

PG&E Wildfire Risk Modeling Overview





Safety


Earthquake
Duck, Cover & Hold

Emergency Plan & Exit Strategy
Have a plan for yourself and your household

24/7 Nurse Care Line
If you experience a work-related discomfort or injury, call [REDACTED] and notify your supervisor.


Wash your hands!


Wear a Mask


Practice social Distancing

Meeting Agenda

Date: 11/13/2020

Desire Outcomes: TBD

| Meeting Agenda | | | | |
|----------------|----------------|----------------------|--------------|----------|
| | What - Content | Who - Facilitator(s) | Slide Number | Duration |
| 1 | TBD | | | |
| 2 | | | | |
| 3 | | | | |

Action Item Review



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| Action Items | | | | |
|--------------------------------|--|---|--|------------|
| Workstream | Action Item (Initial Date) | Description | Resolution | Date |
| Enhanced Vegetation Management | EVM Risk Buydown Curve WGR - 11/9/2020 | Plot and show the 1130 miles (80% Over Work that needs to be finished EVM - 02) Strike Tree and (Weighted) Risk Buydown | | 11/13/2020 |
| Enhanced Vegetation Management | EVM programs timeframes WGR - 11/9/2020 | Determine the EVM program timeframes and how they are being developed alongside tree weighted risk | | 11/13/2020 |
| Enhanced Vegetation Management | EVM programs and resources WGR - 11/9/2020 | | In Progress - Review of other programs underway | TBD |
| Enhanced Vegetation Management | System | | In Progress - Current scripting appears to not have operational efficiencies with hardening | 11/13/2020 |
| Enhanced Vegetation Management | Tree density | Tree density from the 2018 and 2020 LiDAR data will be examined for inclusion in future risk modeling | Road Mapped - LiDAR tree density will be examined for inclusion in future risk modeling | TBD |

To be discussed in working session



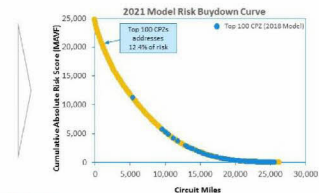
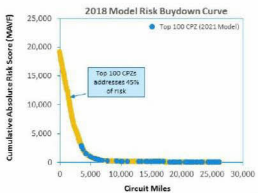
Action Items from 11/09/2020 (Federal Monitor Meeting)

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|-------------|---|---|-------------------|--|------|
| Risk Models | 4-63-models comparison WGR - 10/30/2020 | Identify high risk areas outside of HTD [redacted] in the next iteration of the Dr. Model | [redacted] | Road Mapped - This will be added as an enhancement to the model roadmaps | XXX |
| Risk Models | Risk Model Enhancement | Incorporate 2019 LIDAR data and species data in the next iteration of the Dr. Model | [redacted] | Road Mapped - This will be added as an enhancement to the model roadmaps | XXX |
| Risk Models | Risk Model Enhancement | Include Egress on the consequence side for the next iteration of the Dr. Model | [redacted] | Road Mapped - This will be added as an enhancement to the model roadmaps | XXX |
| Risk Models | Model Documentation | Axis to be added to charts on slide 22 (per 11.09.2020 Wildlife Risk Model Review Final 43) | [redacted] | Completed | XXX |



Risk Model Action Items

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|------------|---|--|-------------------|--|-----------|
| Risk Model | 4-63-models comparison WGR - 10/30/2020 | Create risk comparison between the 2018 risk model and 2021 risk model to highlight movement of CPZs. The getting top 100 (circuits or CPZs) | [Redacted] | Complete - See the Risk Model Followup Section | 11/3/2020 |



Key Takeaways

- No CPZs in the top 100 overlap
- This will result in significant change to the prioritization and expected risk buydown of mitigations
- The 2018 risk results were not distance weighted, where the 2021 prioritization included a distance factor.



Risk Model Action Items

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|------------|---|--|-------------------|--|------------|
| NSR Model | Deep dive risk model session WDR-15/762320 | Hold a Deep Dive session with (1) the Federal Monitor and (2) the Operational Observer | [REDACTED] | Complete - Meetings have been scheduled for 11/8 & 11/12. [REDACTED] is the part of the meeting. | 11/12/2020 |

Updates

- First Deep Dive session held on Monday 11/10/2020 at 1:00pm PST
- Second session will be held on Thursday 11/12/2020 at 12:30pm PST



Risk Model Action Items

| Workstream | Action Item | Description | Responsible Party | Resolution | Date |
|------------|-------------------------|--|-------------------|---|------------|
| risk model | risk model contributors | highlight contributors to the risk model | | Complete - Targeted for inclusion in next release | 11/12/2020 |

| Vegetation Model - Contributors | | Conductor Model - Contributors | |
|---------------------------------|------------------------|--------------------------------|------------------------|
| Variable | Permutation Importance | Variable | Permutation Importance |
| Tree height class | 25.1 | Non-burnable area | 20.8 |
| 100 hour fuel class | 24.1 | Daily precipitation, mean | 20.8 |
| Vapor pressure deficit, avg | 21.6 | Conductor material: ACSN | 9.7 |
| Quality summer day pct | 6 | Estimated conductor age | 8.9 |
| Wilt | 4.3 | Max tree height | 4.5 |
| Annual rain, avg | 3.1 | Reliability program color | 4.3 |
| Humidity | 2.8 | Vapor pressure deficit, mean | 4.0 |
| Specific humidity, avg | 2.4 | Conductor size: 2 | 3.4 |
| Rain index, avg | 3.3 | Conductor size: 4 | 1.6 |
| Windiness | 1.9 | 100 hour fuel, mean | 1.1 |
| Temperature, avg | 1.6 | Max temperature, mean | 1.0 |
| Windy summer day pct | 1 | Wind speed, mean | 0.5 |
| Local topography | 0.8 | Local topography | 0.2 |
| Tree height, avg | 0.8 | Conductor size: 6 | 0.1 |
| 1000 hour fuel, avg | 0.6 | Conductor material: AL | -0 |
| Emergence, avg | 0.4 | Conductor material: CU | -0 |

Key Takeaways

- Tree height and "Non-burnable area" are the most important variables in the vegetation and conductor models, respectively.
- Vegetation density had low predictive utility in the vegetation model, and was not included in the final design



Risk Model Action Items

| Workstream | Action Item | Description | Responsible Party | Resolution | Date |
|------------|------------------------|--|-------------------|---|------------|
| risk model | risk model contributor | provide a detailed description of the top model contributors | [REDACTED] | Complete - Targeted for inclusion in next release | 11/13/2020 |

Vegetation Model - Contributors Description

| Variable | Description |
|------------------------|--|
| Tree height | Maximum tree height, in meters, for each 100m x 100m pixel area using the distribution grid |
| 100-hour fuel | The dead fuel moisture data from GRDMET |
| Vapor pressure deficit | The average vapor pressure deficit from the GRDMET dataset |
| Windy-summer-day-pct | Percentage of days that have high frequency of gusts |
| WU | High fuel/moisture district |
| Precipitation | The average daily precipitation from the GRDMET dataset |
| Impervious | Impervious ground cover (i.e. non-flammable) |
| Specific humidity | The average specific humidity from the GRDMET dataset |
| Burn index | An derived variable based off of the geographical and topographical aspects of a location |
| Wind max | The maximum wind velocity at a height of 10 meters from the Real-Time Mesoscale Analysis (RTMA) dataset at a resolution of 2.5km |
| Temperature | The average temperature from the GRDMET dataset |
| Windy-summer-day-pct | Percentage of days that have a high percentage of days with high average wind speed |
| Local topography | The topographic position index (TPI) was extracted from a USGS digital elevation model (DEM) at 100-meter resolution |
| 1000-hour fuel | The dead fuel moisture data from GRDMET |
| Energy release | Heat insulation [REDACTED] |


Conductor Model - Contributors Description

| Variable | Description |
|------------------------------|--|
| Nonflammable area | Land cover description similar to imperviousness that includes surfaces that typically don't ignite when a spark occurs |
| Daily precipitation, mean | The average daily precipitation from the GRDMET dataset |
| Conductor material, acsr | Aluminum conductor steel-reinforced |
| Estimated conductor age | Number of years since the installation year |
| Max tree height | Maximum tree height, in meters, for each 100m x 100m pixel area using the distribution grid |
| Reliability Program score | Score with more than three voltage per phase |
| Vapor pressure deficit, mean | The average vapor pressure deficit from the GRDMET dataset |
| Conductor size, 2 | Conductor size 2 |
| Conductor size, 4 | Conductor size 4 |
| 100-hour fuel, mean | The dead fuel moisture data from GRDMET |
| Max temperature, mean | The average maximum temperature from the GRDMET dataset |
| Wind speed, mean | The average wind velocity at a height of 10 meters from the Real-Time Mesoscale Analysis (RTMA) dataset at a resolution of 2.5km |
| Local topography | The topographic position index (TPI) was extracted from a USGS digital elevation model (DEM) at 100-meter resolution |

 Risk Model Action Items

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|-------------|-----------------------------|--|-------------------|---|------------|
| Risk Models | Model process documentation | Bring the Model Process Level Documentation to this forum for an official approval | [REDACTED] | In Process Targeted for inclusion in deep dive accounts | 11/20/2020 |

1 User Guide
Model procedure and details will be provided in the user guide to the forum for review at the 11/20 session



Risk Model Action Items

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|-------------|------------------------------------|---|-------------------|--|------------|
| Risk Models | Protection zone selection criteria | Factor in Egress into process for selecting the protection zones to be worked | [REDACTED] | Need Mapped - Egress has been considered and factor enhancement for the risk model | 11/05/2020 |

Factors around Egress

Analysis of the difficulty to access or evacuate communities. Egress analysis was based on:

- 1) Population density of communities
- 2) The number of roads for each community
 - Highways / Interstates
 - County roads
 - Residential roads

✓ Census data has been used as a proxy for calculation of population density of communities.

Plan for utilizing Egress

Need input from [REDACTED]

Key Takeaways

- REAX model uses census data for calculation of community population density. Ichnosylva incorporates more granular data for population density calculation
- External validations on the 2018 egress model highlighted a lack of predictive performance.

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Risk Model Action Items

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|-----------------------------|----------------|--|-------------------|---|------------|
| Wildfire Governance Charter | Charter update | Update charter to include review of broader set of WFR risk reduction activities and projects (see slide). | [REDACTED] | Completed. Risk Charter has been updated, included in attached materials. | 11/05/2020 |

See updated slide for the updated wildfire governance Charter

| | |
|---|--|
| <p>Meeting Purpose:</p> <ul style="list-style-type: none"> Drive decision making on: and, consistent with alignment on the top-level risk board to use to guide the work. Provide a focus to review key risk board assumptions and associated reports. Work: <ul style="list-style-type: none"> Review completion of the highest priority risk mitigation work consistent with investment, asset, strategy and operational needs; guide actions as needed. Direct the approved work plans completed and the quality of the completed work is monitored. Key Deliverables: <ul style="list-style-type: none"> Integrate individual wildfire mitigation workstream meetings into a single governance session. Identify key focus on system hardening, operational expansion management, inspections and repairs and will expand into other areas of wildfire and PFRS mitigation work. Meeting topics and supporting material will adjust based on discussion and request from Working Directors. | <p>How Decisions are Made:</p> <ul style="list-style-type: none"> Detail of voting mechanism used for an attendance for decisions to be made. A simple majority vote by attending committee members. For broader. Chair hold the tie-break vote. |
| <p>Attendees:</p> <ul style="list-style-type: none"> Chief Risk Officer Working Members: <ul style="list-style-type: none"> VP Asset, Risk Management & Community Wildfire Safety Program VP Major Projects and Programs, Electric Operations VP Wildfire Safety and Public Engagement VP Chief Audit Officer <p>Reporting Members:</p> <ul style="list-style-type: none"> VP Director, Electric Asset Strategy VP Director, Major Programs & Project Delivery VP Director, Risk Management Director, CIP & M&P <p>Workstream Lead:</p> <ul style="list-style-type: none"> System Hardening Director, Distribution Strategy Enhanced Inspection Management, Director, Regulatory Management Inspection & Repair Manager, Transmission Standards <p>Facilitator:</p> <ul style="list-style-type: none"> VP Director, Risk - Special Projects | <p>Meeting Logistics:</p> <ul style="list-style-type: none"> Frequency/Duration: Weekly (every Friday) Materials: <ul style="list-style-type: none"> Pre-read materials sent 1 day before meeting. Action items included in following meeting material. Agenda: VP Director, Risk - Special Projects to approve final agenda. |

Key Wildfire Risk Model Governance Forum Decision

| Workstream | Decision | Description | Approval Note | Date |
|-------------|---|---|---|------------|
| Risk Models | Adoption of the 2021 wildfire risk models for mitigation deployment | <ul style="list-style-type: none"> Adopt the approved ignition model for equipment ignitions and Technology for 2021 PDM work Adopt the approved ignition model for equipment ignitions and Technology for 2022 System Rendering work | <ul style="list-style-type: none"> Approved Approved Approved Not Present | 10/20/2020 |



Key Decision – Adoption of the 2021 Risk Model for Mitigation Deployment

Approval Status **Approved**

Decision Detail

The approval is for moving from the 2018 wildfire risk model to the 2021 wildfire risk model to inform system hardening, enhance vegetation management and inspections. These changes included:

- Update to vegetation ignition model (LoRe)
- Update to conductor model (LoRe)
- Update to consequence (core)

Concerns and Mitigations

- Inclusion of non-447D areas requested in the next model iteration
- Inclusion of Egress model requested in the next model iteration
- Resource availability to complete "hot risk informed planned work" was challenged
- Detailed description of variables in particular "non-burnable areas" requested
- The ability to calculate tree density within pswh was challenged

Approvals

| |
|-----------------------|
| Approved |
| Approved |
| Approved |
| Approved |
| Abstain – Not Present |

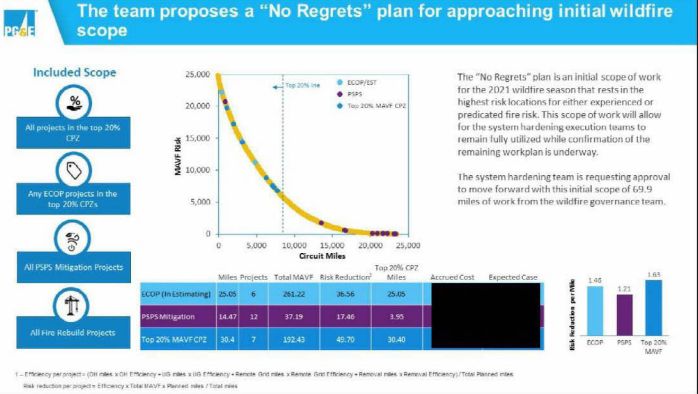
Action Items and Validations

| | |
|--|--|
| Adoption of the 2021 wildfire risk model for mitigation deployment Deep dive risk model session | Completed - Adopt the proposed ignition model for vegetation ignitions and Technosylva for 2021 O&M work Completed - Adopt the proposed ignition model for equipment ignitions and Technosylva for 2021 System Hardening work |
| Risk models comparison | Completed - Detailed risk comparison between the 2018 risk model and 2021 risk model to highlight improvement of CP2s (Targeting top 100 circuits or CP2s) |
| Deep dive risk model session | In Process - Hold a Deep Dive Session with (1) the Federal Monitor and (2) the Operational Closure |
| Model process documentation | In Process - Bring the Model Process Level Documentation to this forum for an official approval |
| Egress Consideration | In Process - Factor in Egress into process for selecting the protection zones to be worked |

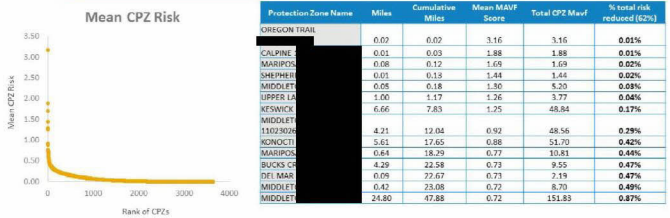
System Hardening



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The top 50 riskiest miles represent 4.9% of the system risk.



Key Takeaways

- Mitigating the top 50 riskiest miles within PG&E's service territory would reduce 0.87% of PG&E's total wildfire risk.
- Some of these segments are relatively small and may be the result of edge effects. However trends in the data, such as the Middletown circuit, highlight areas of high risk where more extensive remediation can occur.
- The team recommends creating a strike team to assess the most effective way to address and mitigate the wildfire risk across these circuits and locations.



The scope for the 2020 Rebuild is focused in XXXX

On a GIS Map and on a Tableau Dashboard – I can get [redacted]
[redacted] started on both once I have the order numbers.

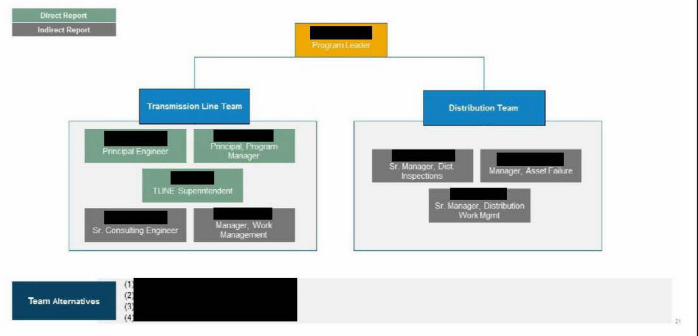
Overhead Inspections



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The inspections team is requesting the following structure to support the execution of the defined scope

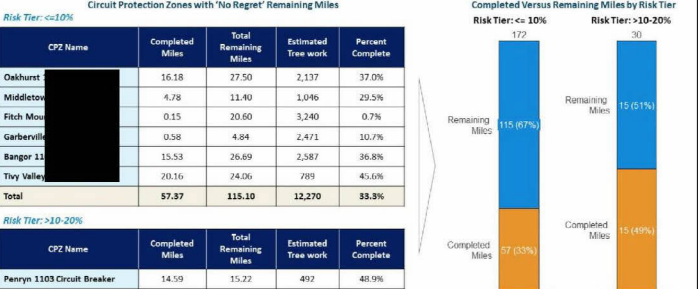


Enhanced Vegetation Management



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EVM is requesting approval to commence work on ~130 'no regret' miles involving a total of seven Circuit Protection Zones (CPZs)



While the full EVM 2021 work plan is being discussed, the EVM team seeks an approved scope for work starting in December that includes 130 miles prior to the approval of the full 2021 work plan

The Distribution Risk model, which forms the basis of EVM risk calculations, has been modified to obtain a tree-weighted risk scoring

| Distribution Risk (Dx) Model | Dx Model with Tree-Weighted Scoring Adjustments |
|--|--|
| <p>1 Highlights</p> <ul style="list-style-type: none"> Looks at the overall risks that exists in each area Does not consider CPZs requiring EVM versus not requiring EVM work The analysis does not take into account the completed miles that were captured in 2018 to 2020. | <p>1 R: Aggregation of Risk</p> <ul style="list-style-type: none"> The 100m x 100m risk pixels are re-aggregated into "1 km x 1 km grid areas" An entire grid area is assigned to a single CPZ All risks in the grid area that are assigned to the same CPZ are aggregated to obtain a risk score for the CPZ |
| <p>2 Data</p> <ul style="list-style-type: none"> Leverages outage and ignition data Includes Base and Technology simulation outputs into the MAVF consequence data While preserving the Technology outcomes at the 100m pixel level, MAVF scores are then scaled to the Risk Scores generated in regulatory filings such as KAMP and WMAP. | <p>2 Estimation of existing Tree Work</p> <ul style="list-style-type: none"> LIDAR data spanning 35k miles of HFTD distribution circuits was used to estimate existing tree work The estimates were prepared based on inspectors visiting "5k miles of conductor segments to validate LIDAR information On the basis of LIDAR and ground inspection data, regression models were built to predict estimated tree work. |
| <p>3 Methodology</p> <ul style="list-style-type: none"> Risk per-pixel is spread across all trees in the VM database within each pixel Modeling and EVM work are constrained to pixels within HFTDs Pixel-level results are rolled up to higher level CPZ results | <p>3 CPZ Risk Weighting</p> <ul style="list-style-type: none"> The predicted tree work was combined with the number of trees already worked to determine remaining CPZ tree work The number of remaining trees were then used to weigh the CPZ risk Tree-Weighted Adjusted Grid Risk = Average MAVF core risk x percent of tree work complete x number of trees in the CPZ |

Tree Weighted Risk = (Dx Risk) X (% CPZ Completed) X (Trees in CPZ)

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2021 EVM Highlights

Key Features and Scope Areas

Circuit Protection Zones (CPZs)

- The 2021 plan incorporates the **concept of the CPZ** – a term coined by the Asset Strategy team
- CPZs are being used because they are **tied to isolation devices** on circuits, and in the case of PSPS events, indicate a way to isolate a circuit from a certain point

Plan rationale

- The 2021 LVM plan has been prepared with the intent that:
 - The plan **avoids any System Hardening projects** in 2021
 - The plan focuses on CPZs that have between **60-90% completion** in line with maintaining EVM scope within the routine program

Scope

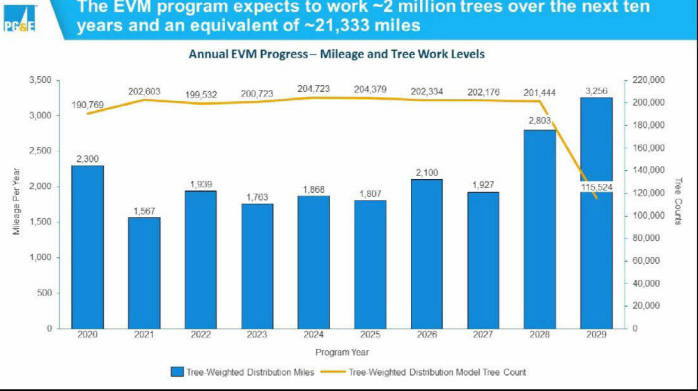
- The plan targets **190,000 trees** and **2,300 miles** of distribution circuits
- The plan envisions a **pre-inspection of between 831-904K trees**, **tree work of an estimated 159-195K trees** and **removal of an estimated 100-133K trees**
- The current plan has been prepared on the basis of a tree-based weighted analysis of risk across CPZs to take into account tree work already completed – a variable that is missing from the Dix model

Regional Distribution of Targeted Mileage (miles)

| Region | Miles | Percentage |
|----------------|--------------|-------------|
| Bay Area | 1,606 | 22% |
| Central Coast | 949 | 13% |
| Central Valley | 1,241 | 17% |
| North Coast | 1,241 | 17% |
| North Valley | 2,190 | 30% |
| Sierra | 2,113 | 29% |
| Total | 7,300 | 100% |

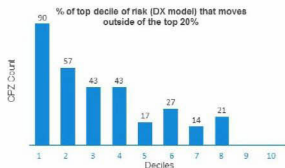
Other Considerations

- Plan Inputs:** The plan has been prepared on the basis of work completed and risk from the VM Wildfire Risk Model
- The plan overlaps with inputs from local subject matter experts (SMEs), prior inspections and local customer/agency contacts
- Regions:** Plan targets have been balanced with respect to a 12 year plan across each of the regions
- Estimated cost:** A direct cost of [REDACTED] is estimated for pre-inspection and tree work spend
- CPZ Inclusion:** CPZs have been included on the basis of the following confidence levels:
 - CPZs where tree work has been **60 percent** completed and have been identified for further LVM work
 - CPZs where more than **90 percent** of the work has been completed are not targeted as there are other environmental or access issues that are the source of risk and cannot be mitigated by additional EVM work



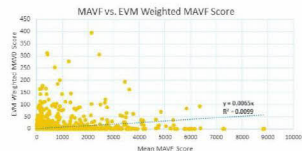


Comparison of the Tree Weighted model to the Dx Model



Key Take-aways

- The correlation between the EVM weighted prioritization scores and the MAVF score is low at 0.0099
- Of the top 20% of circuits that were identified in the Dx model, only 147 remained in the top two deciles of the Tree Weighted model.
- Of the top 100 CPZs, only 14 were common across both prioritization lists
- Over 10% of the CPZs identified to have risk in the Dx model were zero risk locations in the tree weighted model.




First 100 common CPZs

| | |
|-----------|----------|
| VACA CRY | AUBERRY |
| AUBERRY | DISCHUR |
| TINY WALL | COARSE |
| OREGON | TINY VAL |
| MADISON | GRANITE |
| SAND CSE | RED BLUE |
| TINY WALL | ZACA 11 |

Action Items and Next Steps



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|  Action Items | | | | | |
|---|---|---|-------------------|--|----------------------|
| Workstream | Action Item (Initial Date) | Description | Responsible party | Resolution | Date |
| Enhanced Vegetation Management | FVM Risk Reduction Curve WGR - 11/1/2020 | Plot and show the 120 miles (90-90% Carry Over Work that needs to be included) on the FVM - Q2 (Sens Tree and Overhang Weighted) Risk Reduction Curve | [REDACTED] | In Process - Current scope is being plotted against the current risk laydown curve | 11/19/2020 |
| Enhanced Vegetation Management | FVM programs timeframes WGR - 11/1/2020 | Determine the overall time frame and pace for the FVM programs when Sens Potential Trees are factored into the 23000 miles of W12 Grapes Underland which of the 29500 miles need FVM work | [REDACTED] | In Process - Dependent on prioritization decision | 11/26/2020 |
| Enhanced Vegetation Management | FVM programs and roadwork WGR - 11/1/2020 | Provide a full picture of all vegetation management work, outside of just the enhanced vegetation management. | [REDACTED] | In Process - Review of other programs underway | 11/26/2020 |
| Enhanced Vegetation Management | System hardening and FVM work overlay WGR - 11/2/2020 | Evaluate the areas that are being targeted by system hardening to align for operational efficiencies between the two programs. Dependency on 2021 SR Work Plan | [REDACTED] | In Process - Current scoping apparatus not have operational efficiencies with hardening | Dependent on SR plan |
| Enhanced Vegetation Management | Tree density statistic WGR - 11/1/2020 | Show Tree Density from the 2018 and 2020 Work. Provide tree density number per mile processed as we show future work 2021, 2022 | [REDACTED] | Road Mapped - UTM tree density will be examined for inclusion in future risk modeling | TBD |



Action Items (Cont'd)


| Workstream | Action Item | Description | Responsible Party | Resolution | Date |
|-----------------------------|---|--|-------------------|--|------------|
| Risk Models | Risk models comparison WGR - 10/30/2020 | Create risk comparison between the 2018 risk model and 2023 risk model to highlight movement of CRs (Targeting top 100 in units w/ EFS). | | Completed | 11/11/2020 |
| Risk Models | Deep dive risk model session WGR - 10/30/2020 | Hold a Deep Dive Session with (1) the Federal Monitor and (2) the Operational Observer. | | Completed | 11/11/2020 |
| Risk Models | Risk model contributors | Highlight contributors to the risk model. | | Completed | 11/13/2020 |
| Risk Models | Model process documentation | Bring the Model Process documentation to the fore for an official approval. | | In Process - Targeted for inclusion in deep dive sessions. | 11/20/2020 |
| Risk Models | Egress Consideration | Factor in Egress into process for selecting the protection zones to be worked. | | Road Mapped - Egress has been considered as a future enhancement for the risk model. | 11/09/2020 |
| Offshore governance Charter | Charter update | Update charter to include review of broader set of WP risk reduction activities and project oversight. | | Complete - Risk charter has been updated, included in attached materials. | 11/09/2020 |



Action Items from 11/09/2020 (Federal Monitor Meeting)

| Workstream | Action Item | Description | Responsible party | Resolution | Date |
|-------------|--|---|-------------------|---|----------|
| Risk Models | Risk Model Enhancement WGR: 10/30/2020 | Include high risk areas outside of MFD in the next iteration of the Du Model | | Risk Mapped - This will be added as an enhancement to the model roadmap | 11/23/20 |
| Risk Models | Risk Model Enhancement | Incorporate 2019 LIDAR data and species data in the next iteration of the Du Model | | Risk Mapped - This will be added as an enhancement to the model roadmap | 11/23/20 |
| Risk Models | Risk Model Enhancement | Include signs on the consequence side for the next iteration of the Du Model | | Risk Mapped - This will be added as an enhancement to the model roadmap | 11/23/20 |
| Risk Models | Model Documentation | Asa to be added to charters slide 22 (see 11.09.2020 Wildlife Risk Model Review Final v2) | | Completed | 11/23/20 |

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|  Past Action items | | | | | |
|--|-----------------------------|---|-------------------|---|------------|
| Workstream | Action Item | Description | Responsible party | Resolution | Date |
| Inspection | Inspection Workstream Owner | Schedule meeting to identify the owner of the inspection and/or repair workstream | | Completed – inspection lead identified | 10/21/2020 |
| Risk model | Risk Model Deep Dive | The risk model needed further detailed discussion before voting and approval could take place | | Completed – Follow up session held 10/27. Detail on the risk model was provided in advance of 10/30 approval meeting. | 10/23/2020 |
| RIM | RIM review meeting | Schedule additional meeting for RIM review | | Completed – Follow up meeting was held on 11/05 | 11/05/2020 |
| Governance meetings | Meeting updates | Update meeting to be 90 minutes | | Completed – future meetings updated – effective 11/13 | 11/01/2020 |
| Governance meetings | All future meetings | to be added to future meetings to provide additional direction from audit | | Completed – has been added to all future governance meetings | 10/23/2020 |



Upcoming Review Agenda Items

11/20/2020

- Final Decision on System Hardening Plan (If feasible)
- Initial Review into Inspections 2021 Plan
- Initial Review into Repairs 2021 Plan
- Close out Completed Action Items

12/01/2020

- Final Decision on EVM 2021 Plan (If feasible)
- Decision Items needed for Inspections and Repairs 2021 Work Plan
- Close out Completed Action Items

12/08/2020

- TBD

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Appendix



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Key Wildfire Risk Model Governance Forum Decision

| Workstream | Decision | Description | Approval Vote | Date |
|-------------|---|---|---|------------|
| Risk Models | Adoption of the 2021 wildfire risk models for mitigation deployment | <ul style="list-style-type: none"> Adopt the approved ignition model for equipment ignitions and Technology for 2021 PDM work Adopt the approved ignition model for equipment ignitions and Technology for 2022 System Rendering work | Approved Approved Approved Not Present | 10/20/2020 |



Key Decision – Adoption of the 2021 Risk Model for Mitigation Deployment

Approval Status Approved

Decision Detail

The approval is for moving from the 2018 wildfire risk model to the 2021 wildfire risk model to inform system hardening, enhance vegetation management and inspections. These changes included:

- Update to vegetation ignition model (LoRe)
- Update to conductor model (LoRe)
- Update to consequence (core)

Concerns and Mitigations

- Inclusion of non-HFTD areas requested in the next model iteration
- Inclusion of Egress model requested in the next model iteration
- Resource availability to complete "hot risk informed planned work" was challenged
- Detailed description of variables in particular "non-burnable areas" requested
- The ability to calculate tree density within pswh was challenged

Approvals

| |
|-----------------------|
| Approved |
| Approved |
| Approved |
| Approved |
| Abstain – Not Present |

Action Items and Validations

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|--|--|
| Adoption of the 2021 wildfire risk model for mitigation deployment Deep dive risk model session | Completed - Adopt the proposed ignition model for vegetation ignitions and Technosylva for 2021. OVM work Completed - Adopt the proposed ignition model for equipment ignitions and Technosylva for 2021. System hardening work |
| Risk models comparison | Completed - Detailed risk comparison between the 2018 risk model and 2021 risk model to highlight improvement of CP2s (Targeting top 100 circuits or CP2s) |
| Deep dive risk model session | In Process - Hold a Deep Dive Session with (1) the Federal Monitor and (2) the Operational Closure |
| Model process documentation | In Process - Bring the Model Process Level Documentation to this forum for an official approval |
| Egress Consideration | In Process - Factor in Egress into process for selecting the protection zones to be worked |