

EXPLOSIVES AND FLAMMABLE HAZARDS – REVIEW SUMMARY – PREPARED BY LANDAU ASSOCIATES

Tanks within a 1-mile radius of the project were reviewed using Google Earth (image date 5/9/2024). Screenshot of image is attached showing location of tanks identified. HUD's Acceptable Separation Distance (ASD) Electronic Assessment Tool was used to determine ASD in order to be protective of people.

Methodology

According to the HUD guidebook guidelines on container evaluation, when multiple tanks are located at a facility of the same size, the closest tank must be evaluated. When the tanks are of different size, the largest tank must be evaluated. Tanks found at the same facility are grouped and evaluated using this criteria.

Some of the tanks may be other tank-like objects or may be containers that contain inert materials. However, they are included in the assessment in order to be conservative. Sizes of tanks were estimated using Google Earth measuring tools and 3D modeling of buildings, with a bias towards using larger volumes to maintain a conservative estimate.

References:

Google, Inc. Google Earth Pro. Imagery Date May 9, 2024; accessed April 28, 2026.

HUD. 2026. Acceptable Separation Distance Electronic Assessment Tool.

<https://www.hudexchange.info/programs/environmental-review/asd-calculator/>. Accessed April 28.

Tanks Evaluation

A map of all tanks found is pictured below:



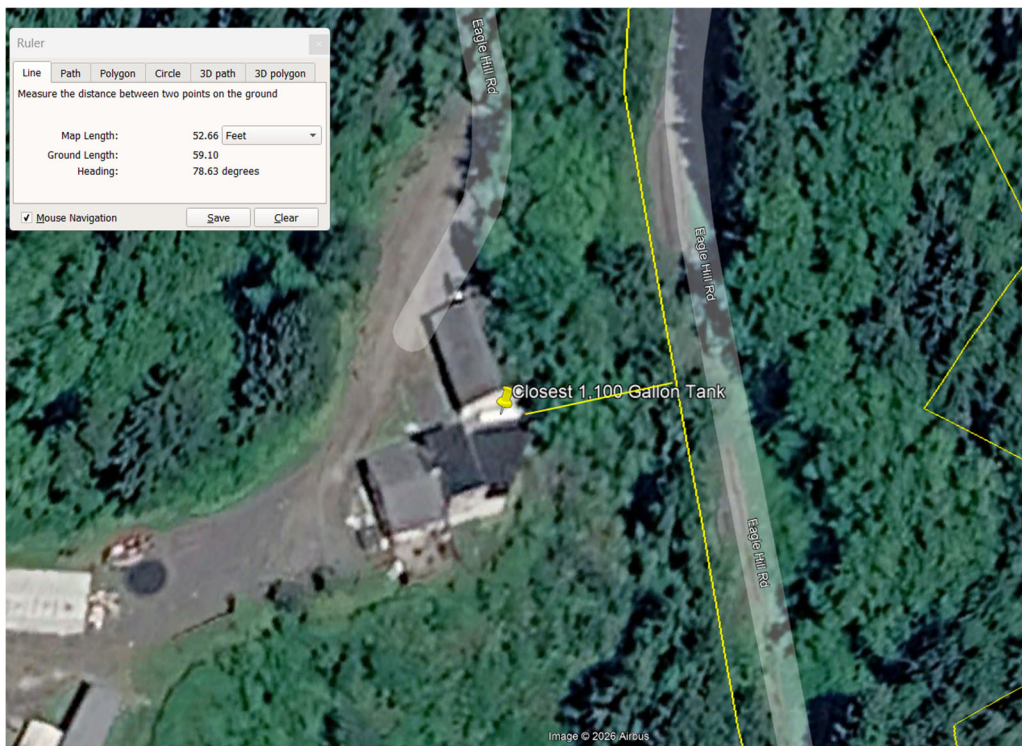
Tanks over 2,000 Gallons in size

There is one large propane tank located at a nearby 76 Station (4115 WA-105), pictured below, approximately 5,000 gallons in size. The acceptable distance for a 5,000-gallon tank is 106 feet away for buildings (thermal radiation), 541 feet away for people, and 373 feet away for blast overpressure (structural integrity). The 76 station is located over 1,500 feet away from the closest point to the project, so meets the acceptable separation distance.



Tanks under 2,000 gallons in size

The area within 1 mile radius of the project location includes many smaller propane tanks ranging from 250-gallons to 1,100 gallons. The acceptable distance for buildings for a 1,100-gallon tank is 53 feet away for buildings (thermal radiation), 226 feet away for blast overpressure (to prevent structural damage), and 288 feet away for people. The closest 1,100-gallon tank is located at a residence at the end of Eagle Hill Road. The tank is beyond the required distance, 53 feet from the planned road expansion, and over 430 feet away from future residential structures. The other propane tanks are all smaller and further away than the 1,100-gallon tank, and therefore also meet the criteria for acceptable separation distance.



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Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft² - hr - people and 10,000 BTU/ft² - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☒ No: ☐
Is the container under pressure?	Yes: ☒ No: ☐
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☒
Is the container diked?	Yes: ☐ No: ☐
What is the volume (gal) of the container?	5000
What is the Diked Area Length (ft)?	
What is the Diked Area Width (ft)?	
Calculate Acceptable Separation Distance	
Diked Area (sqft)	
ASD for Blast Over Pressure (ASDBOP)	372.89

ASD for Blast Over Pressure (ASDBOP)	572.85
ASD for Thermal Radiation for People (ASDPPU)	540.74
ASD for Thermal Radiation for Buildings (ASDBPU)	105.81
ASD for Thermal Radiation for People (ASDPNPD)	
ASD for Thermal Radiation for Buildings (ASDBNPD)	

For mitigation options, please click on the following link: Mitigation Options
(/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us**
(<https://www.hudexchange.info/contact-us/>) form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)

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Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: ☒ No: ☐
Is the container under pressure?	Yes: ☒ No: ☐
Does the container hold a cryogenic liquified gas?	Yes: ☐ No: ☒
Is the container diked?	Yes: ☐ No: ☐
What is the volume (gal) of the container?	1100
What is the Diked Area Length (ft)?	
What is the Diked Area Width (ft)?	
Calculate Acceptable Separation Distance	
Diked Area (sqft)	
ASD for Blast Over Pressure (ASDBOP)	226.04

ASD for Blast Over Pressure (ASDBOP)	229.8
ASD for Thermal Radiation for People (ASDPPU)	287.77
ASD for Thermal Radiation for Buildings (ASDBPU)	52.55
ASD for Thermal Radiation for People (ASDPNPD)	
ASD for Thermal Radiation for Buildings (ASDBNPD)	

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