



Fire Protection Report

For

Williams Creek Generating Station

Colorado Springs Utilities Williams Creek Generating Station

Fire Protection Report

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Overview:

The proposed Williams Creek Generating Station is located on a new parcel to be created from a larger parent property exceeding 3,000 acres in southern El Paso County, Colorado, southeast of the City of Fountain in the vicinity of Irradiance Road and Williams Creek Road (legal description to be confirmed from the final plat). The project will disturb less than 200 acres of the parent parcel for construction of the power plant facility, including individual exhaust stacks, towers, water storage tanks, a wastewater treatment facility, process and containment ponds, a control building, and related structures. The site is bordered by existing utility-scale solar development and undeveloped land, with Calhan Reservoir located to the northwest. Site access will be provided via a proposed extension of the existing roadway serving the property, per the initial civil site exhibit.

The site is within the Hanover Fire Protection District. The closest station is Hanover Station 2, approximately 4.2 miles from the site. Current access to the site includes unmaintained road segments and a gate, and there is no municipal water distribution system serving the property. The closest known hydrant is at the Colorado Springs Utilities Southern Delivery System (SDS) pump station, less than 1/8 mile from the project area. This Fire Protection Report describes the fire protection services available to the site, emergency access requirements, and fire protection water supply for the proposed facility. Wildfire hazard, vegetation management, and defensible space recommendations are addressed separately in the Williams Creek Generating Station Wildland Fire Risk and Hazard Mitigation Plan. Final fire protection requirements will be established by Hanover Fire Protection District through formal plan review.

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Construction Guidelines:

Fire Code Compliance Requirements

All construction and development shall comply with the adopted fire and building codes enforced by Hanover Fire Protection District, El Paso County, and applicable State of Colorado wildfire resiliency standards, including:

- International Fire Code (IFC), as adopted and amended locally
- International Building Code (IBC)
- International Wildland-Urban Interface Code (IWUIC), where applicable
- 2025 Colorado Wildfire Resiliency Code (CWRC)
- NFPA 1140 – Standard for Wildland Fire Protection
- NFPA 1141 – Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas
- NFPA 1142 – Standard on Water Supplies for Suburban and Rural Fire Fighting

All applicable local amendments adopted by:

- El Paso County Board of County Commissioners
- Hanover Fire Protection District Board of Directors

The Colorado Wildfire Resiliency Code supplements existing fire and building codes and establishes minimum statewide wildfire-hardening standards for development within Wildland-Urban Interface (WUI) areas.

Plan Submission Requirements

Prior to final plat approval, land disturbance, or issuance of construction permits, the following shall be submitted to the Fire District for review and approval:

- Site development plans
- Utility and water supply plans
- Fire access and roadway plans
- Grading and drainage plans
- Architectural and construction documents
- Wildfire mitigation and vegetation management plans
- Emergency access and addressing plans

Written approval from the Fire District and all applicable agencies shall be obtained prior to construction.

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Emergency Access Requirements

(IFC §503, CWRC, NFPA 1140)

Roadways and driveways shall comply with Hanover Fire Protection District and El Paso County standards, including:

- Minimum 20-foot clear driving surface width for two-way traffic
 - Minimum 26-foot width adjacent to fire hydrants and where aerial apparatus access is required per IFC Appendix D
- Minimum 13-foot 6-inch vertical clearance
- Maximum roadway grade of 10% unless otherwise approved by the Fire District
- Approved turnaround required for dead-end roads exceeding 150 feet in length
- Turning radii shall accommodate Hanover FPD apparatus, including Type 1 engines and water tenders
- Roads shall provide an all-weather driving surface capable of supporting fire apparatus loads of 75,000 pounds
- Two separate access roads where required by IFC Appendix D based on final building height and size
- Gates across fire apparatus access roads shall be approved by the Fire District and equipped with a Knox lock or other approved means of emergency access
- Knox Box installed at an approved location at the facility entrance with reflective address markings per AHJ requirements.

Existing Access Conditions

In its preliminary response for this project, Hanover Fire Protection District raised concerns about current access to the site. Per Hanover FPD, the primary route includes approximately 3 miles of unmaintained road and a gate that crews must open, and the secondary route is approximately 12.8 miles with the final 4 miles unmaintained. Hanover FPD reports that these roads have a history of washouts and heavy mud in wet weather, which can slow response or prevent some apparatus from reaching the site, and that portions of the road are too narrow for two large apparatus to pass safely (Hanover Fire Protection District, Preliminary Response: Williams Creek Generating Station).

Based on the concerns raised by Hanover FPD, improvements to the primary access route are recommended to provide year-round, all-weather access for fire apparatus. Improvements should address road surface, drainage and washout protection, and width or pullouts so apparatus can pass safely. The existing gate should be equipped with a Knox lock or other approved emergency access device.

Hanover FPD has stated that final requirements for road improvements, access routes, turnarounds, gates, and other fire department access will be determined after formal plans are submitted. Final access requirements will be established through plan review by Hanover FPD Fire Marshal Mike Gates.

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Water Supply Requirements

IFC Appendix B & C and NFPA 1142

Due to the rural nature of southern El Paso County and the absence of a municipal water distribution system at the project site, fire protection water supply for the Williams Creek Generating Station may rely on a combination of:

- On-site fire water storage and distribution
- Fire hydrants on an on-site fire main
- Water tender shuttle operations
- Nearby approved water sources

Based on existing conditions, Hanover Fire Protection District identifies the closest known hydrant as the one at the Colorado Springs Utilities Southern Delivery System (SDS) pump station, less than 1/8 mile from the project area. The SDS facility has an on-site water storage tank of approximately 1 million gallons. Hanover FPD has noted that the proximity of this hydrant and tank does not confirm that it will satisfy required fire flow, pressure, duration, accessibility, use authorization, or hydrant spacing for the project. These items will be evaluated during formal plan review.

Proposed Fire Protection Water Supply

A dedicated on-site fire protection water system is proposed for the generating station, with final design, capacity, hydrant layout, and connection details subject to review and approval by Hanover Fire Protection District and El Paso County.

On-site water storage is recommended because the site is approximately 4.2 miles from Hanover Station 2, the primary access route includes approximately 3 miles of unmaintained road and a gate, and the secondary route is approximately 12.8 miles with the final 4 miles unmaintained. These roads have a history of washouts and heavy mud during wet weather, and portions are too narrow for two large apparatus to pass. Under these conditions, sustained water tender shuttle operations may be slow or not possible, and should not be relied on as the primary fire protection water supply for the facility.

The fire protection water system should be designed in accordance with the applicable codes and standards, including the IFC, NFPA 1142, NFPA 850, NFPA 24, and Hanover Fire Protection District requirements. The system should:

- Provide fire water storage sized to the required fire flow and duration,
- Deliver the required fire flow and pressure to on-site hydrants and fire protection systems
- Include hydrants located and spaced as approved by the Fire District
- Be protected from freezing
- Remain accessible to fire apparatus in all weather conditions
- Include signage and identification as required by the Fire District

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Proposed Fire Protection Water Supply (Cont.)

Hydrants and fire department connections shall be positioned so apparatus can safely connect without obstructing emergency access routes or other responding apparatus. If the SDS hydrant or storage tank is proposed as a primary or backup supply, CSU authorization for fire protection use and confirmation of available flow, pressure, and duration will be required. Final installation and operational access should be field verified by Hanover Fire Protection District prior to acceptance.

Final storage volume and fire flow requirements should be confirmed through the accepted fire flow methodology and coordinated with Hanover FPD Fire Marshal Mike Gates based on final building size, construction type, occupancy, fire suppression systems, and site layout. The final calculations and location will be determined by the owner's engineer in coordination with the AHJ (Hanover Fire Protection District).

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Fire Protection Report

Hanover Fire Protection District is a combination fire and emergency services agency operating one staffed fire station and two primarily volunteer stations. The district provides structural and wildland fire suppression, emergency medical services, rescue, and other all-hazards emergency response throughout the Hanover area, southern and eastern El Paso County, and portions of northern Pueblo County.

Station 1	Station 2	Station 3
17550 S. Peyton Highway Colorado Springs, CO 80928 Primary apparatus: • 1 Type 3 Interface Engine – 1,500 GPM pump, 750-gallon water tank, foam capability. • 1 Type 2 Water Tender – 500 GPM pump, 2,500-gallon water tank. • 1 Type 6 Brush Truck – 375 GPM pump, 500-gallon water tank.	13325 Old Pueblo Road Fountain, CO 80817 Primary apparatus: • 1 Type 1 Rescue-Style Engine – 1,500 GPM pump, 750-gallon water tank. • 1 Type 1 Water Tender – 1,500 GPM pump, 2,500-gallon water tank. • 1 Type 6 Brush Truck – 375 GPM pump, 300-gallon water tank. • 1 UTV – 58-gallon water tank and pump; configurable for wildland firefighting or medical response, including patient transport by backboard.	7960 Indian Village Heights Fountain, CO 80817 Primary apparatus: • 1 Type 3 Interface Engine – 1,000 GPM pump, 500-gallon water tank. • 1 Type 2 Water Tender – 1,000 GPM pump, 3,000-gallon water tank. • 1 Type 4 Brush Truck – 250 GPM pump, 900-gallon water tank, 6x6. • 1 BLS Ambulance.

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1st alarm structure fire has the following response:

Based on the District's current response model, the initial first-due response to a reported structure fire would generally include:

- 1 structure engine;
- 1 water tender – 2,500 gallons; and
- 1 Chief Officer.

Volunteer and off-duty personnel would respond to Stations 1 and 3 to staff and respond with additional apparatus as personnel are available.

Station 1:

- 1 water tender – 2,500 gallons; and
- 1 engine – 750 gallons.

Station 3:

- 1 water tender – 3,000 gallons; and
- 1 engine – 500 gallons.
- 1 Type 4 brush truck 900 gallons

Actual apparatus and personnel responding to an incident will depend upon availability, incident conditions, existing emergency activity, road conditions, and other operational factors at the time of dispatch.

Each structural engine carries dry-chemical, carbon-dioxide, and water fire extinguishers. Station 1 and station 3 apparatus also carry approximately **20 gallons of firefighting foam**. The specific type, quantity, and application of extinguishing agents necessary for the proposed development cannot be determined until the District has reviewed the proposed facilities, occupancies, hazards, materials, and fire-protection systems.

• ISO Rating: 5Y

• Hanover FPD current automatic-aid response may include resources from neighboring agencies, including:

- Fountain – 1 engine and 1 Chief Officer;
- Security – 1 engine and 1 ambulance;
- Stratmoor Hills – 1 engine; and
- Fort Carson – 1 engine, 1 water tender, and 1 Battalion Chief.

Automatic-aid resources remain subject to the availability of the assisting jurisdictions and existing emergency activity at the time of the incident.

• **Closest Hanover Fire Protection District Station 2:** 13325 Old Pueblo Road Fountain, CO 80817

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Sources:

United States Environmental Protection Agency (EPA).

Climate Change Indicators: Drought.

<https://www.epa.gov/climate-indicators/climate-change-indicators-drought>

National Oceanic and Atmospheric Administration (NOAA) / National Weather Service (NWS).

Colorado Springs Regional Climate Data and Weather Information.

<https://www.weather.gov/pub/localClimateStationsAdditionalInformation>

Colorado State Forest Service (CSFS).

Falcon Fire Protection District Community Wildfire Protection Plan (CWPP).

Colorado State University.

<https://csfs.colostate.edu/media/sites/22/2014/02/Falcon-FPD-Final-CWPP.pdf>

Colorado State Forest Service (CSFS).

Colorado Wildfire Risk Assessment Portal (CO-WRAP) Report.

https://pro.coloradoforestatlas.org/proreports/report_695_20210428/COWRAP_REPORT.pdf

National Fire Protection Association (NFPA).

Preparing Homes for Wildfire / Firewise USA® Program.

<https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire>

Colorado State Forest Service (CSFS).

Protecting Your Home from Wildfire: Creating Wildfire-Defensible Zones.

Colorado State University Extension.

https://static.colostate.edu/client-files/csfs/pdfs/FIRE2012_1_DspaceQuickGuide.pdf

El Paso County.

Emergency Preparedness and Wildfire Planning Resources.

<https://epc-assets.elpasoco.com/>

United States Forest Service (USFS).

Wildfire Risk to Communities Program – Wildfire Hazard, Exposure, and Risk Data.

<https://wildfirerisk.org/>

United States Forest Service (USFS).

Wildfire Risk to Communities Data Download and Image Services.

<https://wildfirerisk.org/data-download/>

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Sources (Cont.)

LANDFIRE Program.

Landscape Fire and Resource Management Planning Tools – Vegetation, Fuel, and Fire Behavior Data.

United States Department of Agriculture Forest Service / Department of the Interior.

<https://www.landfire.gov/>Multi-Resolution Land Characteristics Consortium (MRLC).

National Land Cover Database (NLCD) Land Cover Products.

<https://www.mrlc.gov/data>

National Wildfire Coordinating Group (NWCG).

Wildland Fire Behavior Field Reference Guide (PMS 437).

<https://www.nwcg.gov/publications/pms437>

Colorado State Forest Service (CSFS).

Wildfire Mitigation Resources and Home Ignition Zone Guidance.

<https://csfs.colostate.edu/wildfire-mitigation/>

Colorado State Forest Service (CSFS).

Home Ignition Zone and Defensible Space Guidance.

<https://csfs.colostate.edu/wildfire-mitigation/protect-your-home-property/>

Insurance Institute for Business & Home Safety (IBHS).

Wildfire Ready Program – Structure Hardening and Wildfire Preparedness Guidance.

<https://wildfireready.org/>

National Fire Protection Association (NFPA).

NFPA 1140: Standard for Wildland Fire Protection.

<https://www.nfpa.org/codes-and-standards/nfpa-1140-standard-development>

National Fire Protection Association (NFPA).

NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting.

<https://www.nfpa.org/codes-and-standards/nfpa-1142-standard-development>

International Code Council (ICC).

International Fire Code (IFC) and International Wildland-Urban Interface Code (IWUIC).

<https://www.iccsafe.org/products-and-services/i-codes>

Hanover Fire Protection District (HFPD). Preliminary Response: Williams Creek Generating Station.

National Fire Protection Association (NFPA).

NFPA 850: Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage

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Direct Current Converter Stations. <https://www.nfpa.org/codes-and-standards/nfpa-850-standard-development>

Liability Disclaimer:

This Fire Protection Report is provided for informational and planning purposes only. Information on fire district resources, response, access, and water supply is based on available data and the Hanover Fire Protection District's preliminary response at the time of preparation. Apparatus, staffing, response times, and automatic-aid resources may change and are subject to availability at the time of an incident.

This report does not constitute a fire protection engineering design. Final fire flow, water storage, hydrant layout, fire suppression systems, and emergency access requirements will be determined by the owner's engineer and approved by Hanover Fire Protection District through formal plan review.

Property owners, developers, and contractors are solely responsible for ensuring compliance with all applicable local, state, and federal laws, codes, and regulations, including but not limited to those adopted by the El Paso County Board of County Commissioners and Hanover Fire Protection District. The authors of this document assume no liability for any damages, losses, or injuries resulting from the use, misuse, or reliance upon the information contained in this report.