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Re: CA 2023-WMPs
OEIS-P-WMP_2023-PC-001

Please find enclosed PacifiCorp's responses to OEIS data requests 1.1-1.6. Also provided are Attachments OEIS 1.3 and 1.4.

If you have any questions, please call me at (503) 813-7314.

Sincerely,

 /s/
Pooja Kishore
Manager, Regulation

OEIS Data Request 1.1

Regarding Wildland Fire Sensor Program - In Table 8-22 (p. 211) in its WMP, PacifiCorp lists its partnership with the Department of Homeland Security on its Wildland Fire Sensors program, beginning March 2023.

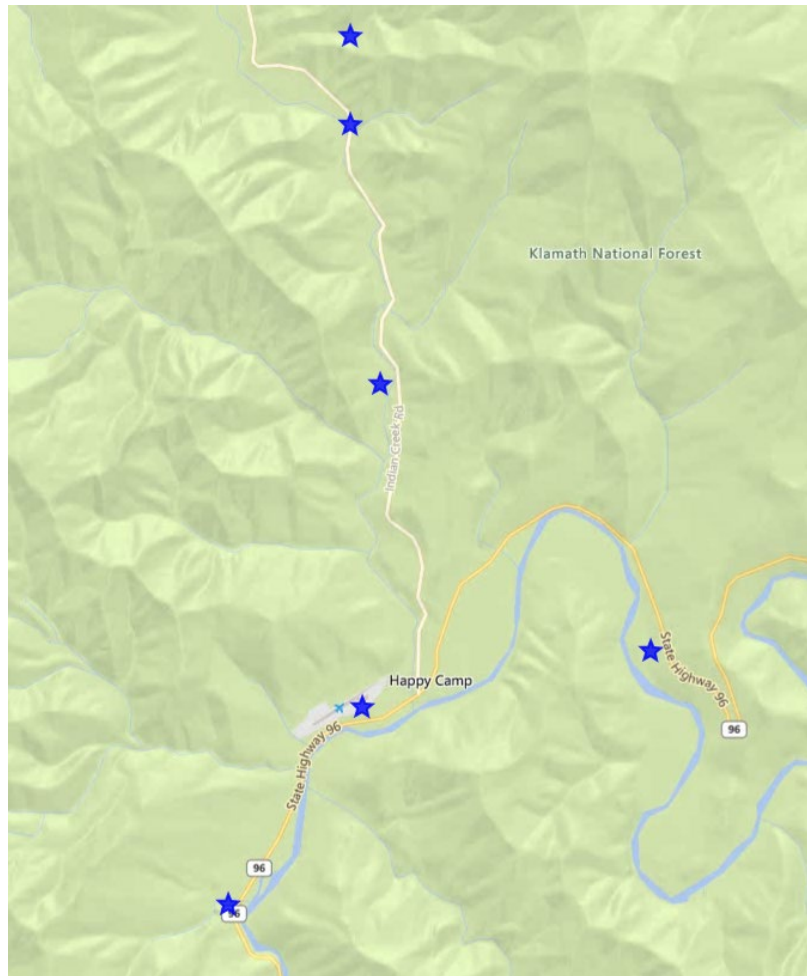
- (i) Provide a status update on this initiative (SA-03), including the following:
 - (1) The number of sensors currently deployed as part of this program
 - (2) The number of sensors to be deployed over the next 3 years
 - (3) A map of current and future deployment locations

- (ii) Will PacifiCorp be providing the information from these sensors to the local, State, and Federal fire agencies in its service area?
 - (1) If yes, please explain how this information will be provided.
 - (2) If no, please explain why.

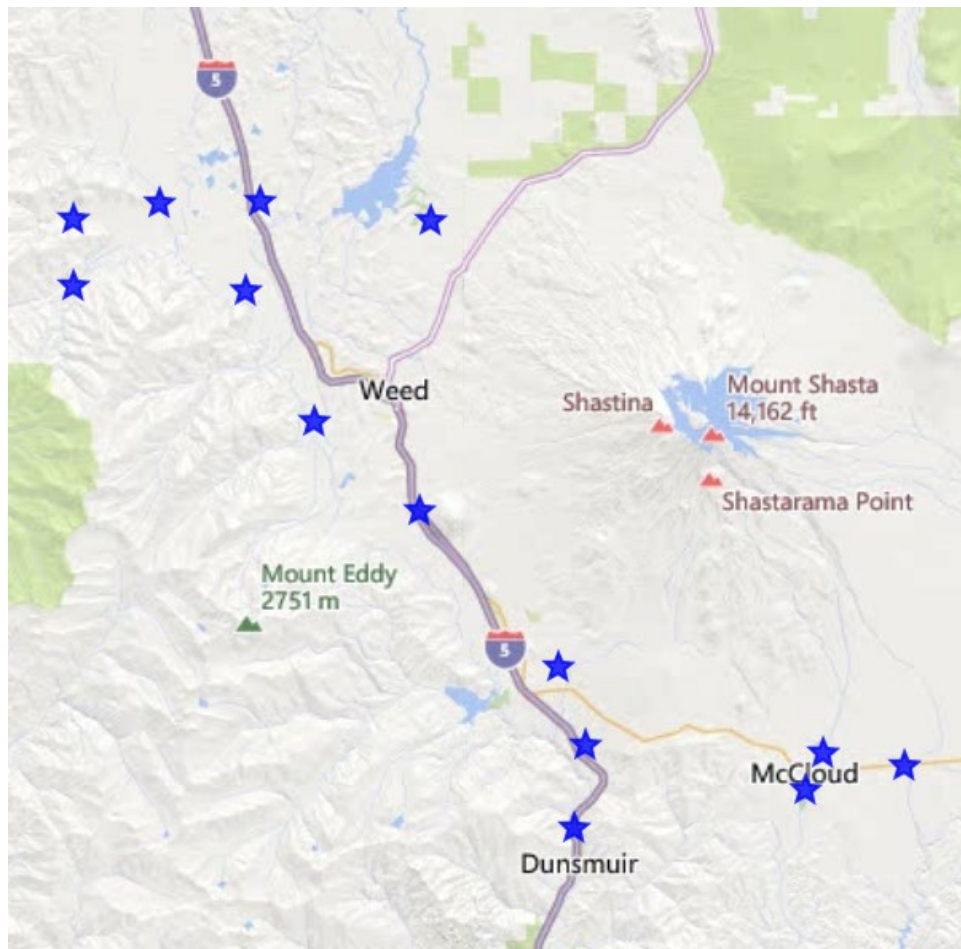
- (iii) PacifiCorp does not reference these sensors in Table 8-29 “Fire Detection Systems Currently Deployed” (p. 220) of its WMP. Are these sensors accounted for as part of PacifiCorp’s “existing and planned ignition detection sensors and systems”?
 - (1) If yes, please explain why this information is not listed in Table 8-29 of PacifiCorp’s WMP.
 - (2) If no, please explain why PacifiCorp does not account for these sensors as part of its existing/planned system.

Response to OEIS Data Request 1.1

- (i) Please refer to the Company’s responses to subparts (1) through (3) below:
 - (1) 20 smoke and air quality sensors were deployed by PacifiCorp in 2023.
 - (2) PacifiCorp has no plans to deploy more sensors in the next three years after conclusion of the Department of Homeland Security (DHS) Wildland Fire Sensor Program.
 - (3) Current sensor deployments are shown in the maps provided below. As noted in the Company’s response to subpart (2) above, PacifiCorp has no plans to deploy more sensors.



Despite PacifiCorp's diligent efforts, certain information protected from disclosure by the attorney-client privilege or other applicable privileges or law may have been included in its responses to these data requests. PacifiCorp did not intend to waive any applicable privileges or rights by the inadvertent disclosure of protected information, and PacifiCorp reserves its right to request the return or destruction of any privileged or protected materials that may have been inadvertently disclosed. Please inform PacifiCorp immediately if you become aware of any inadvertently disclosed information.



- (ii) Please refer to the Company's responses to subparts (1) and (2) below:
 - (1) Yes. The California Department of Forestry and Fire Protection (CAL FIRE) has access to the sensor platform and has signed up to receive alerts as part of the Department of Homeland Security (DHS) Wildland Fire Sensor Program.
 - (2) Not applicable.
- (iii) Please refer to the Company's responses to subparts (1) and (2) below:
 - (1) Smoke and air quality sensors are listed in Table 8-29 (line item. "Smoke and Air Quality Sensors") of the 2023 Wildfire Mitigation Plan (WMP).
 - (2) Not applicable.

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OEIS Data Request 1.2

Regarding Fire Potential Index (FPI) - On p. 242 of its WMP, PacifiCorp states that it does not yet have an operational Fire Potential Index (FPI).

- i. Provide the method and matrix that is being utilized to formulate the current daily FPI for PacifiCorp’s service area.

Response to OEIS Data Request 1.2

- i. Not Applicable. PacifiCorp is currently using an operational Fire Potential Index (FPI), as shown in the figure and table below from P. 242 of the 2023 Wildfire Mitigation Plan (WMP):

PacifiCorp Wildfire Risk	GACC 7-Day Significant Fire Potential	Fuels Considerations	Wind Gust Considerations
Little to No Wildfire Risk	Low or Little to No Risk		
Elevated Wildfire Risk	Low or Moderate	Dry	
Significant Wildfire Risk	Moderate	Very Dry	
	High Risk*	Dry or Very Dry	Max Gusts < 95th Percentile
Extreme Wildfire Risk	High Risk*	Dry or Very Dry	Max Gusts ≥ 95th Percentile

* Excludes Lightning or Recreation High Risk triggers

PacifiCorp Fuels	100-hr Dead Fuel Moisture	1000-hr Dead Fuel Moisture	Energy Release Component
Dry	Near or Below Average*		Near or Above Average*
Very Dry	≤ 10th Percentile	≤ 10th Percentile	≥ 90th Percentile

*Relative to the average fire season values for a given location

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Additional Considerations When Assessing Wildfire Potential	
Current or Recent Wildfire Activity	Current or recent wildfire activity is an indication that the weather and fuels conditions will contribute to fire occurrence and spread.
Evaporative Demand Drought Index (EDDI)	EDDI identifies anomalous atmospheric evaporative demand and provides an early warning of increased wildfire risk.
Fire High Consequence Areas (FHCA) (Y/N)	Fire High Consequence Areas are pre-identified areas of elevated risk based on historical fires, climatology, geography, and populations
Fire Potential Index (FPI)	FPI quantifies the potential for large or consequential wildfires based on weather, fuels, and terrain.
Fire Weather Watches or Red Flag Warnings	National Weather Service issued Fire Weather Watches or Red Flag Warnings
Fuels Conditions (Grasses, Live Fuels, & Dead Fuels)	Observations of the local fuels conditions including 1, 10, 100, and 1000-hour dead fuel moisture, herbaceous and woody live fuel moisture, tree mortality, Energy Release Component, etc.
High Resolution Fire Weather Forecasts (WRF)	Rocky Mountain Power's two kilometer WRF model produces a twice daily territory-wide forecast of fire weather and National Fire Danger Rating System (NFDRS) outputs across a 96-hour time horizon.
Severe Fire Danger Index	Publicly available index that uses two United States National Fire Danger Rating System indices that are related to fire intensity and spread potential.
Vapor Pressure Deficit (VPD) one month running average	Vapor Pressure Deficit is a measure of the atmospheric demand (thirst) for water. Values above the 94th percentile have been associated with large wildfires.
Wildfire Consequence Modeling (WFA-E)	Millions of wildfire simulations are performed daily to map out potential wildfire risk and consequence across the service territory.

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OEIS Data Request 1.3

Regarding Weather Station Totals - On p. 157 of its WMP, PacifiCorp states that it has, "...continued to increase the weather station density across [its] service territory with close to 100 (portable and fixed) weather stations in California." On p. 213 PacifiCorp states that it utilizes three different types of weather stations: micro-stations, remote automated weather stations (RAWS), and portable stations.

- i. Provide a listing of the total number of each type of station owned and operated by PacifiCorp, including the location of each.
- ii. Provide a list of the total number of stations owned by other entities (e.g., CAL FIRE, BLM, USFS, NWS, NOAA, etc.) that PacifiCorp utilizes for environmental monitoring, including the locations.
- iii. Provide the location and type of the 26 additional weather stations that are planned to be deployed by 2025 as outlined in Section 8.3.1.2 of PacifiCorp's WMP ("Situational Awareness Initiative Targets by Year" table; SA-01).

Response to OEIS Data Request 1.3

- i. Please refer to Attachment OEIS 1.3 which provides a list of California weather stations. This file shows 101 active weather stations, including those installed in 2023. The 10 portable weather stations are stored in the Yreka service center to be deployed as needed.
- ii. Additional data could be used from Automated Surface Observing Systems (ASOS), Department of Transportation (DOT), National Weather Service (NWS), and Remote Automated Weather Station (RAWS). These stations are only looked at on a case-by-case basis, no specific locations are routinely used. Those weather stations are used to fill in gaps of data, gain historical records, or used to validate PacifiCorp data readings.
- iii. The need for weather stations and their locations are assessed annually by the Company's meteorology department. 15 weather stations were installed in 2023 and can be viewed in the list of California weather stations provided in Attachment OEIS 1.3 and filtered for stations in service in 2023. Additional locations have not yet been determined.

OEIS Data Request 1.4

Regarding Weather Station Standards - On page 216 of its WMP, PacifiCorp states that it, "...has complete control and knowledge of [its weather station] network calibration and maintenance to ensure that the weather data used to support operational decision making is of the highest quality." PacifiCorp also states that its weather stations are calibrated annually before wildfire season to ensure accuracy of the data throughout fire season (p. 213). Please provide the following:

- i. The installation and equipment standard that governs PacifiCorp's weather station installation, including height from ground, direction of cross-arm, and which side of the pole/tower they are installed on.
- ii. The total number of stations that were serviced annually over the past 3 years and the maintenance performed on each station in accordance with PacifiCorp Procedure 069, Policy 001, Policy 356, as listed in Appendix F of PacifiCorp's WMP (p. 387).
- iii. The total number of stations not serviced annually over the past 3 years, including an explanation as to why they did not receive the annual maintenance/calibration and how many attempts were made to perform the annual maintenance/calibration.
- iv. The estimated life span of each sensor and the replacement cycle for each.
- v. The total number of repair requests initiated per year over the past 3 years, including the duration from initiation to completion of the repair.
- vi. A copy PacifiCorp's Policy 001 on the maintenance of weather station assets.

Response to OEIS Data Request 1.4

- i. Please refer to Attachment OEIS 14.3 which provides a copy of "EA500 Pole-Mounted Weather Monitoring Station"; the construction standard used when installing weather stations. Weather stations can be placed on the pole in any direction.
- ii. The maintenance performed on the weather stations ensures that the stations are operational. The stations have each sensor (wind monitor, temperature/relative humidity sensor, rain gauge) checked individually at each station. At the end of the maintenance the station is confirmed to be operational with the weather station vendor. If a sensor measured outside of the tolerance levels the equipment is either replaced with spares on hand or with a new sensor ordered.

Table 1 Weather Stations Maintained Annually

2020	2021	2022
10	12	34

- iii. All stations were calibrated annually in 2020, 2021 and 2022.
- iv. Please refer to the table below which provides the estimated lifespans for the sensors as provided by the weather station vendor:

Part	Lifespan
Datalogger	10-15 Years
Charging Regulator	10-15 Years
Temp/RH Sensor	10-15 Years
Wind Sensor	10-15 Years
Rain Gauge	10-15 Years
Cellular Modem	As technology advances
New Power Relay	10 Years
New Power-over-Ethernet Injector	10 Years
Satellite Terminal	5 Years
Satellite Terminal Mounting bracket	20+ Years
Satellite Power Cable	5 Years
Sealed Lead Acid Battery	2-5 Years
Lithium Battery	10-20 Years
Enclosure	5-10 Years
65W Solar Panel	10-15 Years
4ft Crossarm	20+ Years

- v. The average time from corrective maintenance (CM) initiation to completion was around two to three months. This includes ordering material to completion.

Table 2 Weather Station CM Required

2020	2021	2022
4	9	1

- vi. Please refer to Attachment OEIS 1.4 which provides a copy of Policy 001-PP. Weather station maintenance in Policy 001 is provided in tab “Wires”.

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OEIS Data Request 1.5

Regarding Social Vulnerability and Exposure Risk: On p. 59 of its WMP, PacifiCorp states that it is currently working on calculating its composite risk score and therefore cannot provide areas that exceed the 85th percentile at this time.

- i. Please provide PacifiCorp's expected timeline for completion of this calculation. Please also include an explanation of any factors contributing to potential delays in calculating this risk score, if applicable.

Response to OEIS Data Request 1.5

- i. As discussed on page 68 of the 2023 Wildfire Mitigation Plan (WMP), PacifiCorp expects to complete calculating the composite score by the end of 2023. At this time, there are no identified barriers to completing the calculation by the end of 2023.

OEIS Data Request 1.6

Regarding Priority A/Level 1 Conditions - In Cal Advocates' data requests 14 and 16 (CalAdvocates-PacifiCorp-2023WMP-14 and CalAdvocates-PacifiCorp-2023WMP-16), additional information was requested related to Priority A conditions. Please clarify the following:

- i. Who determines if a Priority A condition is an imminent threat?
- ii. How are Priority A conditions that are classified as imminent threats tracked?
- iii. Is there any form of QA/QC performed on Priority A conditions to determine if the conditions should have been classified as an imminent threat?
- iv. Are there temporary repairs/interim measures taken to address Priority A conditions tracked?
 - (1) If so, please provide a copy of the spreadsheet created in response to Cal Advocates data request 14 (question 1) with an additional column (q) temporary repair implemented.

Response to OEIS Data Request 1.6

- i. The Company's inspectors will make the determination if a Priority A condition meets the definition of an imminent threat per Policy 192.
- ii. Imminent threat Priority A conditions are tracked the same as non-imminent threat Priority A conditions. Per Policy 192, imminent threat Priority A conditions shall have corrective action taken immediately.
- iii. Any Priority A condition that is reviewed during the Company's quality assurance (QA) / quality control (QC) processes as outlined in section 8.1.6 of the Company's 2023 Wildfire Mitigation Plan (WMP) will verify the severity of the condition was identified correctly and determine if the condition should have been classified as an imminent threat.
- iv. Yes, depending on the severity and if possible, the Company will take interim measures or actions to ensure the condition is made safe until correction action can be completed.
 - (1) The Company currently does not have a way to track temporary repairs/interim measures specifically unless comments are added to the condition in the Company's Facility Point Inspection (FPI) system. In reviewing the conditions provided with the Company's response to Cal Advocates Data Request 14.1,

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specifically Attachment CalAdvocates 14.1, it was determined no temporary repairs/interim measures were taken on these conditions.

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