US Department of Agriculture (USDA)

Statement of Work

Middle Mountain Cabins Chimney Repair Project

Greenbrier Ranger District, Monongahela National Forest

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Project

Middle Mountain Cabins Chimney Repairs Project

General Information

1.0 Background

The Middle Mountain Cabins are located within Randolph County on a 3.5-acre plot near a small pond and Camp Five Run Trail, a hiking trail that leads and connects visitors to the Laurel Fork South Wilderness. The cabins are located on the Greenbrier Ranger District of the Monongahela National Forest.

The popular recreation site includes three individual cabins. The main cabin, constructed in 2002, was a replacement for a previously burned down log structure. There are two smaller cabins on the site, known as Cabin 1 and Cabin 2. These cabins were constructed by the CCC in c.1939. The site is listed on the National Register of Historic Places.

Each cabin features one fireplace and chimney constructed out of mortared flagstone facing. Each fireplace features a firebox constructed of Bessmer Fire Bricks. The fireplaces are the only means of heat in the three cabins and provide light in the evenings. The chimneys and fireplaces are suffering from a lack of maintenance and are no longer up to modern standards with regard to sizing and ventilation. Repairs are necessary to allow the Middle Mountain Cabins to continue to be occupied and used by the public in a safe manner.

2.0 Scope of Work

This Statement of Work (SOW) outlines the repair of chimneys at Middle Mountain Cabins to ensure safety, efficiency, and compliance with NFPA 211, 2021 IRC and CSIA standards. Services include masonry repair, crown repair, liner inspection/installation, and verification of clearance to combustibles to mitigate fire hazards, ensure proper drafting, and prevent carbon monoxide leakage.

Contractor Requirements

3.0 Technical Requirements / Tasks

- The contractor shall perform all necessary repairs on all three chimneys and fireplaces at Middle Mountain Cabins to ensure they meet or exceed NFPA 211 standards for chimneys and fireplaces. This includes supplying all necessary labor, materials and equipment required to perform the work.
- The contractor shall conduct a Level II inspection per NFPA 211 for all fireplaces and chimneys at the project location to include:
    - Checking for proper ventilation
    - Structural Integrity
    - Condition of the existing chimney linings
    - Removal of loose mortar, tuckpointing or reconstructing deteriorated brickwork where necessary to ensure structural integrity.
    - Replace each damper assembly
    - Repairing each heat shield flue
    - And restoring each firebox
- The contractor shall be a certified historic chimney contractor from the Chimney Safety Institute of America (CSIA).
- The contractor shall implement the project to satisfy the National Park Service Standards for Rehabilitation of a Historic Property, and consult with the Government should questions arise prior to implementation.

4.0 Government Furnished

The Government will provide the following to assist with this project:

- Mapping and photos of the project location
- Access to the project location, to include signing out a key to the selected contractor
- On-site availability for meetings if required

5.0 Schedule

It is expected that each chimney will require approximately 10 days to complete the necessary repairs. Work shall be performed over the course of 6 weeks, with 5 workdays per week, for a total of 30 total workdays.

6.0 Photographs of Existing Conditions

6.1) Main Cabin Chimney and Fireplace Pictures:

Figure 1: Overview of exterior of Main Cabin with chimney visible at left extent of image.

Figure 2: Interior view of fireplace in Main Cabin.

6.1) Main Cabin Chimney and Fireplace Pictures (Continued):

Figure 3: Detail showing fire box of Main Cabin with damaged bricks and mortar joints.

Figure 4: Detail showing additional issues with existing conditions of fire box at Main Cabin.

Figure 5: Detail showing damper assembly of Main Cabin fireplace.

Figure 6: Additional view showing damper assembly of Main Cabin fireplace.

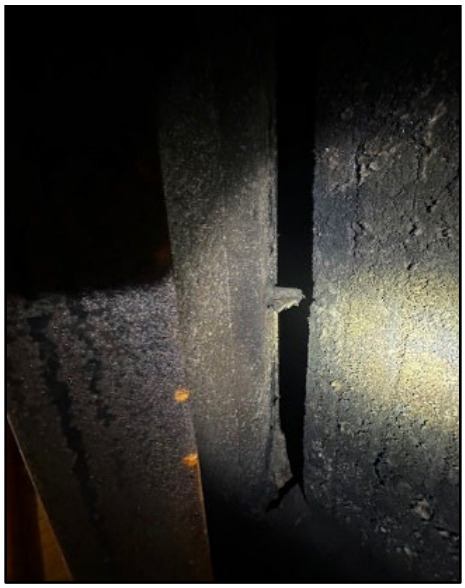


Figure 7: Damper assembly of Main Cabin fireplace.

6.1) Main Cabin Chimney and Fireplace Pictures (Continued):

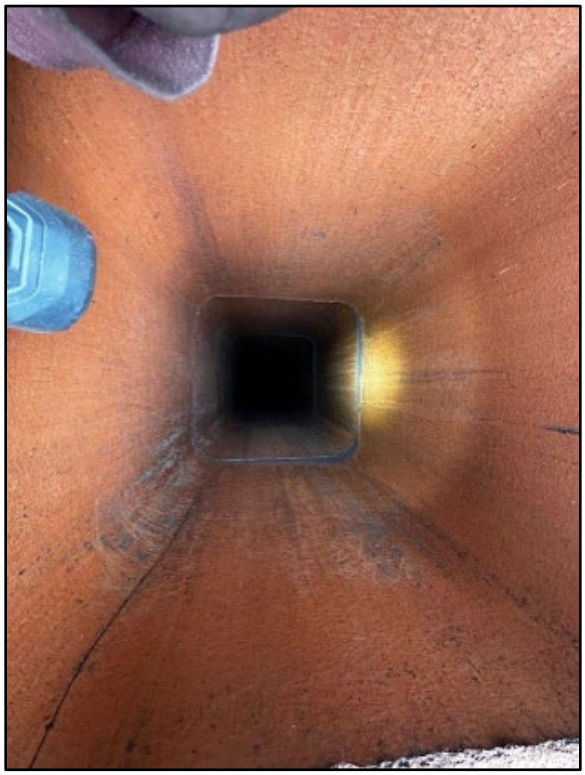


Figure 8: Showing interior flue, facing down from the roof of Main Cabin.

Figure 9: Showing height of the flue of Main Cabin as being approximately 14'.

Figure 10: Showing additional view of interior of Main Cabin Flue.

Figure 11: Showing overview of flue and concrete cap of chimney of Main Cabin.

6.1) Main Cabin Chimney and Fireplace Pictures (Continued):

Figure 12: Showing interior width of existing flue of Main Cabin as being approximately 15 ½" wide.

Figure 13: Additional view of measurement of interior width of flue at Main Cabin.

Figure 14: Showing total width of Main Cabin flue as being approximately 17 7/8" wide.

6.1) Main Cabin Chimney and Fireplace Pictures (Continued):

Figure 15: Showing one width of the concrete cap at Main Cabin as being approximately 38".

Figure 16: Showing the other width of the concrete cap at Main Cabin as being approximately 35".

6.2) Cabin 2 Chimney and Fireplace Pictures:

Figure 17: Showing overall view of chimney at Cabin 2.

Figure 18: Detail showing mortar joints of top extent of chimney at Cabin 2.

Figure 19: Detail showing mortar joints of bottom extent of chimney at Cabin 2.

Figure 20: Detail of stone and mortar joints of Cabin 2 chimney.

6.2) Cabin 2 Chimney and Fireplace Pictures (Continued):

Figure 21: Detail showing interior of fire box of Cabin 2 looking up towards flue. Note there is no damper assembly.

Figure 22: Detail showing fire box of Cabin 2.

Figure 23: Showing overall view of fireplace at Cabin 2.

6.2) Cabin 2 Chimney and Fireplace Pictures (Continued):

Figure 24: Showing top of chimney of Cabin 2. Note the moss growth on top of mortar joints.

Figure 25: View of chimney cap and central flue of Cabin 2.

Figure 26: Showing approximate width of chimney cap as being approximately 36" wide along two sides at Cabin 2.

Figure 27: Showing that the chimney cap of Cabin 2 is approximately 29" along the other two sides of cap.

6.2) Cabin 2 Chimney and Fireplace Pictures (Continued):

Figure 28: Showing that the flue at Cabin 2 extends approximately 2 ½" above concrete cap.

Figure 29: Details showing typical condition of failed mortar joint on chimney of Cabin 2.

Figure 30: Additional view of typical conditions of mortar joints at Cabin 2 chimney.

Figure 31: Showing spalled stone and poor mortar joint at top of chimney of Cabin 2.

6.2) Cabin 2 Chimney and Fireplace Pictures (Continued):

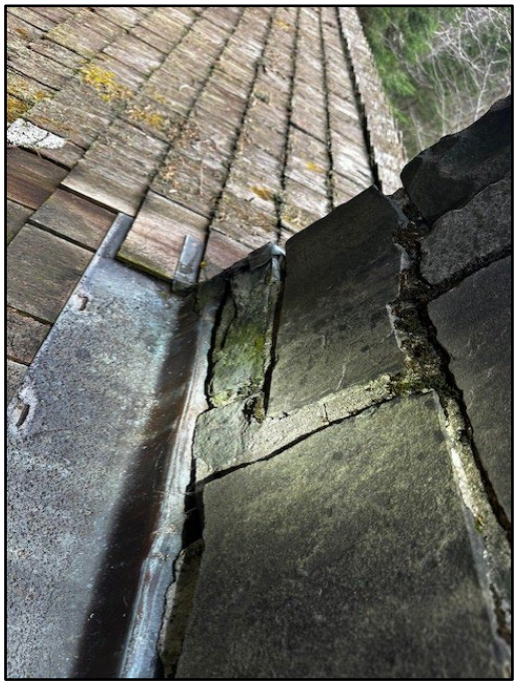


Figure 32: Showing intersection of chimney, flashing, and roofing of Cabin 2.

Figure 33: Additional view of failed mortar joint at Cabin 2.

Figure 34: Showing another view of flashing surrounding chimney at ridge of Cabin 2.

Figure 35: Showing flashing at chimney and roofing intersection of Cabin 2.

6.3) Cabin 3 Chimney and Fireplace Pictures

Figure 36: Showing overall view of chimney at Cabin 3.

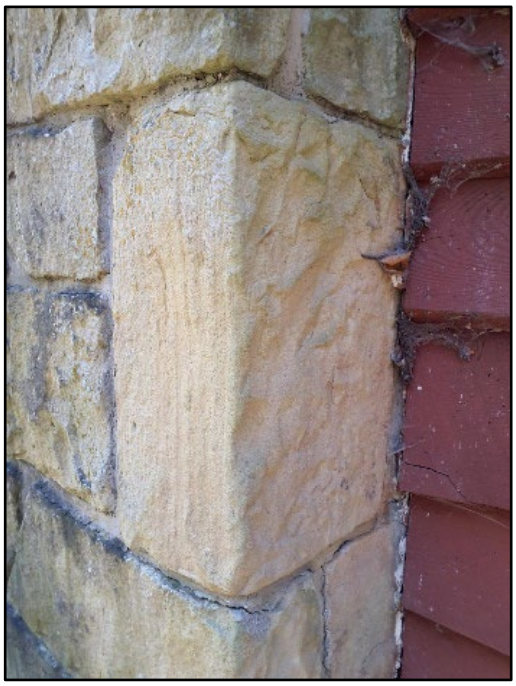


Figure 37: Showing typical condition of chimney and mortar joints at Cabin 3.

Figure 38: Showing overall view of chimney cap and flue of Cabin 3. Note the measurements of this feature are presumed to be the same as Cabin 2.

Figure 39: Detail showing damaged flue at Cabin 3.

6.3) Cabin 3 Chimney and Fireplace Pictures (Continued)

Figure 40: Overall view of roof looking down from chimney of Cabin 3. Note the flashing at the intersection of features.

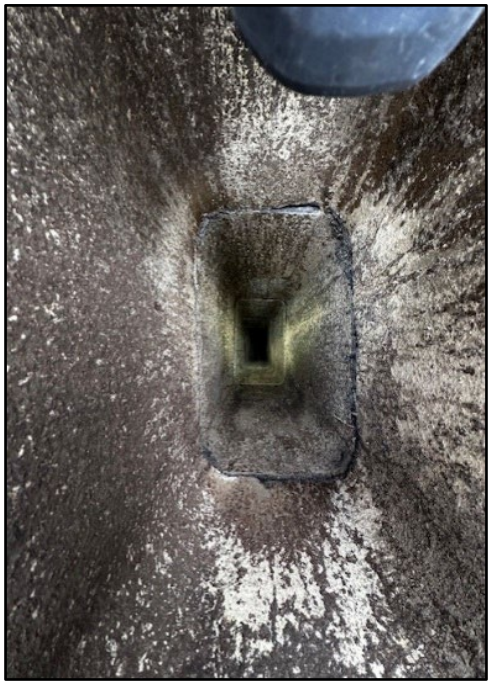
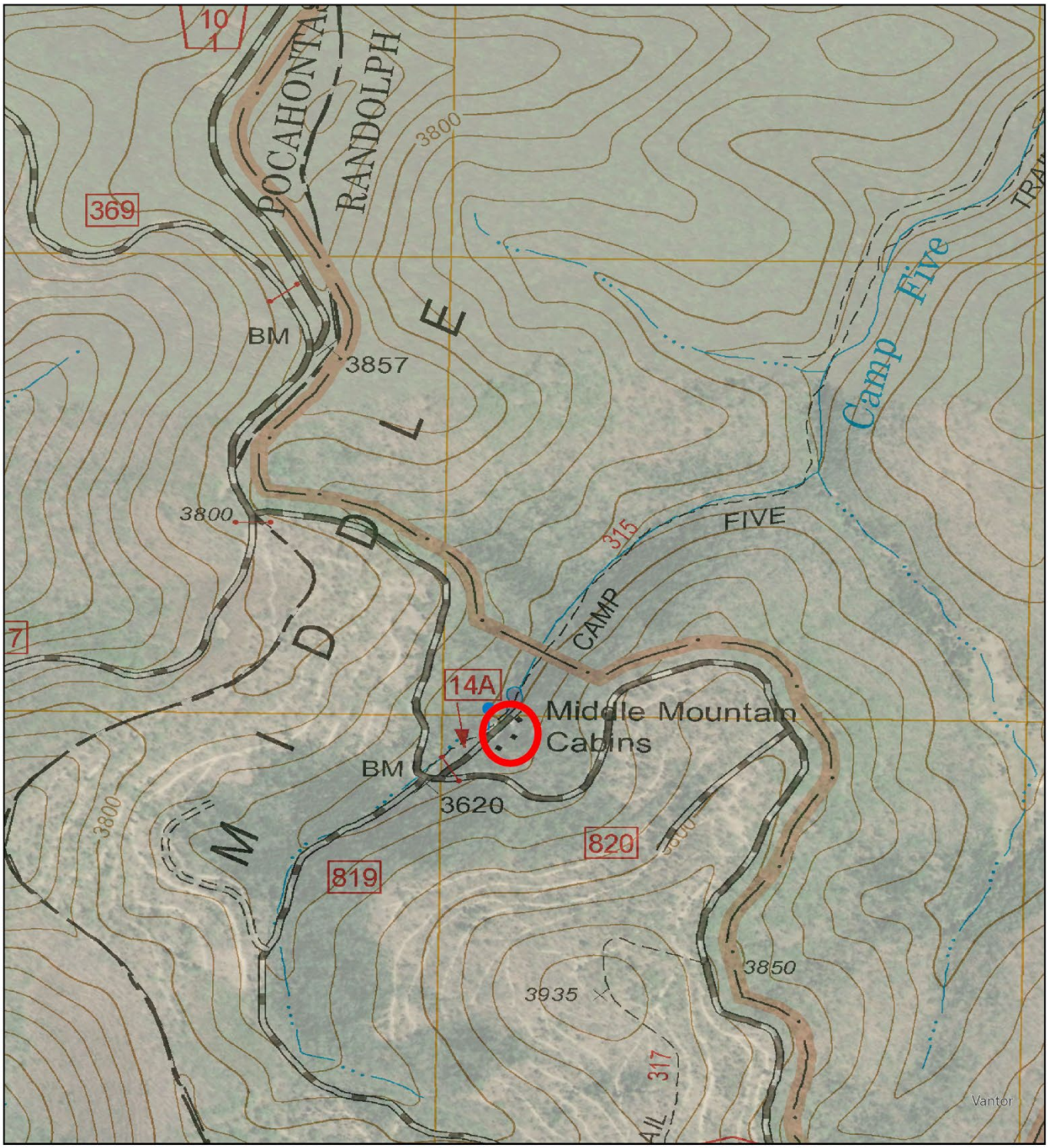


Figure 41: Showing interior condition of flue at Cabin 3.

Figure 42: Showing overall view of fireplace of Cabin 3.

Figure 43: Looking up from fire box towards flue of Cabin 3.

7.0 Site Map - Middle Mountain Cabins



Site Map

Middle Mountain Cabins
Greenbrier Ranger District

Coordinates:
Lat: 38.688470
Long: -79.734316

0 0.16 0.32 0.64 Miles

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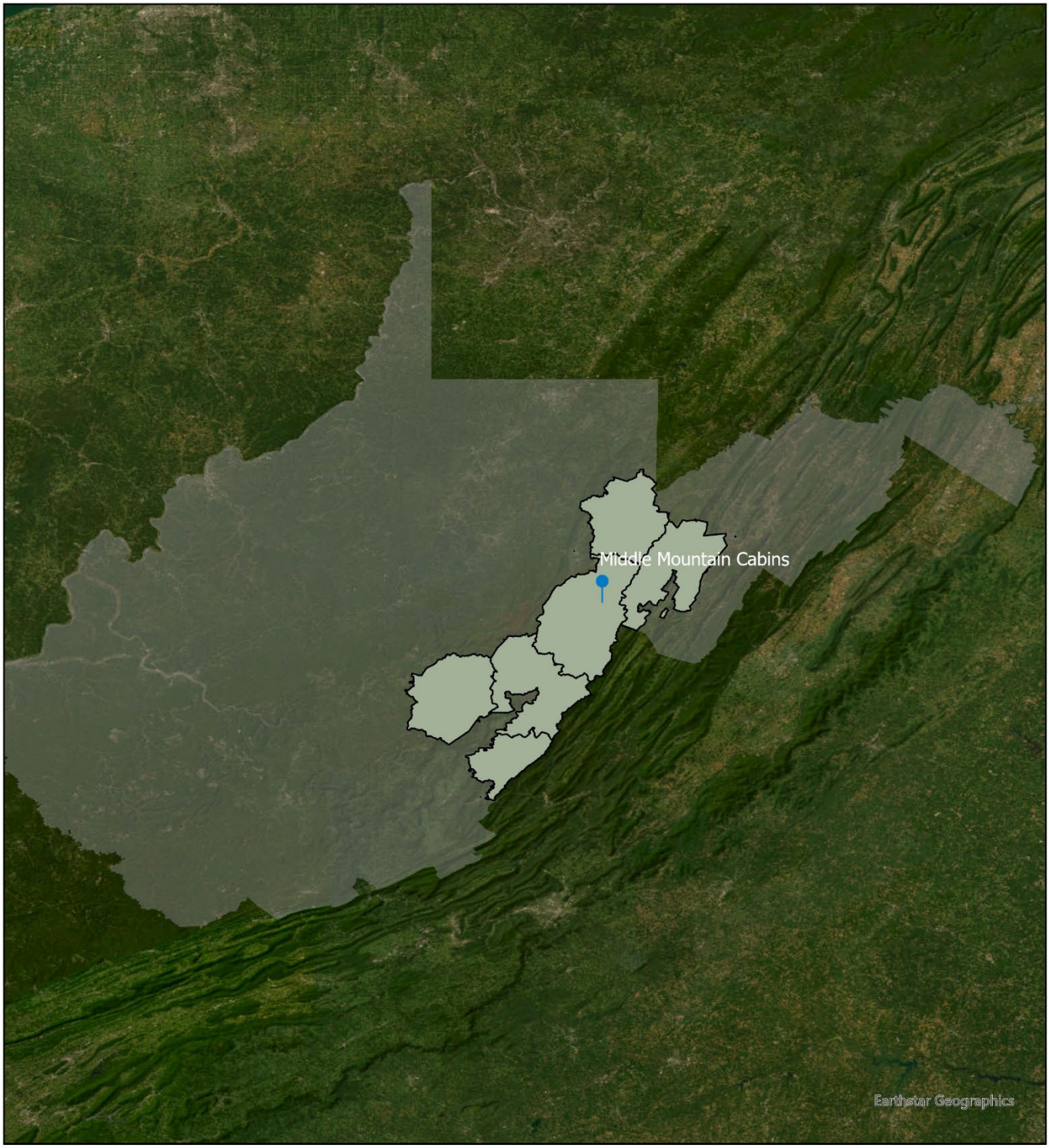
8.0 Regional Map - Middle Mountain Cabins



Location in WV

0 37.5 75 150 Miles

Middle Mountain Cabins
Greenbrier Ranger District

Coordinates:
Lat: 38.688470
Long: -79.734316

Legend

- RangerDistrict
- WV_State
- ProclaimedForest

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