, 1 at 3-phase switch.	92
WILEY	Occidental	5Y382	Replace relays on 5Y382 at Wiley Sub (Engineering CY13, Construction CY14)	97
WILEY	Tampico	5Y380	Replace relays on 5Y380 at Wiley Sub (Engineering CY14; Construction CY15)	103
SELAH	10 <sup>th</sup> Street	5Y437	Add 2 switches. FP#336001 on west side FP#330400	157
SELAH	Gravel	5Y99	Replace relays on 5Y99 at Selah Sub (Engineering CY14; Construction CY15)	180

**WASHINGTON**

### 3.7 Reduce CPI for Worst Performing Circuits by 20%

On a routine basis, the company reviews circuits for performance. One of the measures that it uses is called circuit performance indicator (CPI), which is a blended weighting of key reliability metrics covering a three-year time frame. The higher the number, the poorer the blended performance the circuit is delivering. As part of the company's Performance Standards Program, it annually selects a set of Worst Performing Circuits for target improvement. The improvements are to be completed within two years of selection. Within five years of selection, the average performance is to be improved by at least 20% (as measured by comparing current performance against baseline performance). Program years 1-12 have previously met improvement targets so are no longer shown in the performance update below.

WASHINGTON WORST PERFORMING CIRCUITS	BASELINE	Performance 12/31/2012
PROGRAM YEAR 13:		
DONALD 5Y330	90	n/a
FORNEY 5Y94	207	n/a
PRESCOTT 5W305	94	n/a
STEIN 5Y164	156	n/a
TERRACE HTS 5Y10	114	n/a
TARGET SCORE = 106	132	n/a

**WASHINGTON**

### 3.8 Restore Service to 80% of Customers within 3 Hours

The Company targets restoring power to 80% of its customers within 3 hours, however during 2013 this target was not met, mostly due to the impact of certain significant events that resulted in longer than-desired restoration.

WASHINGTON RESTORATIONS WITHIN 3 HOURS					
January 1 through December 31, 2013					79%
January	February	March	April	May	June
70%	87%	74%	81%	74%	70%
July	August	September	October	November	December
83%	82%	85%	82%	63%	83%

### 3.9 Telephone Service and Response to Commission Complaints

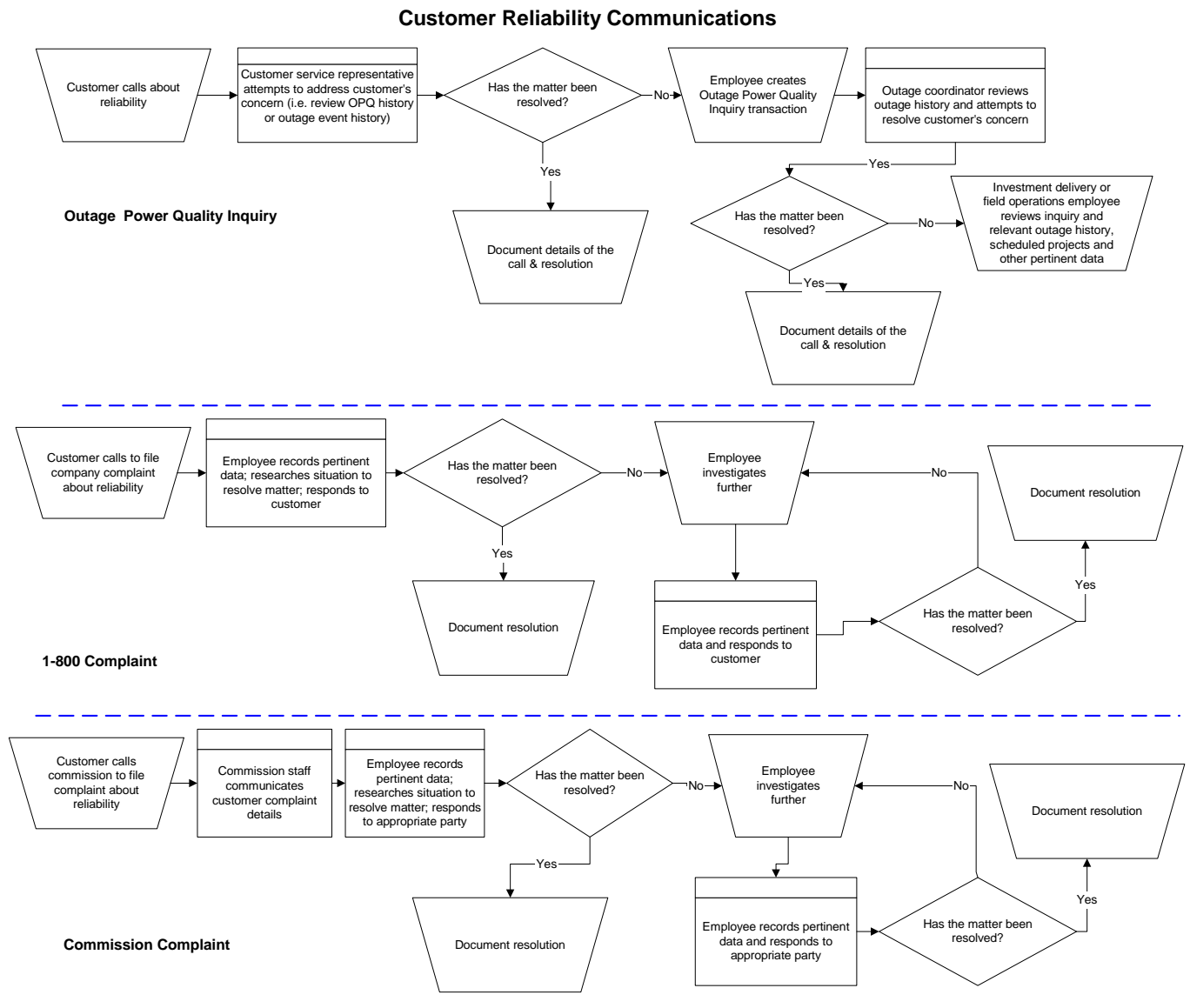
COMMITMENT	GOAL	PERFORMANCE
PS5-Answer calls within 30 seconds	80%	80%
PS6a) Respond to commission complaints within 3 days <sup>1</sup>	95%	97%
PS6b) Respond to commission complaints regarding service disconnects within 4 hours	95%	100%
PS6c) Resolve commission complaints within 30 days	95%	98%

<sup>1</sup> Although the Performance Standard indicates that complaints will be responded to within 3 days, the Company acknowledges and adheres to the requirements set forth in 480-100-173(3)(a).

## 4 CUSTOMER RELIABILITY COMMUNICATIONS

### 4.1 Reliability Complaint Process Overview

The company's process for managing customers' concerns about reliability are to provide opportunities to hear customer concerns, respond to those concerns, and where necessary, provide customers an opportunity to elevate those concerns.





**WASHINGTON**

## 4.2 Customer Complaint Tracking

Listed below are the various avenues available to a customer to resolve concerns about reliability performance.

- **Customer Reliability Inquiry**

The company records customer inquiries about reliability as Outage Power Quality transactions in its customer service system, referred to as “OPQ” transactions.

- **Customer Complaint**

If a customer’s reliability concerns are not met through the process associated with the OPQ transaction, a customer can register a 1-800 complaint with the company. This is recorded in a complaint repository from which regular reports are prepared and circulated for resolution.

- **Commission Complaint**

If a customer’s reliability concerns are not met through the process associated with a 1-800 complaint, a customer can register a complaint with the Commission. This is recorded by the Commission staff and also by the company in a complaint repository. Regular reports are prepared and circulated for resolution of these items.

## 4.3 Customer Complaints Recorded During the Period

Listed below, by the recording source, are reliability-related customer complaints if any were received for Washington services during the reporting period.

- **Informal Complaints (1-800 Customer Advocacy Team)**

There was one Informal Complaint received by the company in the reporting period.

Received On	State	City	Complaint Type	Site Address	Site ID	Summary	Source	Commission
10/28/2013	WA	Selah	Outage	304 1/2 N Wenas Rd	528708319	Regarding frequency of power outages.		800 Private

- **Commission Complaints**

There was one Commission Complaint in the reporting period.

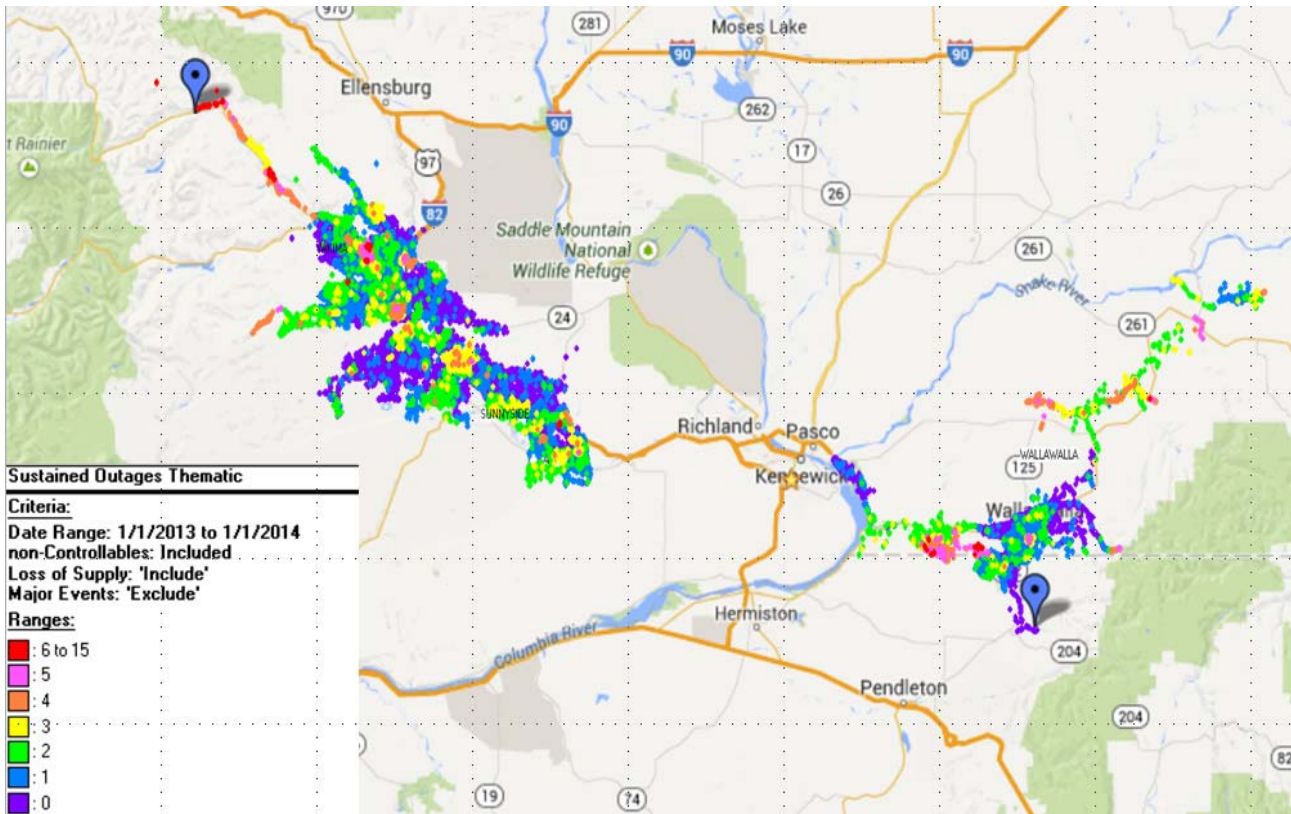
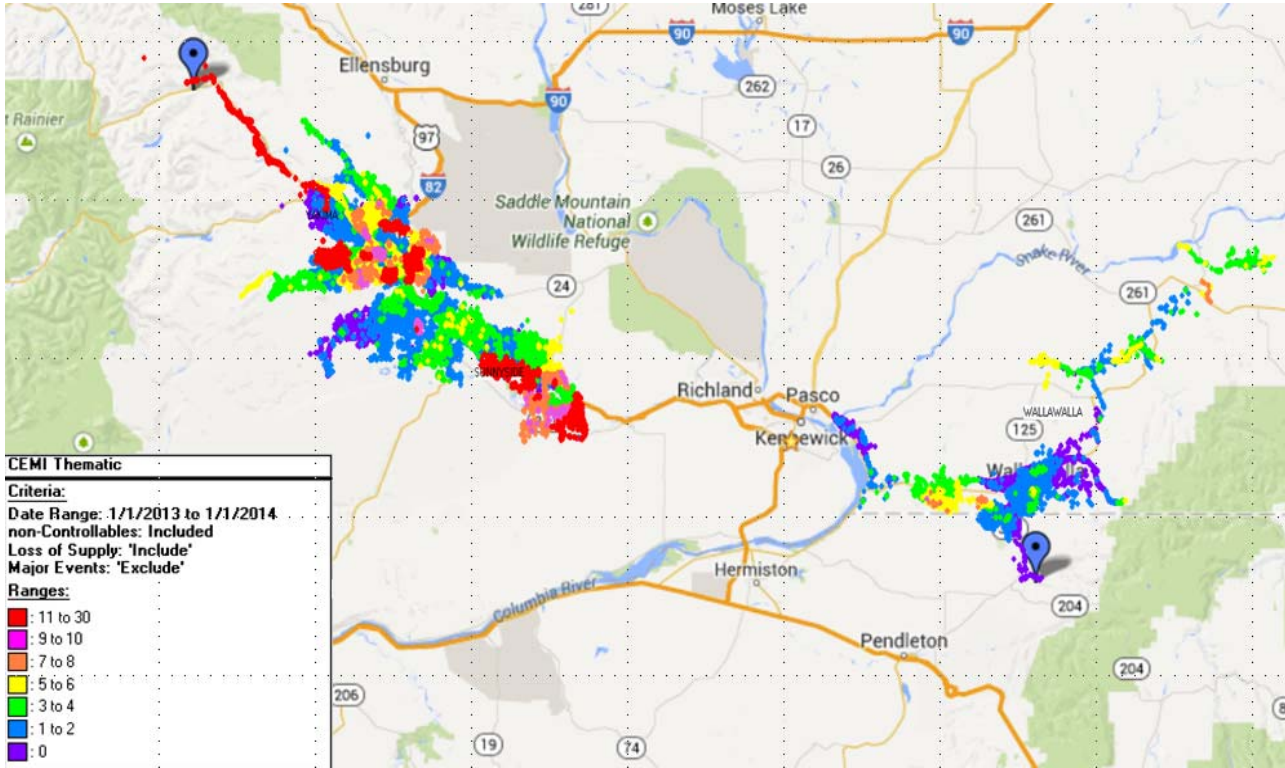
Received On	State	City	Complaint Type	Site Address	Site ID	Summary	Source	Commission
9/16/2013	WA	Selah	Outage	1204 Heritage Hills Dr	796517787	Doesn't feel CO should get rate increase until it addresses bird related outages.	Washington Commission	WA-Commission

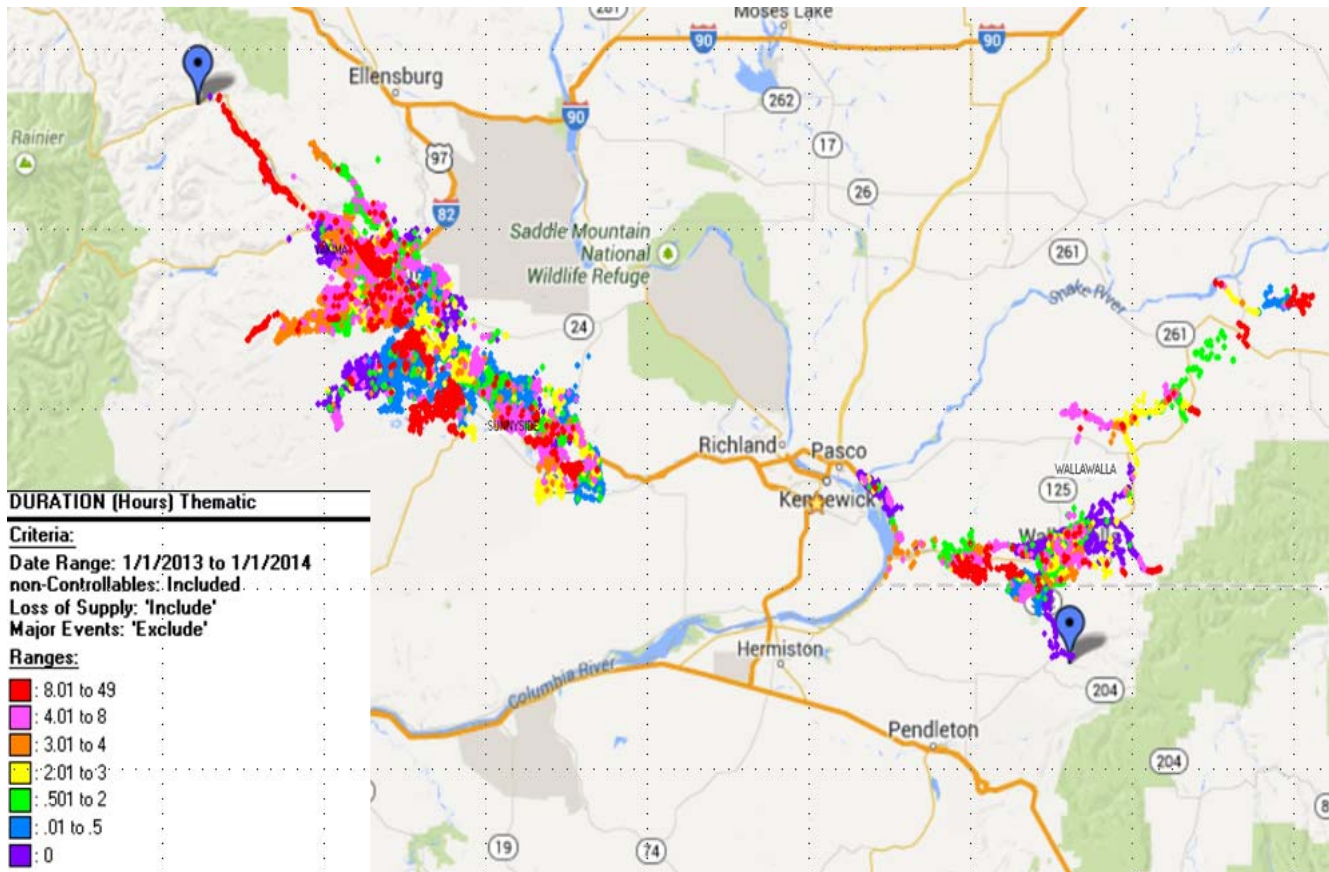
## **5 WASHINGTON RELIABILITY RESULTS DURING 2013**

To geospatially display reliability results the Company has developed its GREAT tool which blends circuit topology with outage history and uses a variety of industry metrics (differentiated by color) to indicate areas where reliability analysis should be targeted. In the subsequent plots, two important reliability indicators are depicted. In each plot thumbnails are used to orient the graphic. First, plots with customers experiencing multiple interruptions (CEMI) are shown. This measure shows how many sustained and momentary outages a given service transformer has experienced. The greater the color intensity, with red as the most severe, the more interruptions the transformer has had. Note that this depiction exceeds the requirements of the reporting rule, but is helpful to the Company in selecting areas of reliability concern. Second sustained interruptions are shown. This measure shows how many sustained outages a service transformer has experienced, which is aligned with the requirements of the reporting rules. Third, service transformer-level SAIDI is shown. While technically SAIDI is a “system-level” metric, the local application of this metric can be revealing in determining service transformers that have had long cumulative durations of outages during the period. As explained previously, the greater the color intensity, the longer the outage duration during the period. (Major events, customer requested and prearranged outages are excluded from underlying results.)

**WASHINGTON**

**5.1 State Reliability**

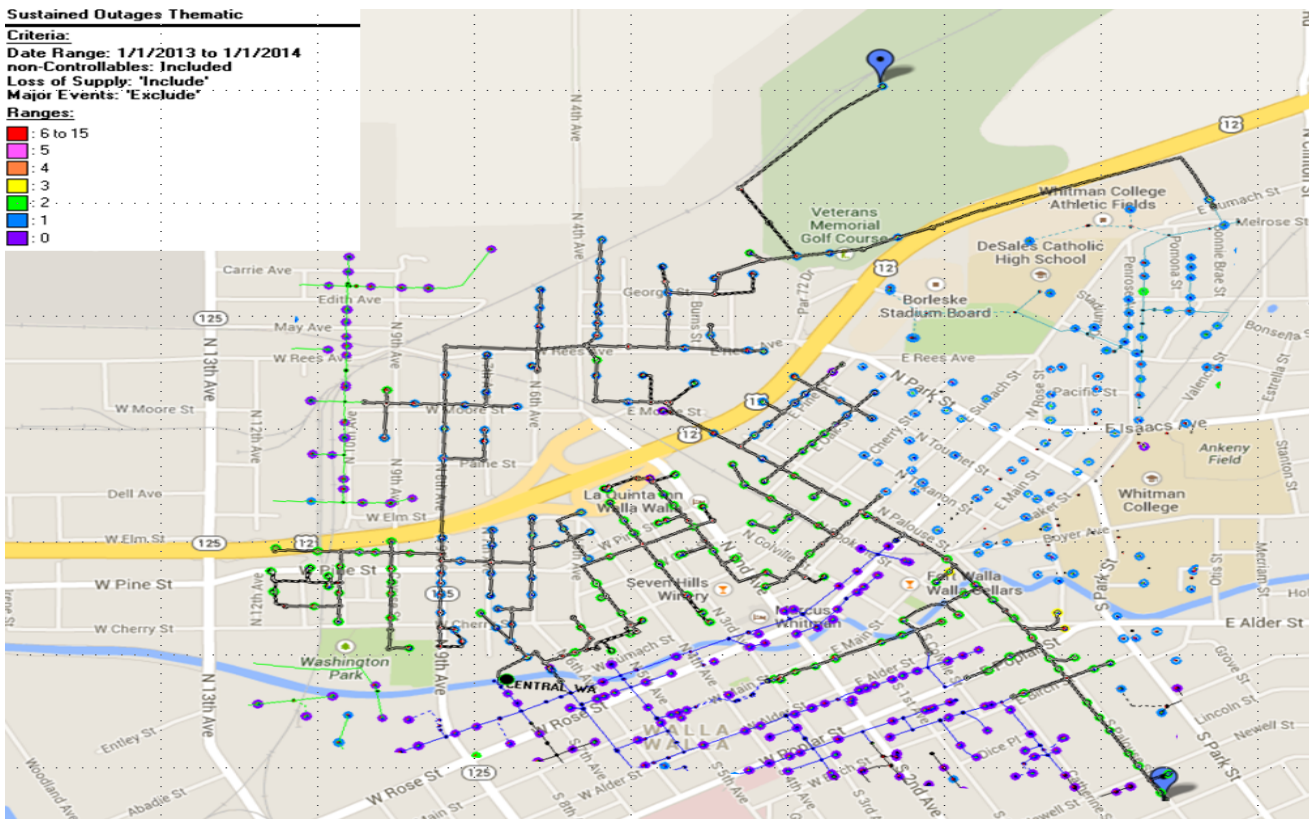
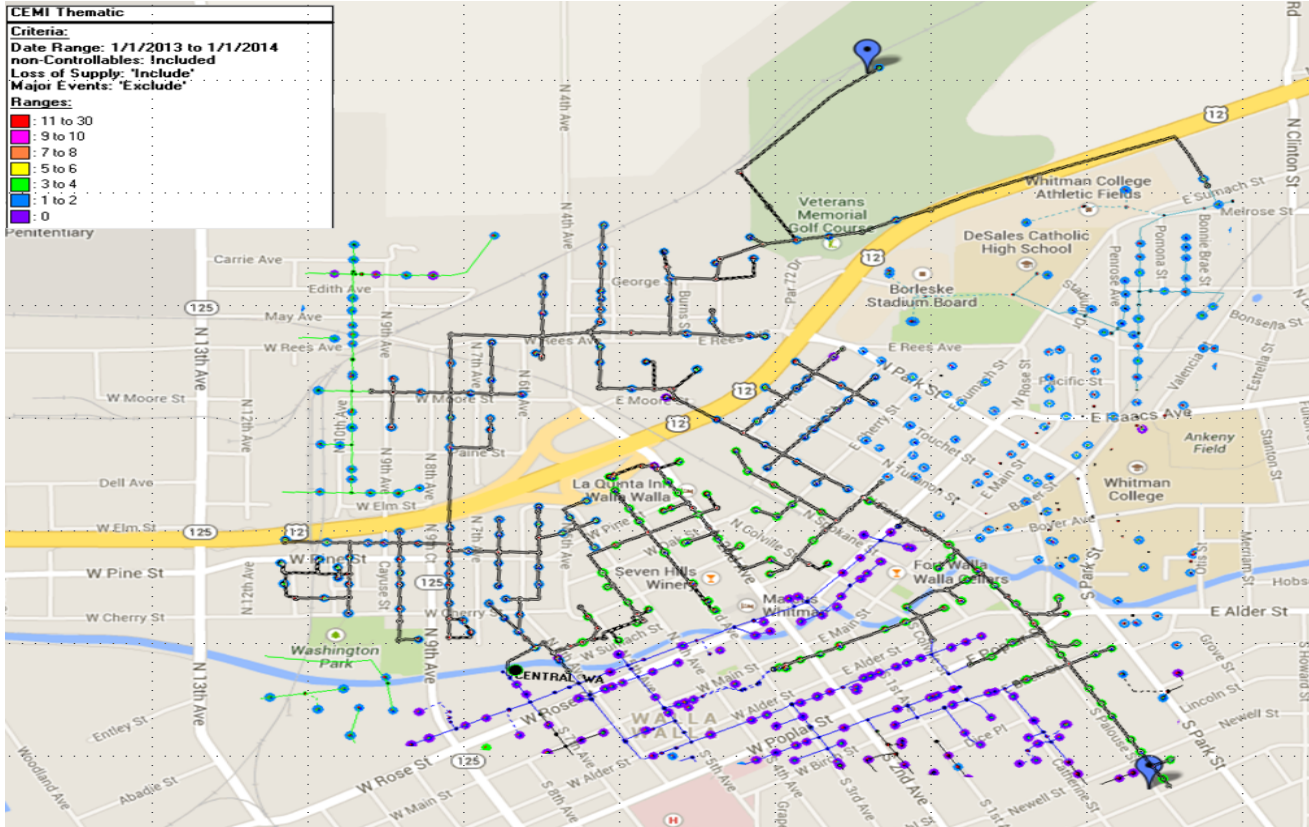


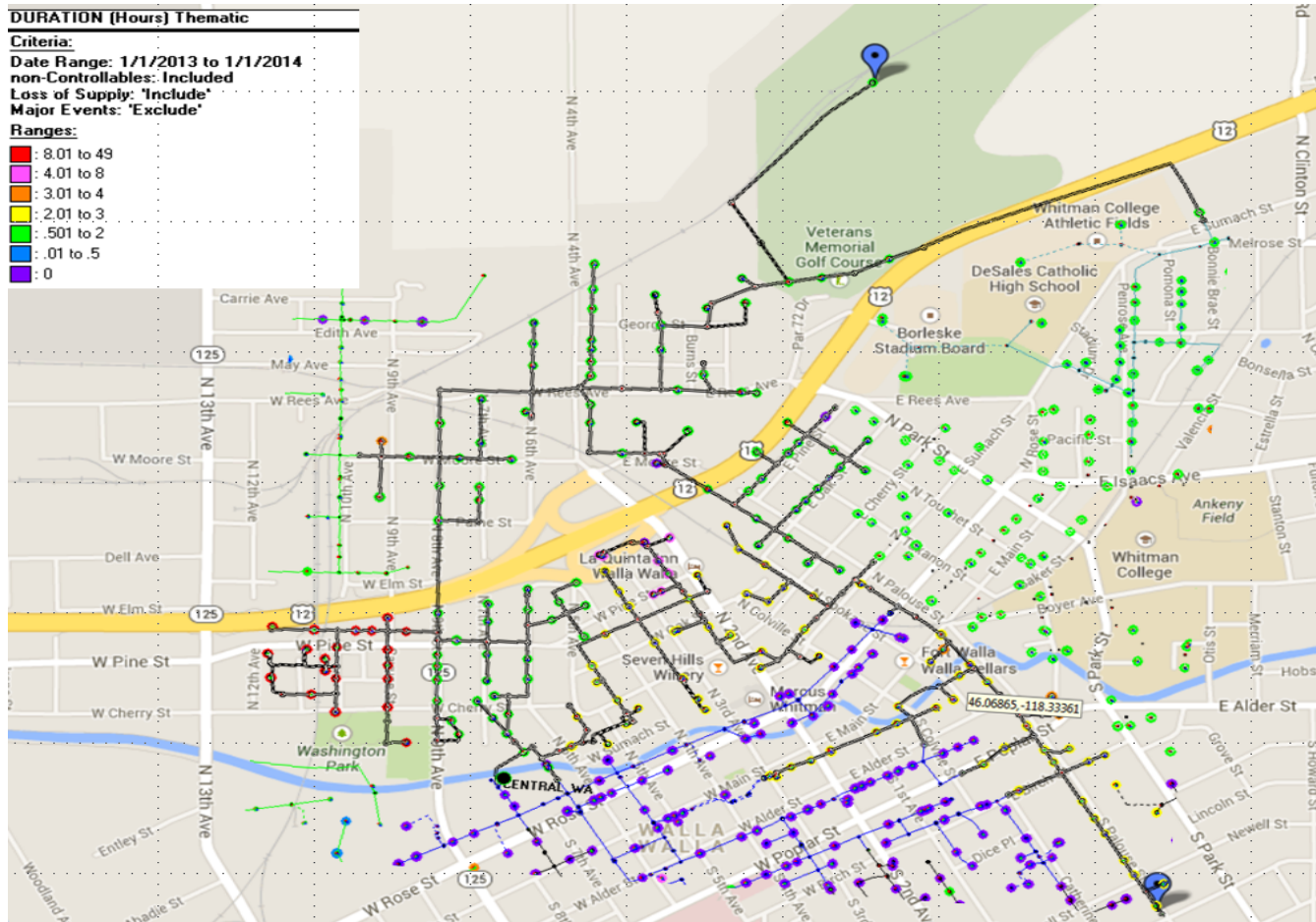
**WASHINGTON**


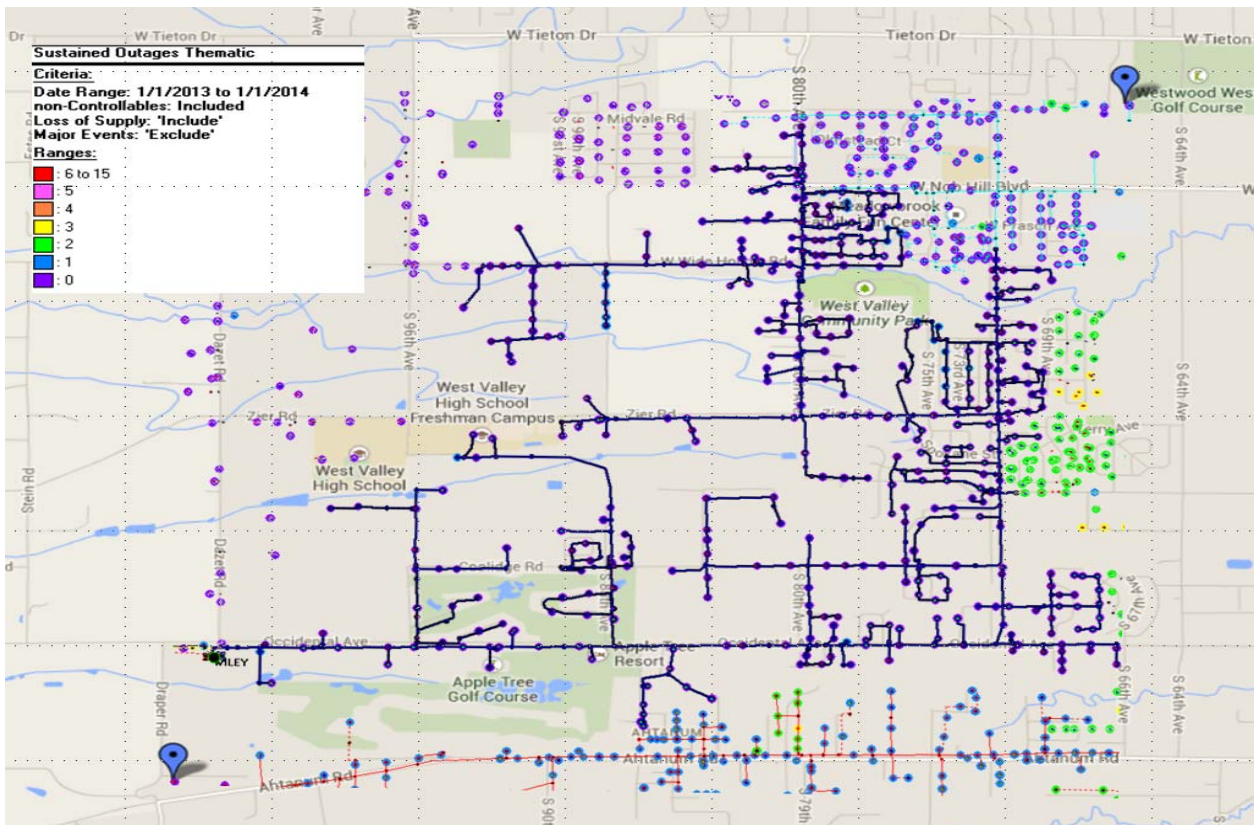
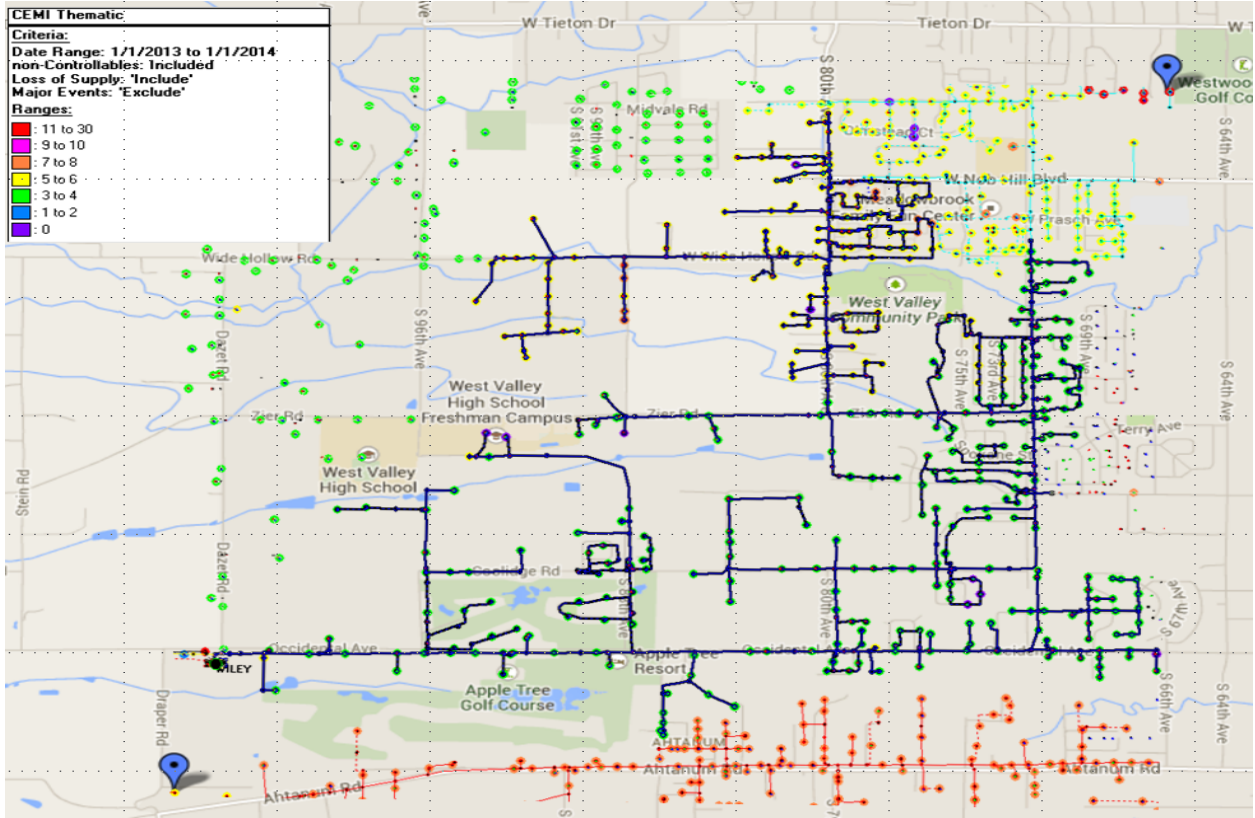
**WASHINGTON**

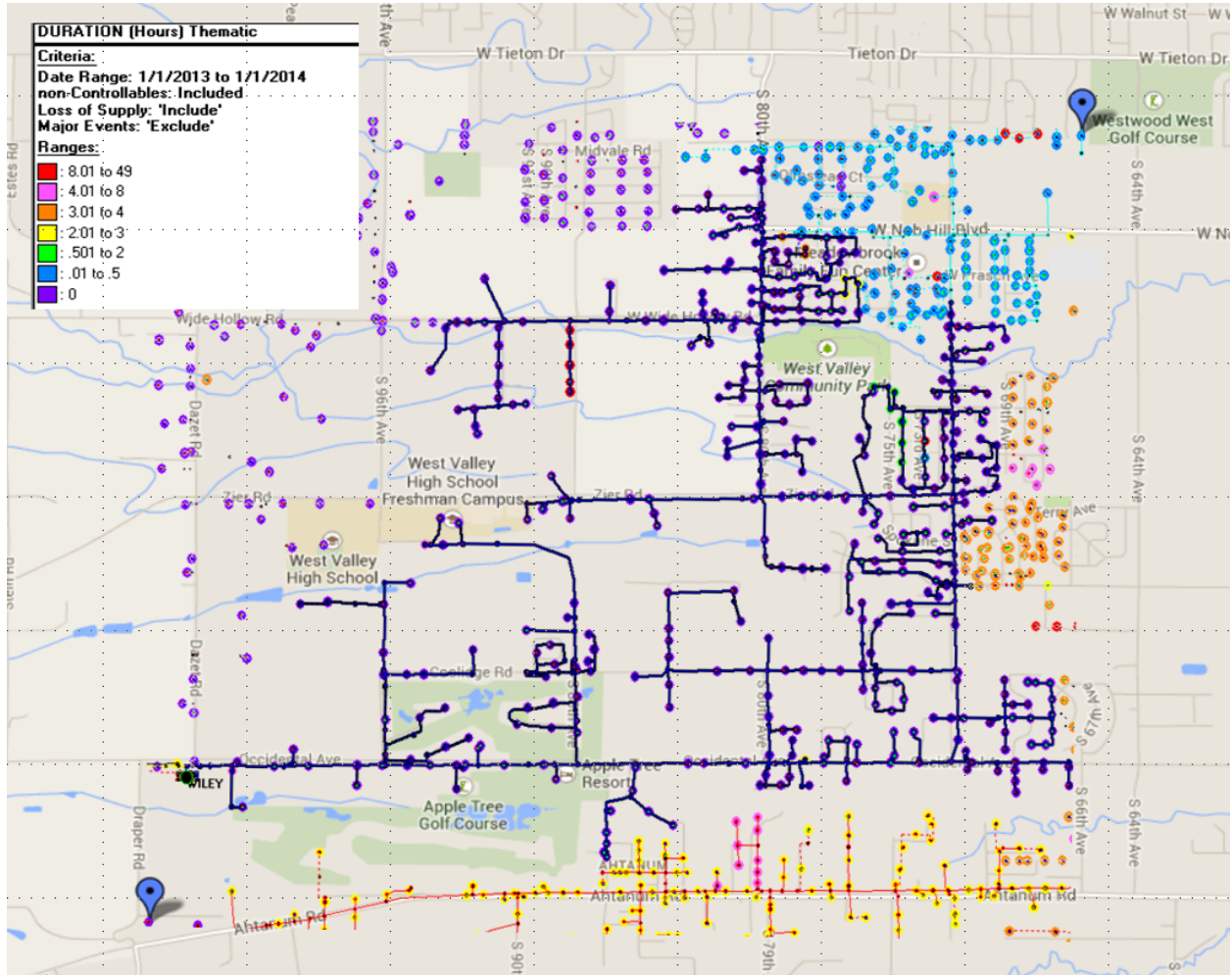
January – December 2013

**5.2 5W2: Memorial Feeder**



**WASHINGTON**


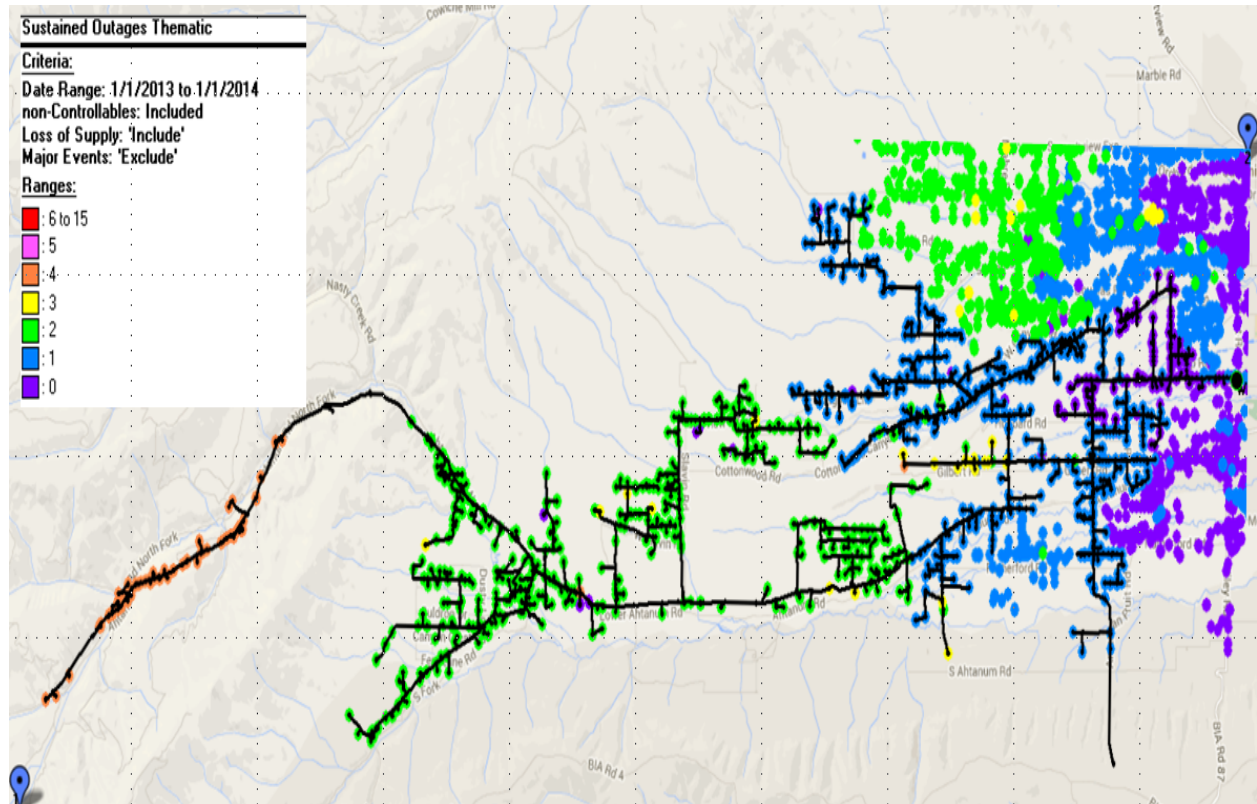
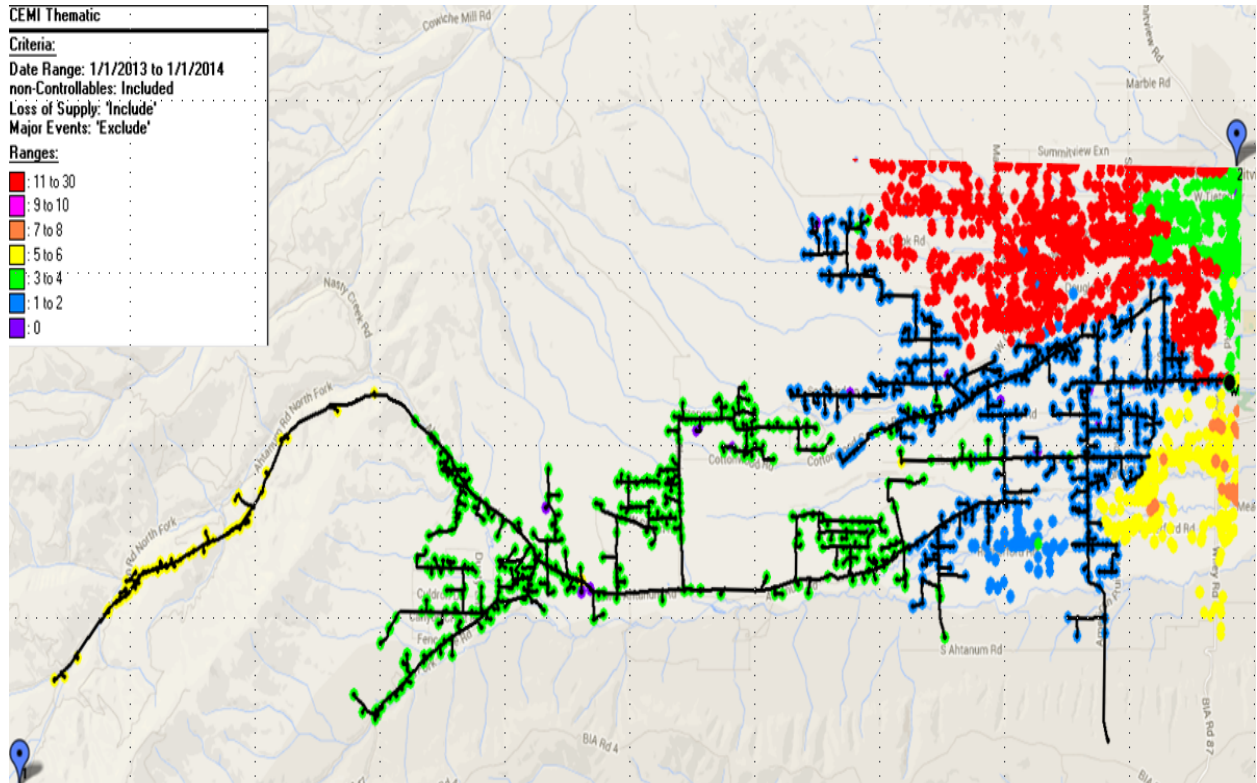
**WASHINGTON**
**5.3 5Y382: Occidental Feeder**






WASHINGTON

5.4 5Y380: Tampico Feeder

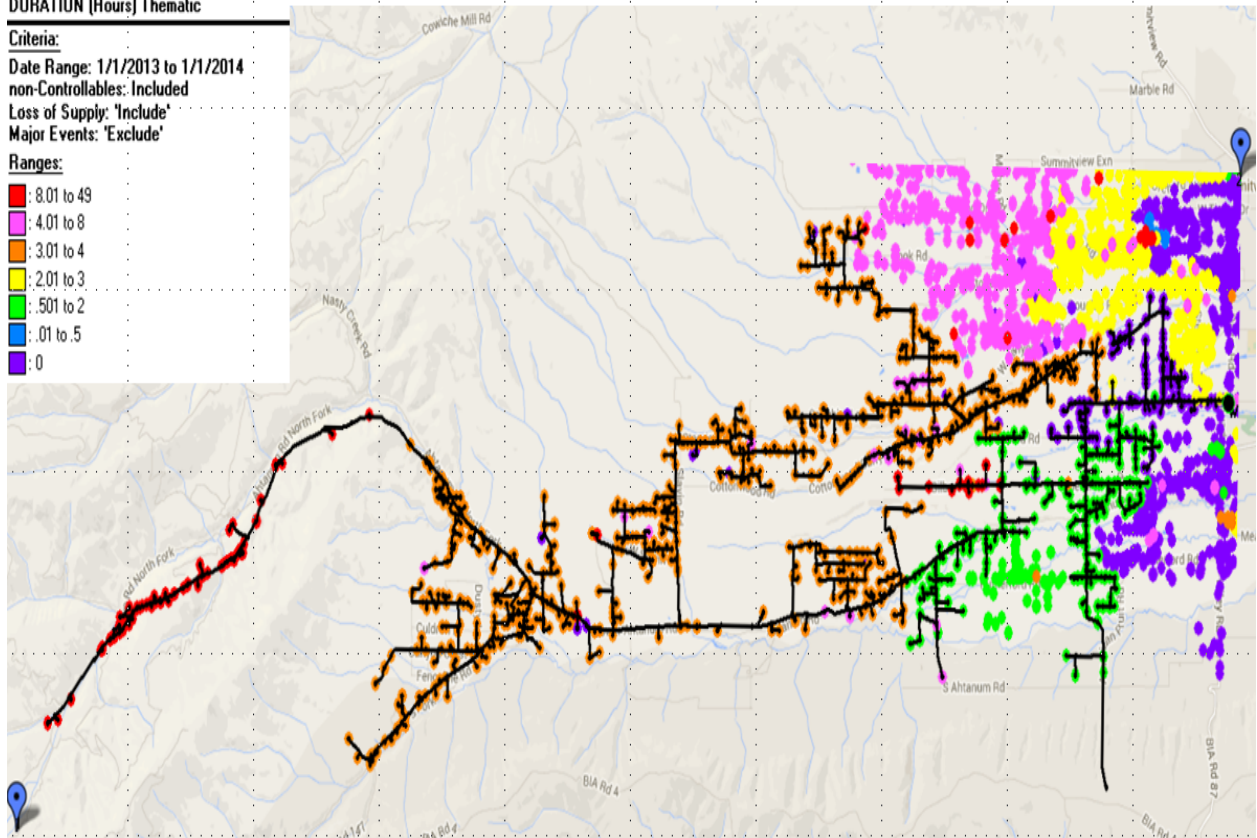


**DURATION (Hours) Thematic**

Criteria:  
Date Range: 1/1/2013 to 1/1/2014  
non-Controllables: 'Included'  
Loss of Supply: 'Include'  
Major Events: 'Exclude'

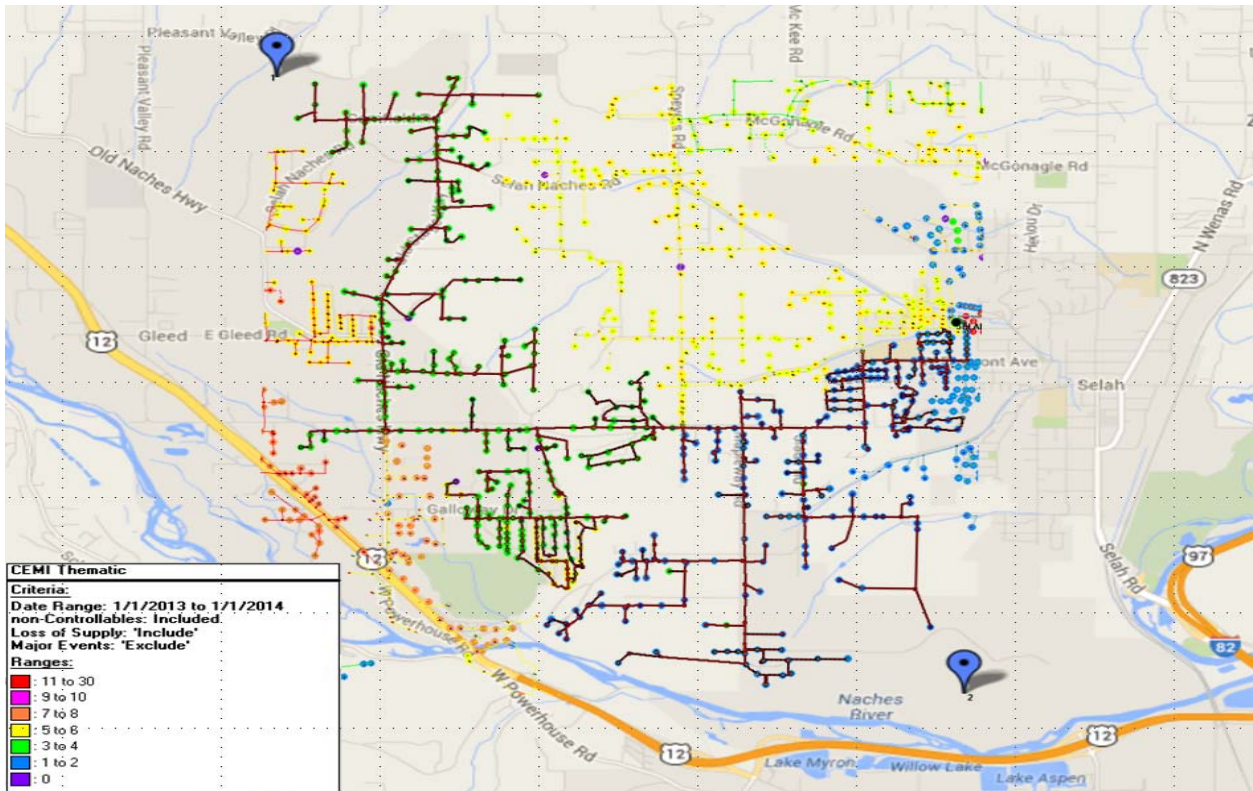
Ranges:

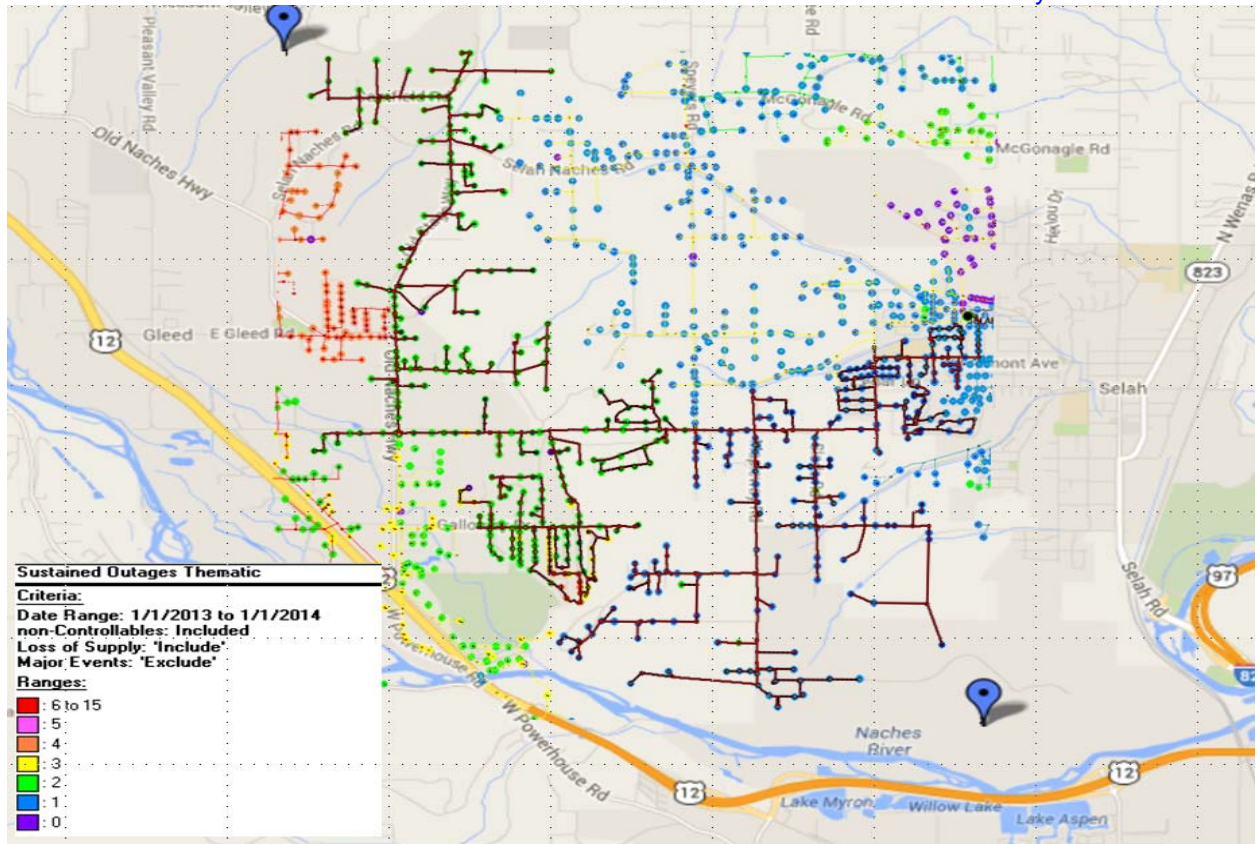
8.01 to 49
4.01 to 8
3.01 to 4
2.01 to 3
.501 to 2
.01 to .5
0

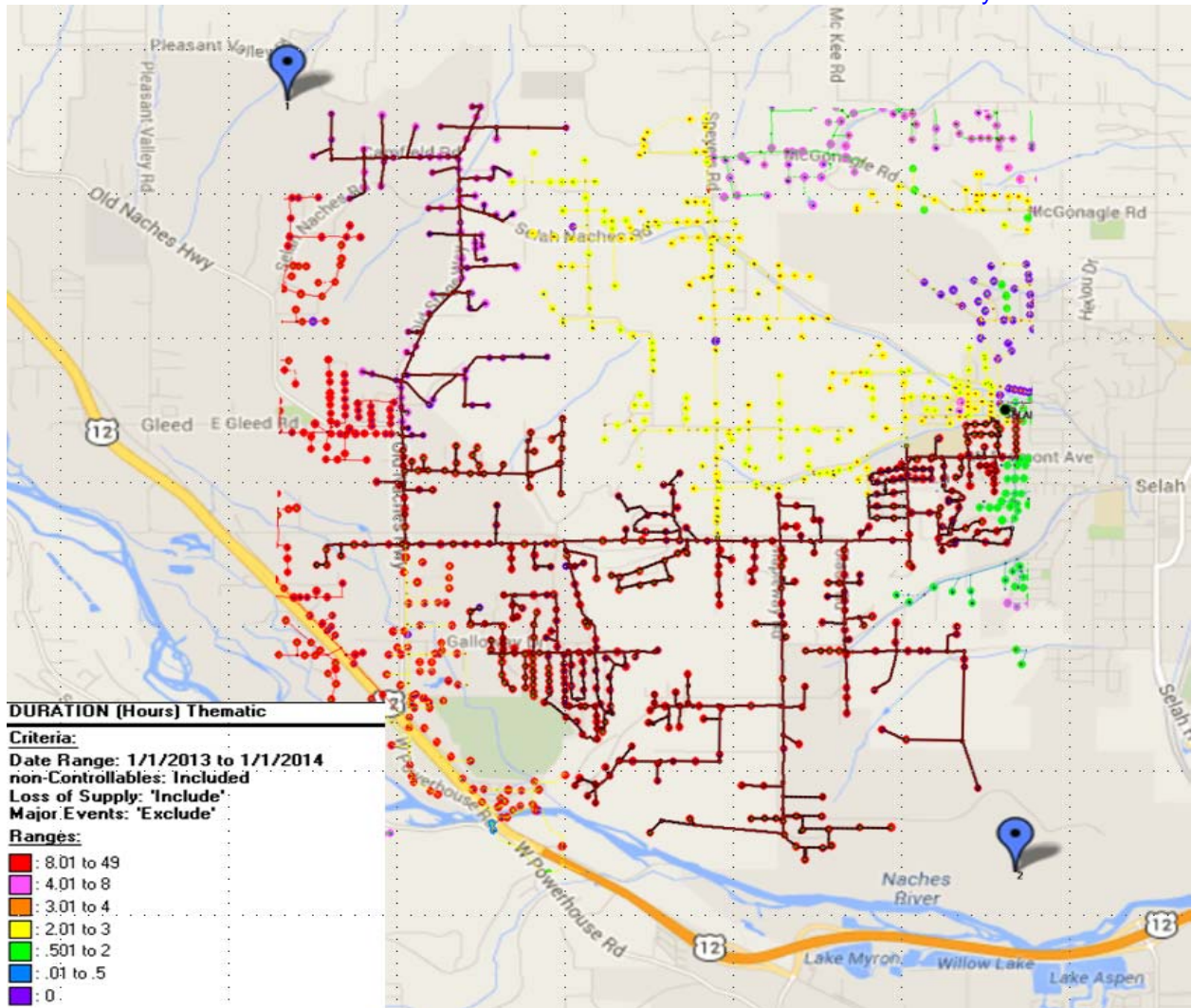


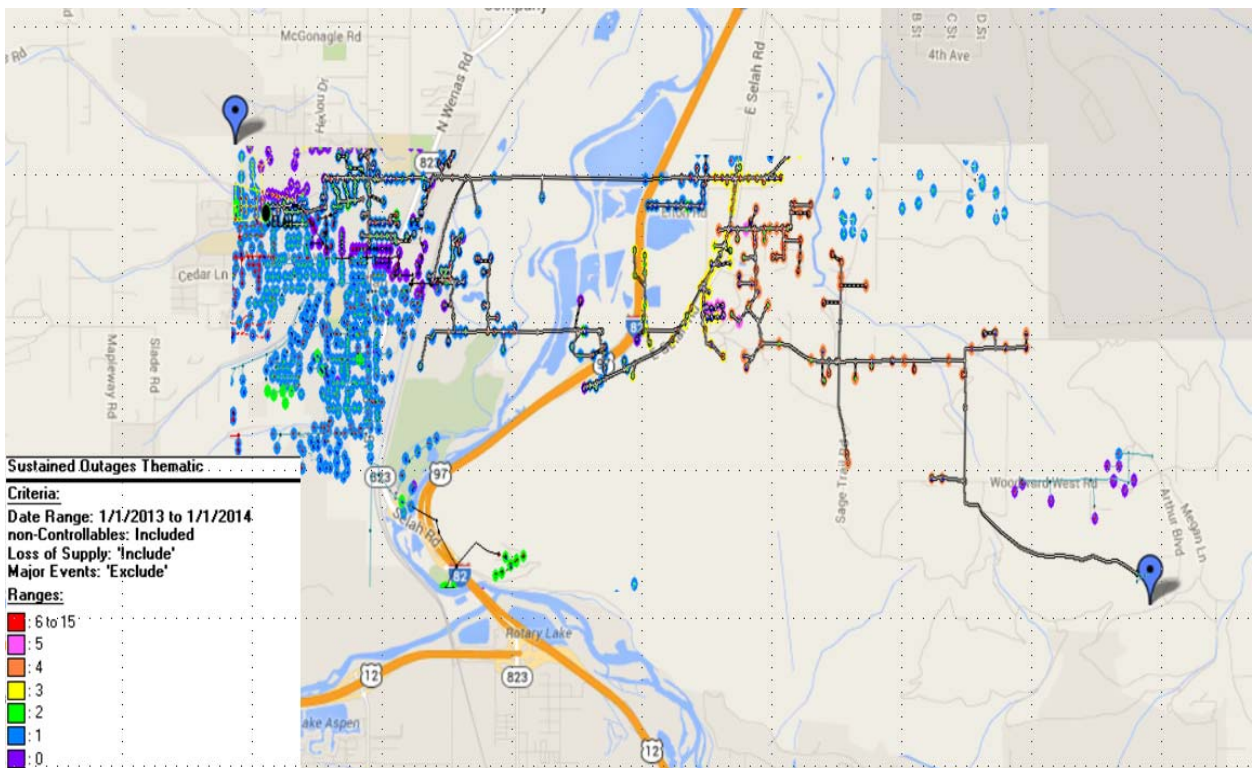
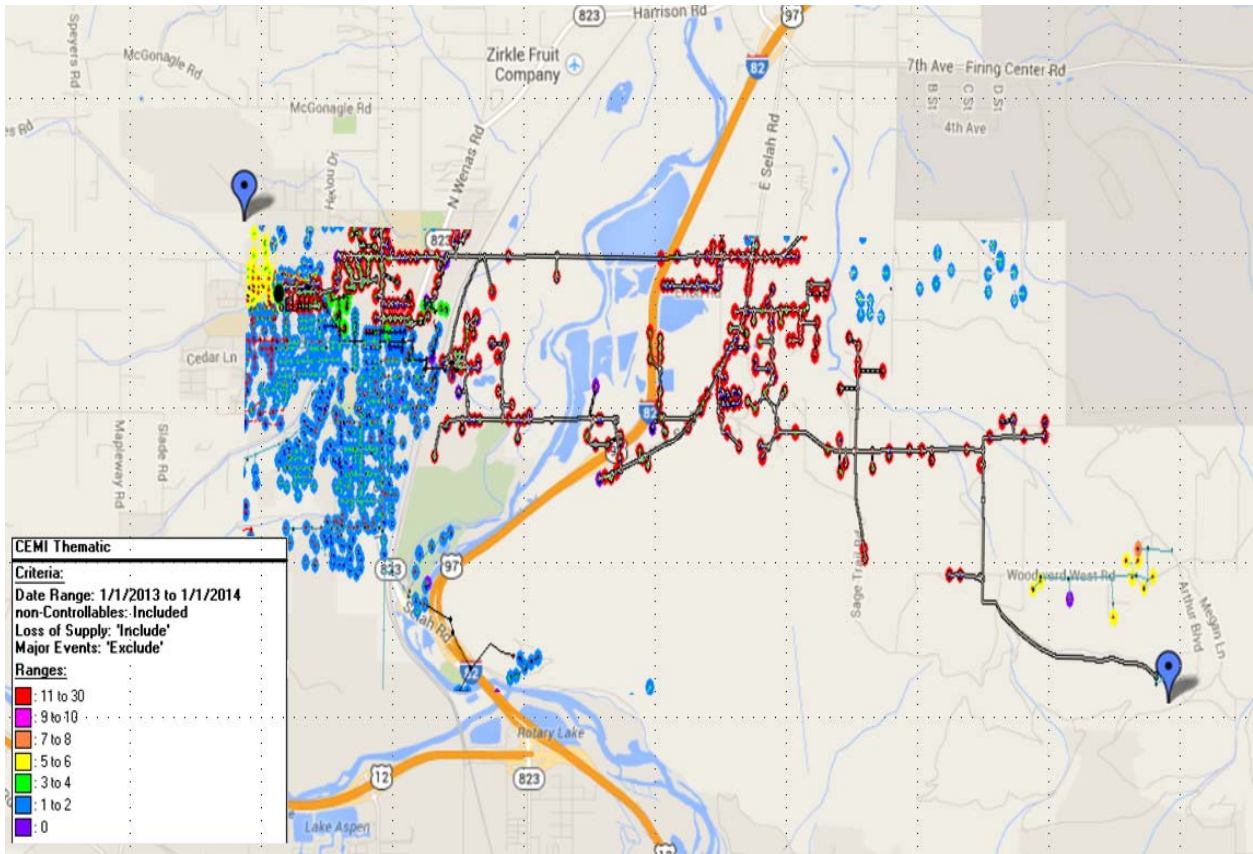
**WASHINGTON**

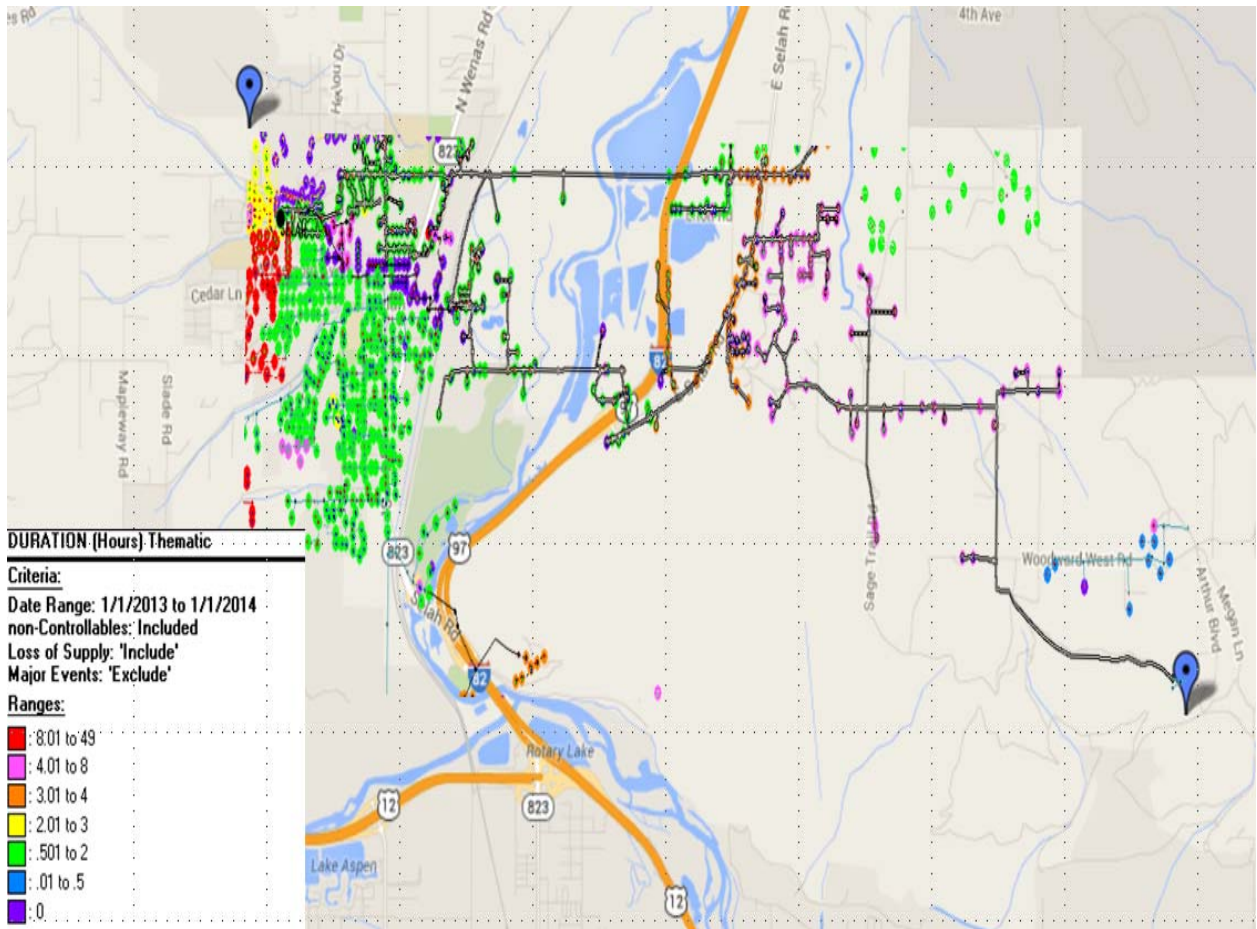
**5.5 5Y437: 10<sup>th</sup> Street Feeder**



**WASHINGTON**


**WASHINGTON**


**WASHINGTON**
**5.6 5Y99: Gravel Feeder**




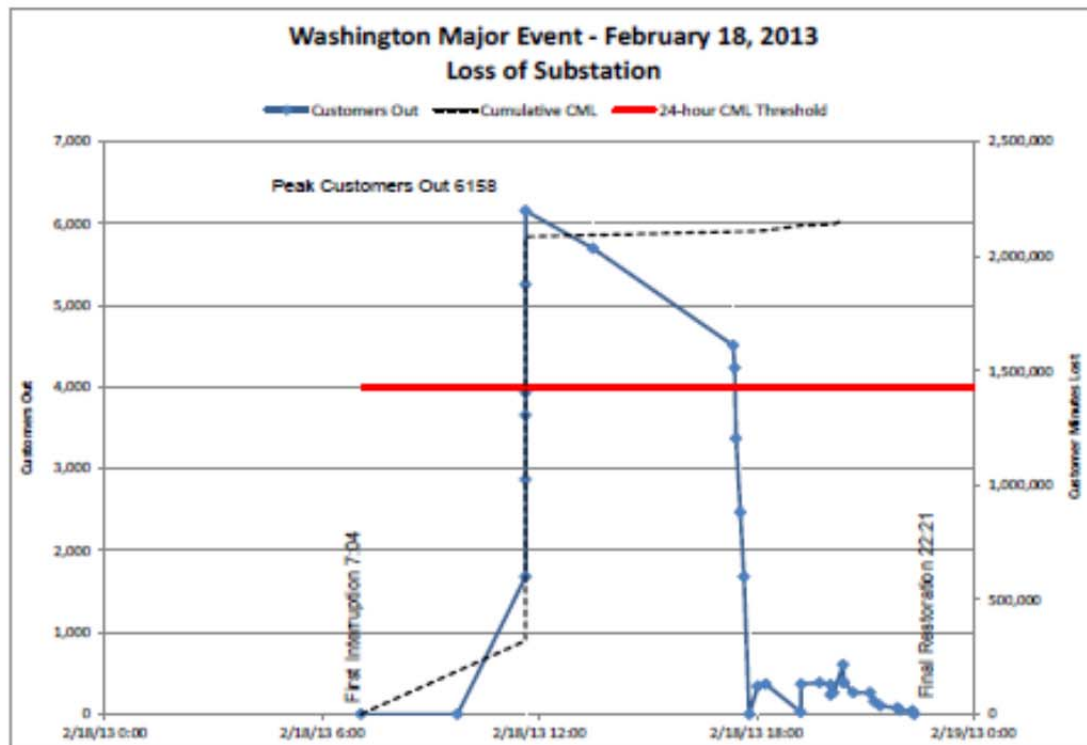
**WASHINGTON**
**APPENDIX A: 2013 MAJOR EVENT FILINGS**
**Report to the Washington Utilities and Transportation Commission  
 Electric Service Reliability - Major Event Report**

Date:	February 18, 2013
Date Submitted:	March 15, 2013
Primary Operating Area(s) Affected:	Yakima
Exclude from Reporting Status:	Yes
Report Prepared by:	Diane DeNuccio
Report Approved by:	Heide Caswell

**Event Description:**

On February 18, 2013, birds made contact with the bus work in Selah substation resulting in loss of supply to six circuits and about 6000 Pacific Power customers in Yakima. Customers were step-restored as repairs were made and each of the affected circuits was closed in; the majority of customers were restored within 6 hours but cold load issues meant a few were out for up to eleven hours.

Customers Out Sustained: 7,261  
 Total Customer Minutes Lost: 2,157,935  
 Sustained Interruptions: 15





**WASHINGTON**

PacifiCorp is requesting this event and the consequences thereof to be classified a “Major Event” because it exceeded the design limits of the system and the Company’s current annual IEEE 1366-2003 threshold of 1,430,667 customer minutes lost in a 24-hour period in Washington.

**Estimated Major Event Cost:**

This event did not generate significant incremental costs to the company.

**SAIDI, SAIFI, MAIFI Report:** Attached

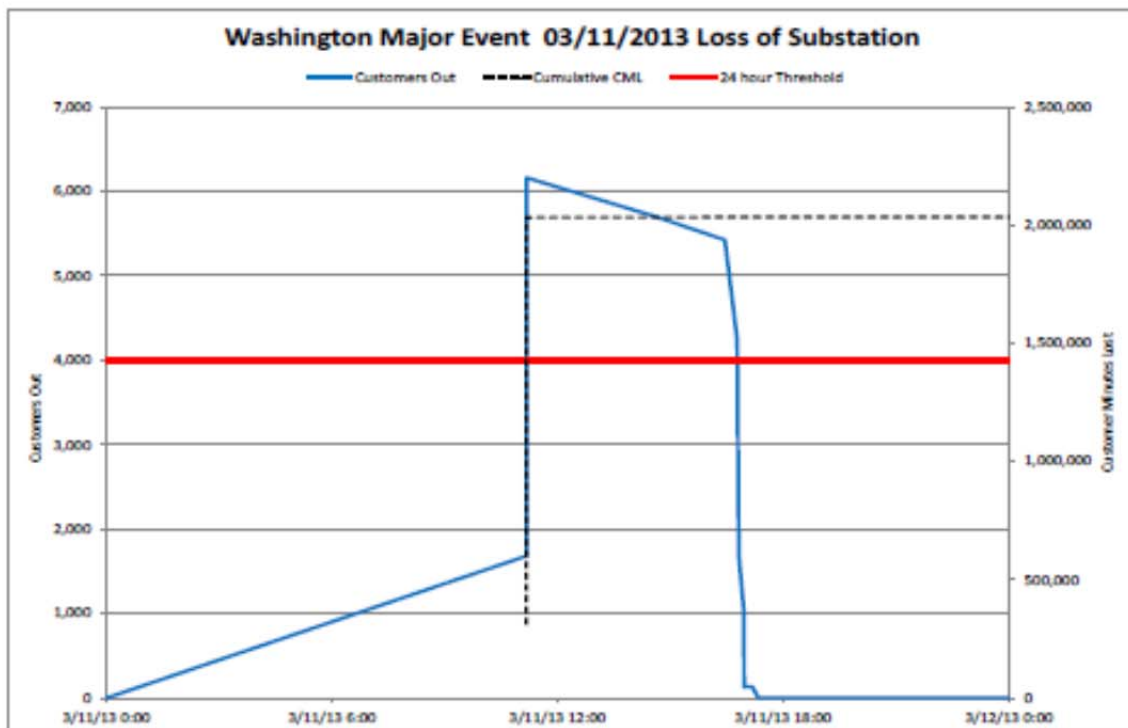
**Report to the Washington Utilities and Transportation Commission  
 Electric Service Reliability - Major Event Report**

Date:	March 11, 2013
Date Submitted:	March 28, 2013
Primary Operating Area(s) Affected:	Yakima
Exclude from Reporting Status:	Yes
Report Prepared by:	Diane DeNuccio
Report Approved by:	Heide Caswell

**Event Description:**

On March 11, 2013, birds made contact with the bus work in Selah substation resulting in loss of supply to six circuits and about 6000 Pacific Power customers for about six hours. Three Eurasian Collared Doves were found in the substation (one carcass and 2 severely injured birds that were taken to raptor rehabilitation). The company is working with wildlife experts to learn more about this particular population of birds.

Customers Out Sustained: 6,167  
 Total Customer Minutes Lost: 2,034,375  
 Sustained Interruptions: 9



**WASHINGTON**

PacifiCorp is requesting this event and the consequences thereof to be classified a “Major Event” because it exceeded the design limits of the system and the Company’s current annual IEEE 1366-2003 threshold of 1,430,667 customer minutes lost in a 24-hour period in Washington.

**Estimated Major Event Cost:**

This event did not generate significant incremental costs to the company.

**SAIDI, SAIFI, MAIFI Report:** Attached

**WASHINGTON****Report to the Washington Utilities and Transportation Commission  
Electric Service Reliability - Major Event Report**

Date:	September 5-6, 2013
Date Submitted:	October 5, 2013
Primary Operating Area(s) Affected:	Walla Walla
Exclude from Reporting Status:	Yes
Report Prepared by:	Diane DeNuccio
Report Approved by:	Heide Caswell

**Event Description:**

The Pacific Power Emergency Action Center was activated as of 11:56 a.m. on Friday, September 6, due to a severe thunderstorm that swept through the Company's Washington service territory on Thursday night, September 5, causing significant interruptions beginning at approximately 5:30 p.m. due to heavy rains and wind gusts of 60 miles per hour. Lightning and vegetation into facilities caused loss of supply due to downed wire, broken poles and blown fuses in all areas but primarily and most significantly in Walla Walla.

Customers Out Sustained: 11,821  
Total Customer Minutes Lost: 5,223,698  
Sustained Interruptions: 136

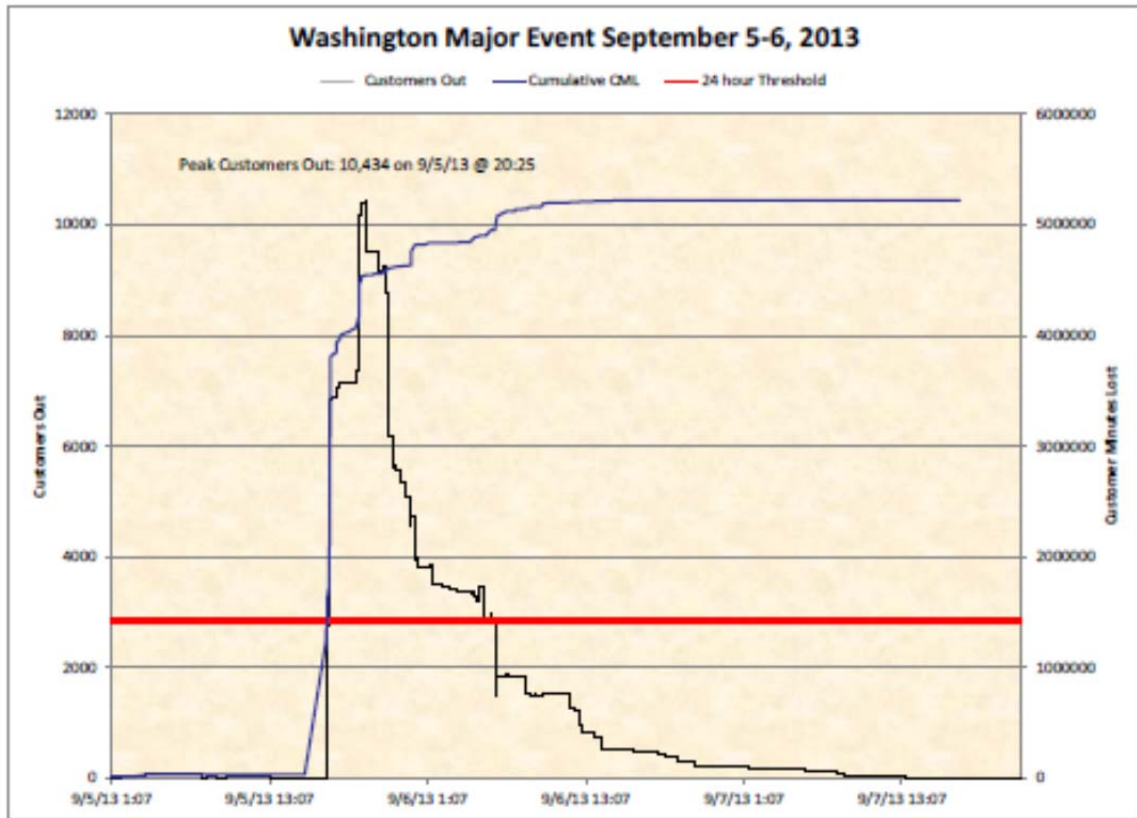
PacifiCorp is requesting this event and the consequences thereof to be classified a "Major Event" because it exceeded the design limits of the system and the Company's current annual IEEE 1366-2003 threshold of 1,430,667 customer minutes lost in a 24-hour period in Washington.

**Restoration Description:**

Additional company crews from Hood River, Madras, Bend, Pendleton, Portland and Astoria, along with contract and vegetation crews, helped local crews fix downed lines, damaged poles and other storm-related damage.

**SAIDI, SAIFI, MAIFI Report:** Attached

**Customers Out Over Time Chart:**



<b>Report to the Washington Utilities and Transportation Commission Electric Service Reliability - Major Event Report</b>
---

Date:	September 15, 2013
Date Submitted:	October 24, 2013
Primary Operating Area(s) Affected:	Sunnyside
Exclude from Reporting Status:	Yes
Report Prepared by:	Diane DeNuccio
Report Approved by:	Heide Caswell

**Event Description:**

A major event on September 15, 2013 was due to a severe thunderstorm that swept through the Company's Washington service territory, bringing rain, wind and lightning to its facilities and sustained interruptions to more than 7% of the Company's total Washington customers served. Sunnyside customers were most significantly impacted at 26% of area customers. The majority of interruptions were due to a tree falling into the transmission line serving Grandview substation, pulling the conductor off the insulator and onto distribution lines.

Customers Out Sustained: 9,649  
Total Customer Minutes Lost: 2,036,229  
Sustained Interruptions: 52

PacifiCorp is requesting this event and the consequences thereof to be classified a "Major Event" because it exceeded the design limits of the system and the Company's current annual IEEE 1366-2003 threshold of 1,430,667 customer minutes lost in a 24-hour period in Washington.

**Restoration:**

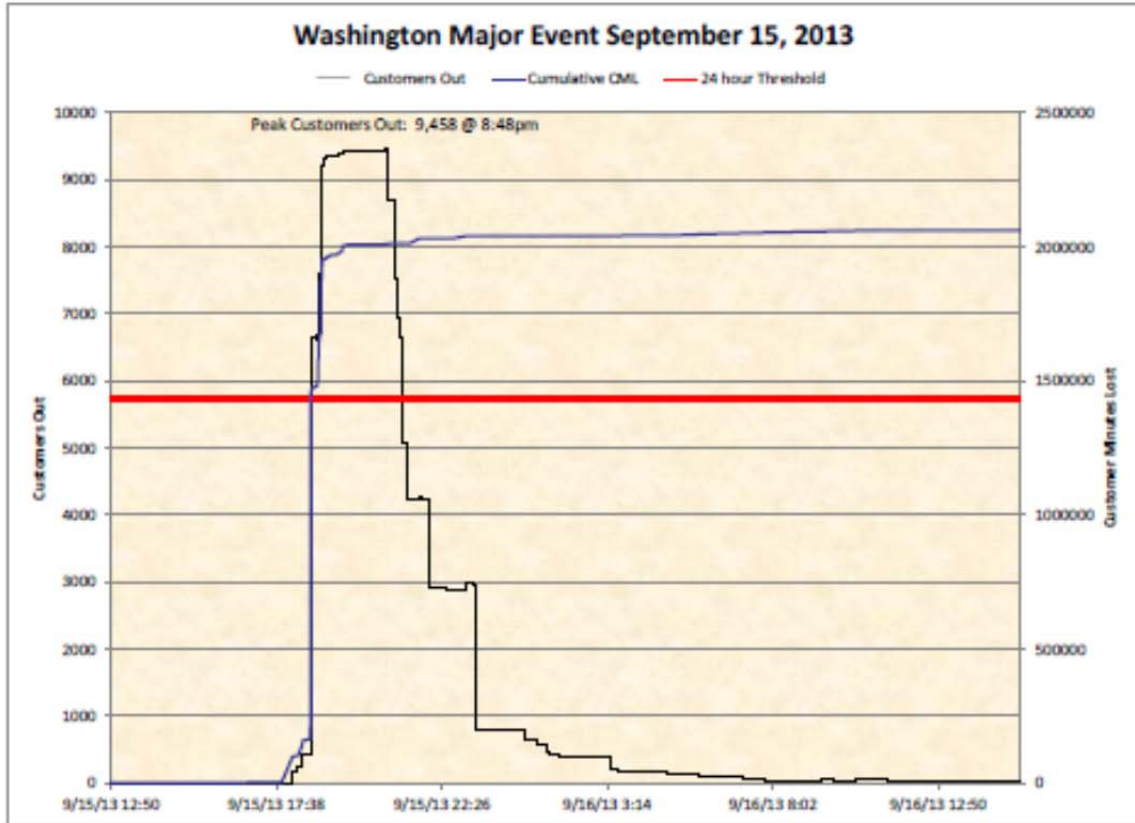
Fifty-six percent of customer interruptions were restored within three hours; three customers were off supply for more than 24 hours.

**Estimated Major Event Cost:**

This event did not generate significant incremental costs to the company.

**SAIDI, SAIFI, CAIDI Report:** Attached

**WASHINGTON**



<b>Report to the Washington Utilities and Transportation Commission</b> <b>Electric Service Reliability - Major Event Report</b>
---

Date:	October 28, 2013
Date Submitted:	November 19, 2013
Primary Operating Area(s) Affected:	Sunnyside
Exclude from Reporting Status:	Yes
Report Prepared by:	Diane DeNuccio
Report Approved by:	Heide Caswell

**Event Description:**

A SAIFI-based major event in Pacific Power's Washington service territory on October 28, 2013 was due to wire down on circuit 5Y134 caused by high winds, which resulted in sustained interruptions affecting 13% of Sunnyside operating area customers.

Customers Out Sustained: 4,147  
Total Customer Minutes Lost: 875,874  
Sustained Interruptions: 39

PacifiCorp is requesting this event and the consequences thereof to be classified a SAIFI-based Major Event, pursuant the Company's Modified Electric Reliability Reporting Plan, Docket UE 110634, with the 2013 threshold being 2,477 customer interruptions simultaneously in Sunnyside operating area.

**Restoration:**

Additional crews were borrowed from Yakima and Walla Walla operating area to assist Sunnyside personnel in the patrol of and ultimate step restoration of 5Y314. About 51% of customer interruptions were restored within three hours.

**Estimated Major Event Cost:**

This event did not generate significant incremental costs to the company.

SAIDI, SAIFI, CAIDI Report: Attached



