

# LLNL Site 300 CERCLA Groundwater Cleanup Project Corral Fire Update

Site 300 CERCLA Remedial Project Managers (RPM) Meeting

June 25, 2024

DOE / LLNL  
Environmental Restoration Department



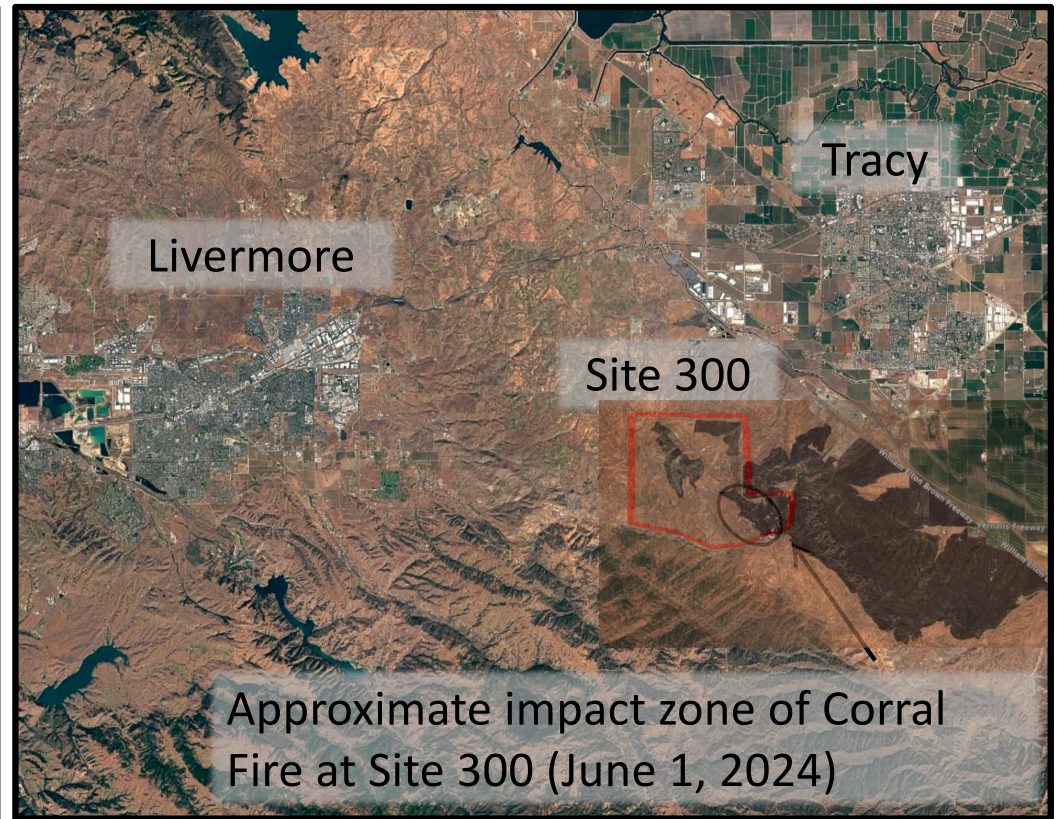
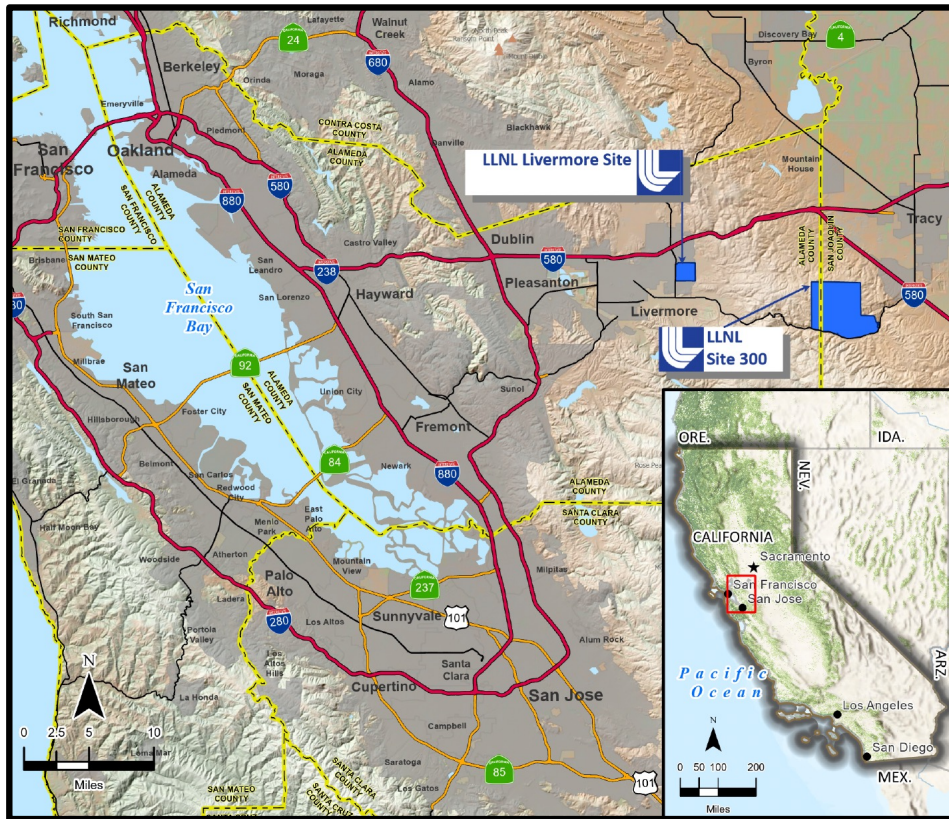
# Chronology of event

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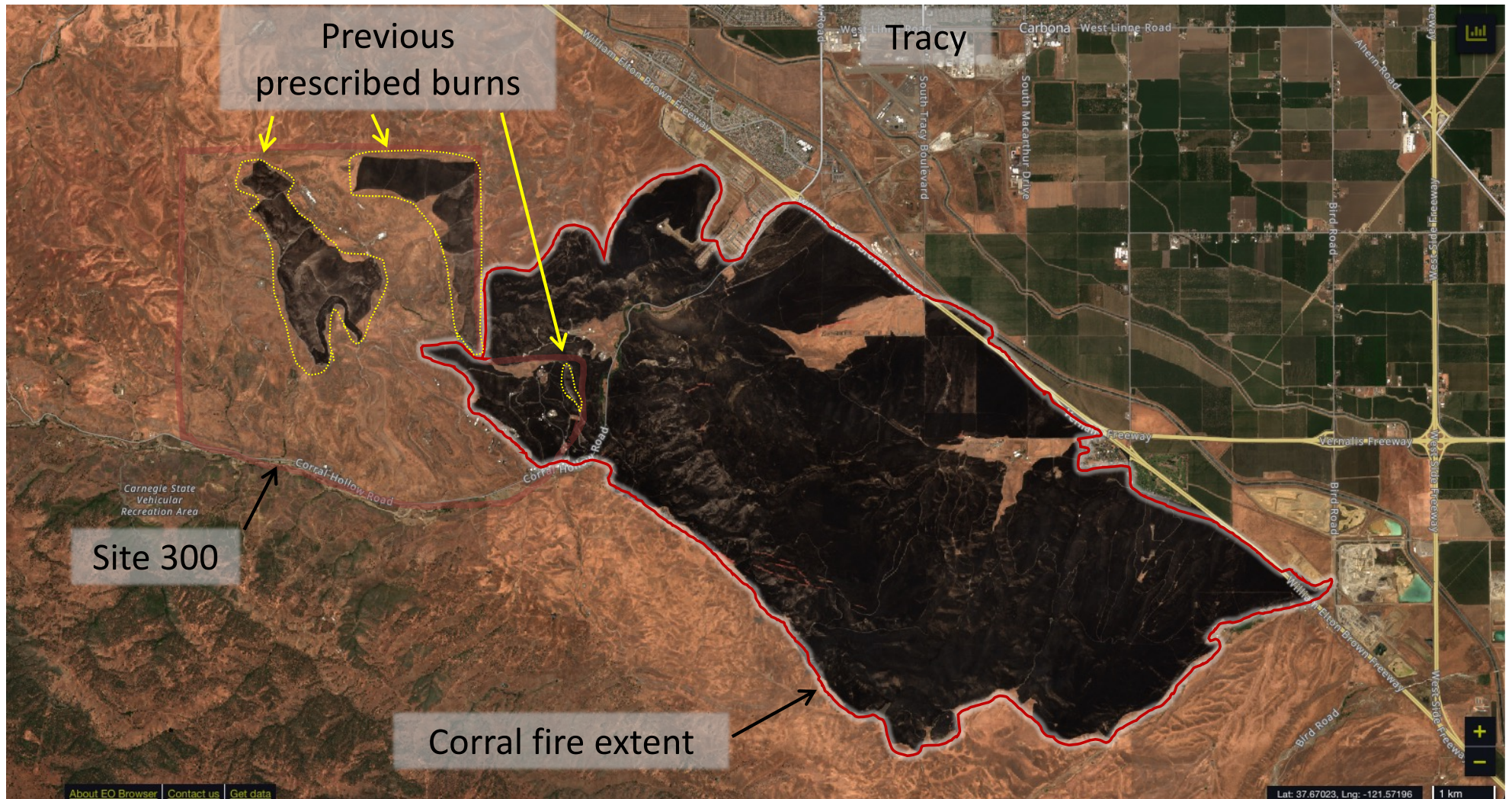
- June 1, Saturday
  - Around 2:30 PM a wildfire (Corral Fire) started near Bldg. 892 at LLNL Site 300.
- June 2, Sunday
  - DOE informed the CERCLA regulators of the incident.
- June 3, Monday
  - ERD team was on-site to provide a preliminary damage assessment
    - Facility interlocks worked as designed.
    - Untreated groundwater was released to ground in one location.
- June 4, Tuesday
  - DOE informed the Water Board with the release from 830-Distal South facility.
- June 13, Thursday
  - CGSA Soil Vapor Treatment System (SVTS) was restarted.
- June 18, Tuesday
  - 834-SRC SVTS was restarted.

ERD is in the process of completing the damage assessment

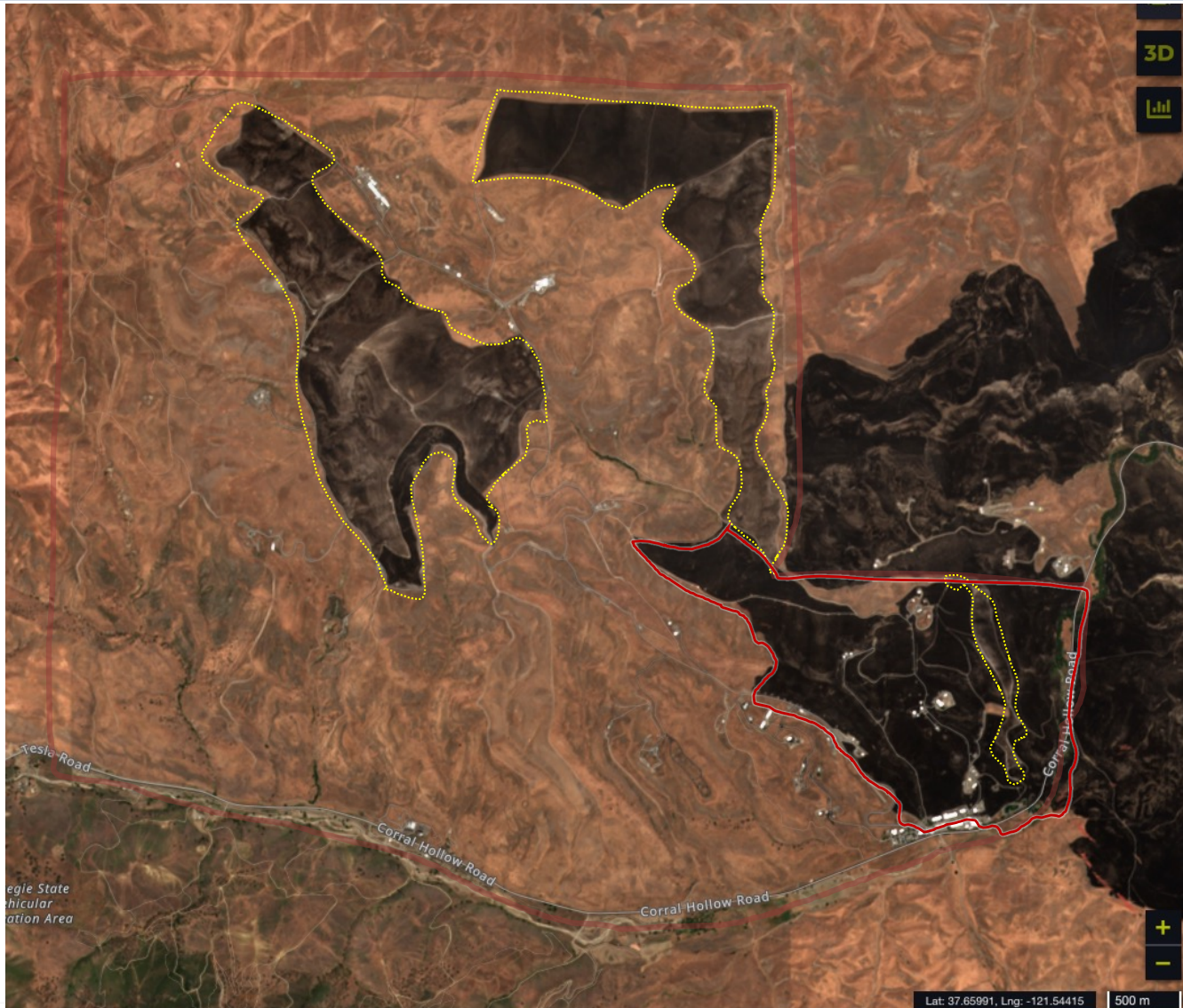
# LLNL Site 300



# Corral Fire



# Corral Fire



# Corral Fire

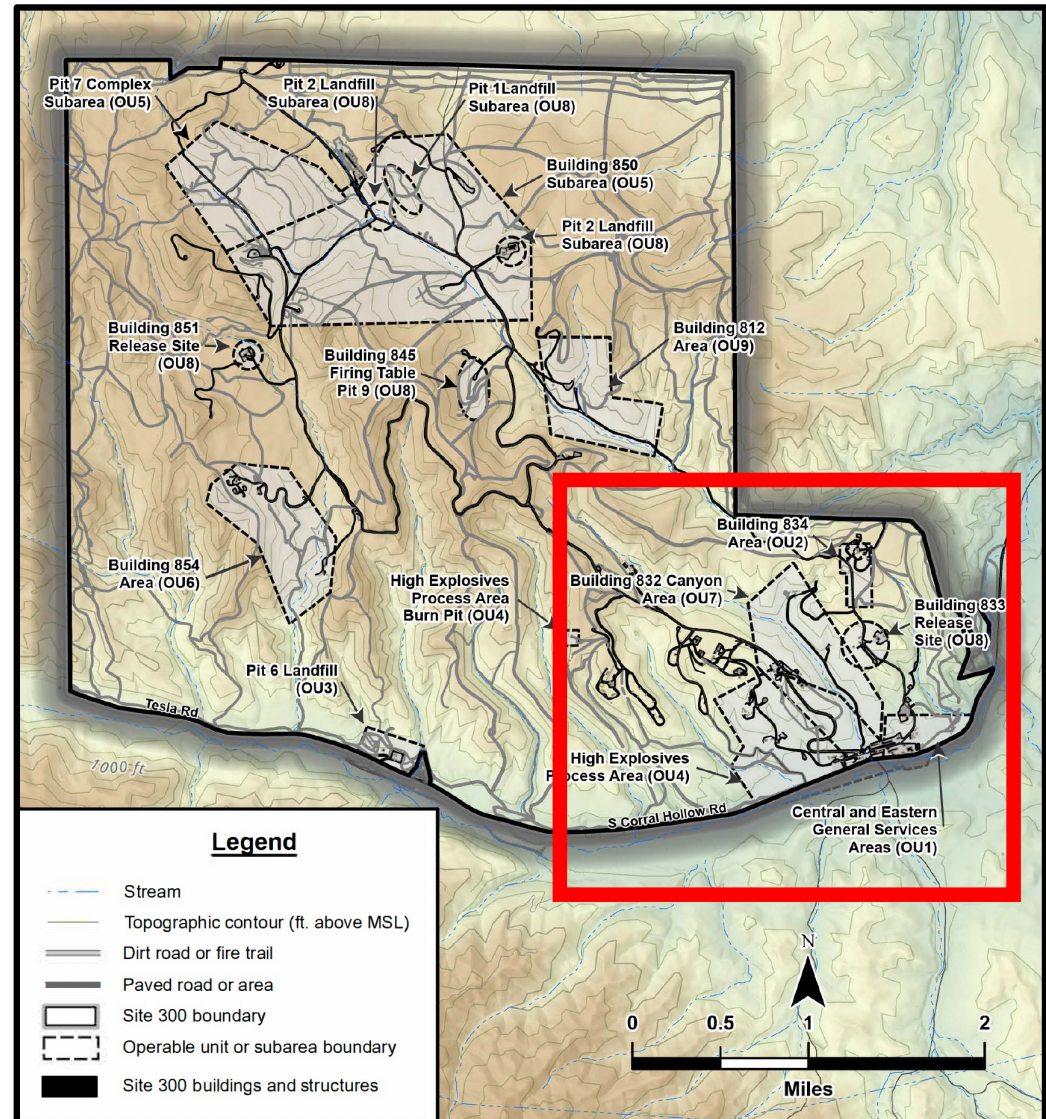
## Summary of damage

The Corral Fire started on Saturday June 1, 2024, near Bldg. 892 and quickly spread across the SE corner of Site 300.



All ten (10) pump-and-treat systems in OUs 1, 2, and 7 were damaged.

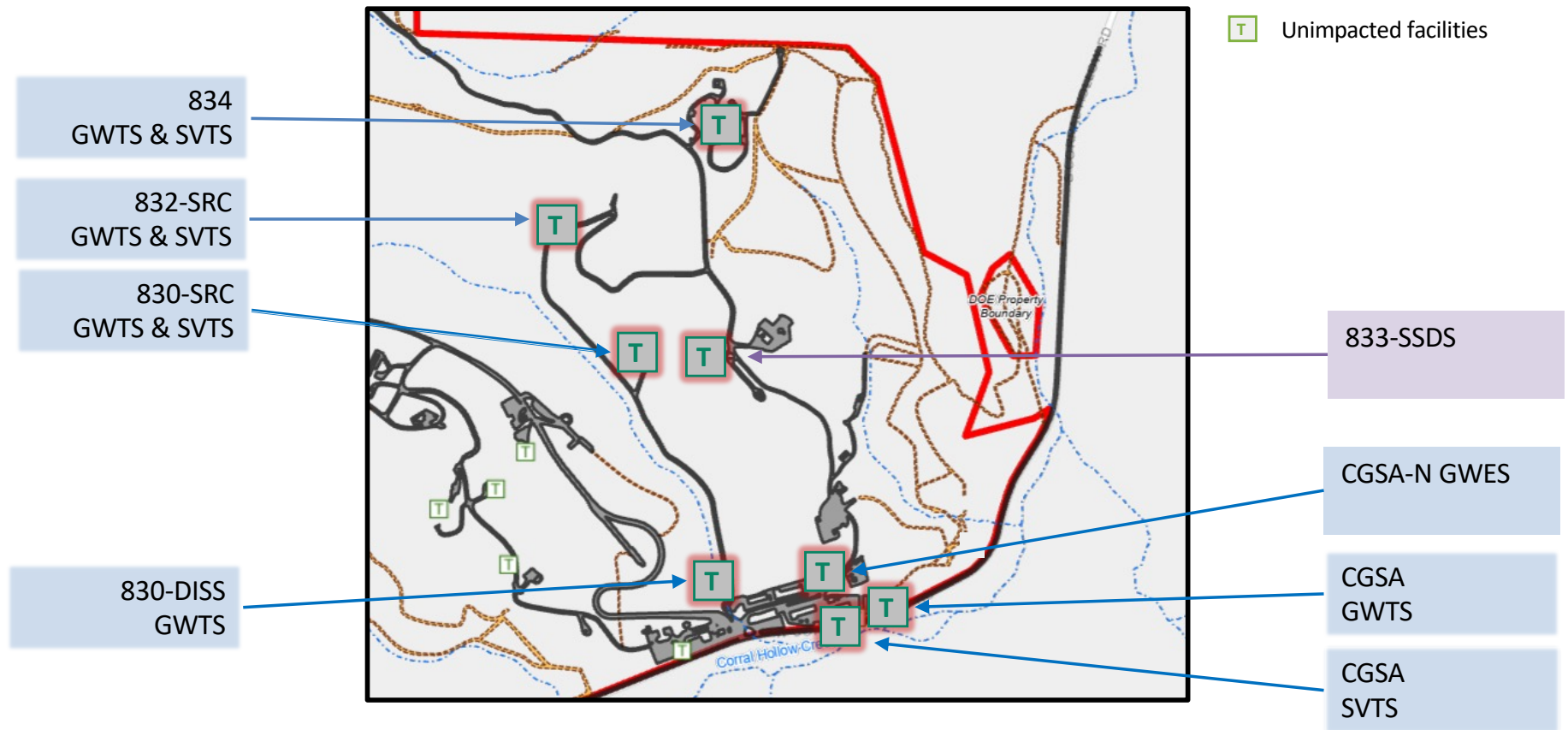
833-SSDS (OU 8) was also damaged.

21, out of 130 monitor wells in the impacted area are damaged.



# Corral Fire Impact Summary of damage

-  Facilities impacted by Corral Fire
-  Unimpacted facilities



# Corral Fire Impact Summary of damage

Operable Unit (OU)	System	Impact	VI concerns
OU1	CGSA-N GWES	low	N/A
OU1	CGSA GWTS	high	N/A
OU1	CGSA SVTS	low	restarted on June 13
OU7	830-DISS GWTS	high	N/A
OU2	834 GWTS	medium	N/A
OU2	834 SVTS	medium	restarted on June 18
OU7	830-SRC GWTS	high	N/A
OU7	830-SRC SVTS	high	none
OU7	832-SRC GWTS	high	N/A
OU7	832-GWTS SVTS	high	none
OU8	833-SSDS (VES13)	high	low

GWTS – Groundwater Treatment System, GWES – Groundwater Extraction System,  
SVTS – Soil Vapor Treatment System, SSDS – Sub Slab Depressurization System



# Corral Fire Impact CGSA (OU1)



CGSA GWTS was damaged by the fire.

CGSA SVTS was not significantly damaged during the fire.

SVTS was restarted on June 13, 2024.

CGSA GWTS extraction well W-7P. Significant damage.

# Corral Fire Impact CGSA (OU1)



CGSA GWTS was damaged by the fire.

CGSA SVTS was not significantly damaged during the fire.

SVTS was restarted on June 13, 2024.

CGSA GWTS effluent pipeline. Significant damage to PVC pipes and expansion joints.

# Corral Fire Impact 830-DISS (OU7)



830-DISS GWTS influent pipeline.

830-DISS GWTS has significant damage.

830-DISS treats the influent groundwater for perchlorate. The effluent line is connected to CGSA GWTS where VOCs are treated.

Approximately 6,000 gal of untreated groundwater was released from this pipeline during the fire.

# Corral Fire Impact 830-DISS (OU7)



830-DISS GWTS has significant damage.

DOE/LLNL utilizes artesian conditions to recover impacted groundwater in the 830 area of Site 300.

The 830-DISS artesian wells were secured once site access was allowed (Monday, June 3).

830-DISS GWTS influent pipeline.

# Corral Fire Impact 830-DISS (OU7)



830-DISS GWTS has significant damage.

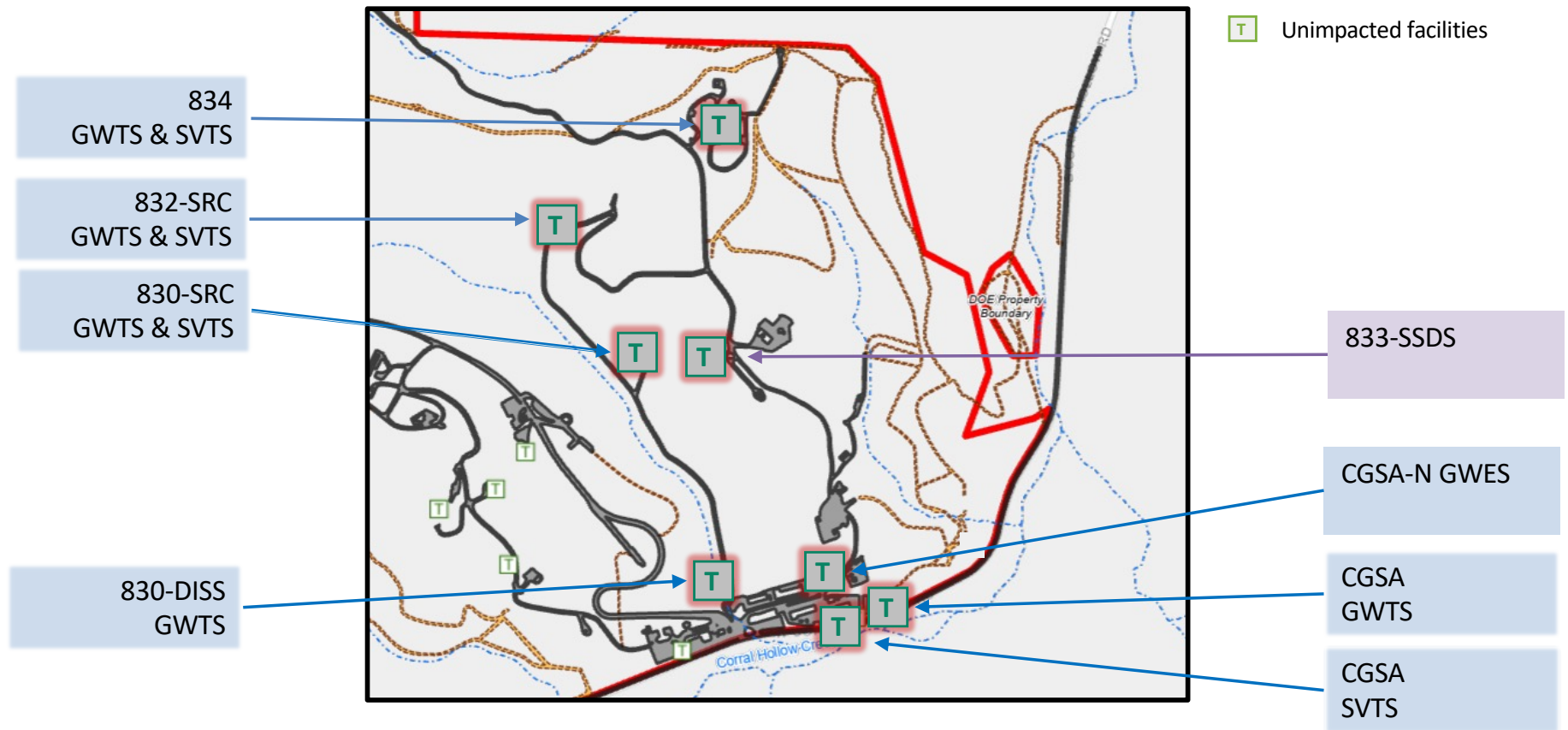
DOE/LLNL utilizes artesian conditions to recover impacted groundwater in the 830 area of Site 300.

The 830-DISS artesian wells were secured once site access was allowed (Monday, June 3).

Several shallow monitor wells completed in the Qal/WBR HSU were damaged.

# Corral Fire Impact Summary of damage

- T Facilities impacted by Corral Fire
- T Unimpacted facilities



# Corral Fire Impact 834 (OU2)



Several 834 GWTS & SVTS wells were damaged.

GWTS may be operable, though only on limited wells, once damage to effluent pipes are repaired.

834 SVTS was restarted on June 18, 2024. Operating only ten of the fourteen SVE wells.

Significant damage to four extraction wells in the 'leach field' area.

834 GWTS extraction wells W-834-S12A and W-834-2113.

# Corral Fire Impact 834 (OU2)



Some 834 GWTS & SVTS wells were damaged.

GWTS may be operable, though only on limited wells.

834 SVTS was restarted on June 18, 2024. Operating only ten of the fourteen SVE wells.

Significant damage to four extraction wells in the 'leach field' area.

834 Area monitor well W-834-S8. Significant damage



# Corral Fire Impact 830-SRC (OU7)



830-SRC GWTS & SVTS wells and pipelines significantly damaged.

The 830 building structure was damaged. The building is not occupied (cold-and-dark).

There are no vapor intrusion (VI) concerns.

Building 830 and the 830-SRC treatment facilities.

# Corral Fire Impact 830-SRC (OU7)



830-SRC GWTS & SVTS wells and pipelines significantly damaged.

The 830 building structure was damaged. The building is not occupied (cold-and-dark).

There are no vapor intrusion (VI) concerns.

Building 830 and the 830-SRC GWTS effluent pipeline.

# Corral Fire Impact 832-SRC (OU7)

832-SRC GWTS & SVTS wells and pipelines significantly damaged.



832-SRC GWTS pipeline.

# Corral Fire Impact 832-SRC (OU7)



832-SRC GWTS & SVTS wells and pipelines significantly damaged.



832-SRC GWTS pipeline.

# Corral Fire Impact 833-SSDS (OU8)



VES13 was a skid-mounted system that was deployed in 2018 in response to elevated TCE concentration in indoor air (Bldg. 833), is significantly damaged.

A permanent system (VES21) is scheduled to come on-line this year. It was not damaged.

Building 833 is not permanently occupied.

833-SSDS (sub-slab depressurization system) engineering control system.

# Corral Fire Impact 833-SSDS (OU8)



VES13 was a skid-mounted system that was deployed in 2018 in response to elevated TCE concentration in indoor air (Bldg. 833), is significantly damaged.

A permanent system (VES21) is scheduled to come on-line this year. It was not damaged.

Building 833 is not permanently occupied.

833-SSDS (sub-slab depressurization system) engineering control system.

# Corral Fire Impact 833-SSDS (OU8)



VES13 was a skid-mounted system that was deployed in 2018 in response to elevated TCE concentration in indoor air (Bldg. 833), is significantly damaged.

A permanent system (VES21) is scheduled to come on-line this year. It was not damaged.

Building 833 is not permanently occupied.

Retaining wall damage near the vapor recovery well W-833-34.



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