



**PennState Extension**

[extension.psu.edu](http://extension.psu.edu)



PennState Extension



# “Using Geographic Information Systems (GIS) to Track Management and Assess Attributes of Forested Property”

Katie Brooks

Jeff Osborne

# Agenda

What is GIS?

---

Why use GIS?

---

How to use GIS?

---

What programs are available?

---

Walkthrough of programs

# What is GIS?

**G**eographic **I**nformation **S**ystem

## Geographic data

### Tabular data

Date	High Temp	Low Temp	Precipitation	Wind Speed
2/1/22	35	12	0	15
2/2/22	41	26	0	15
2/3/22	39	20	0.23	15
2/4/22	21	16	0	13

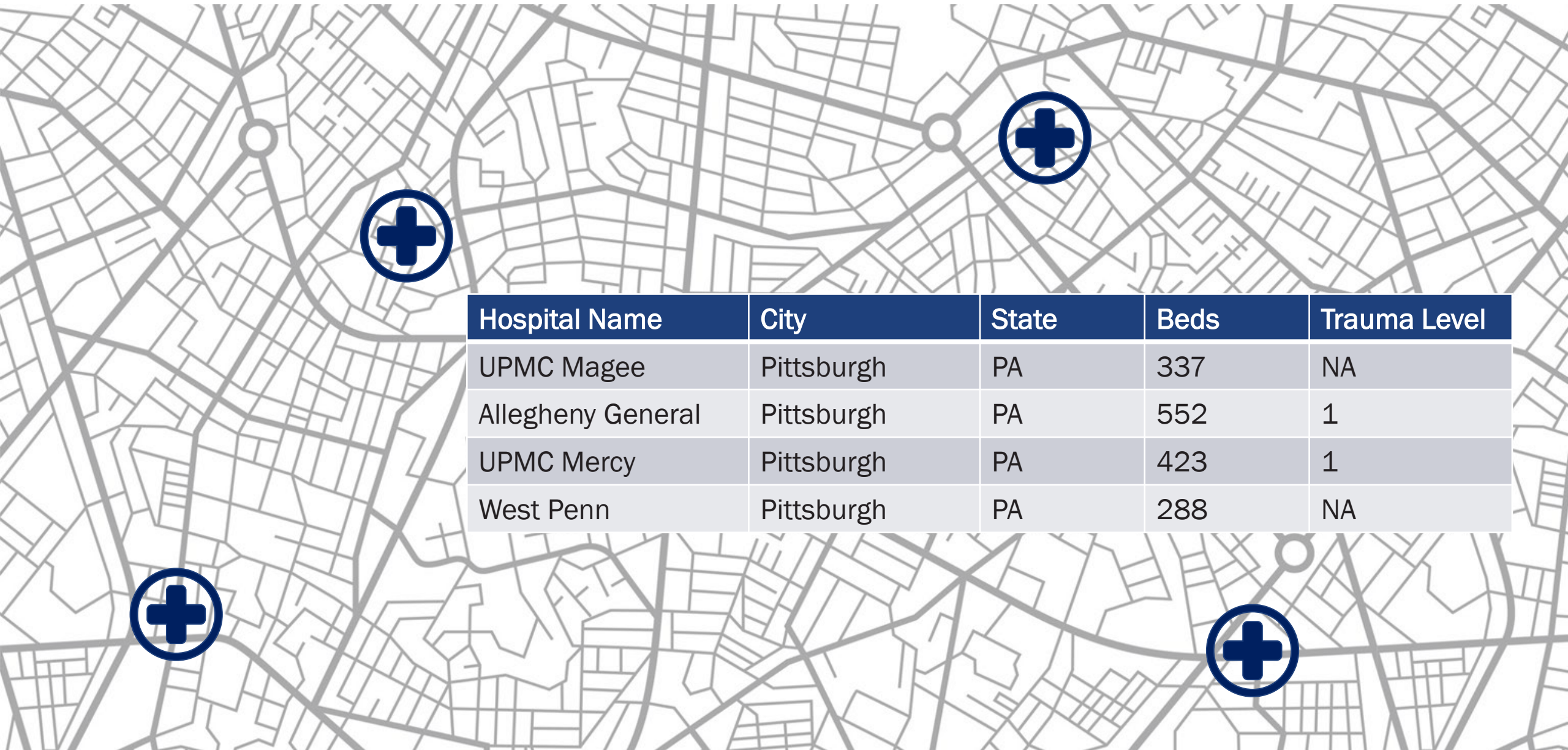
# What is GIS?



Hospital Name	City	State	Beds	Trauma Level
UPMC Magee	Pittsburgh	PA	337	NA



# What is GIS?



Hospital Name	City	State	Beds	Trauma Level
UPMC Magee	Pittsburgh	PA	337	NA
Allegheny General	Pittsburgh	PA	552	1
UPMC Mercy	Pittsburgh	PA	423	1
West Penn	Pittsburgh	PA	288	NA



# How is GIS data created?

---

- Digitization
- Global Positioning



# Why use GIS?

---

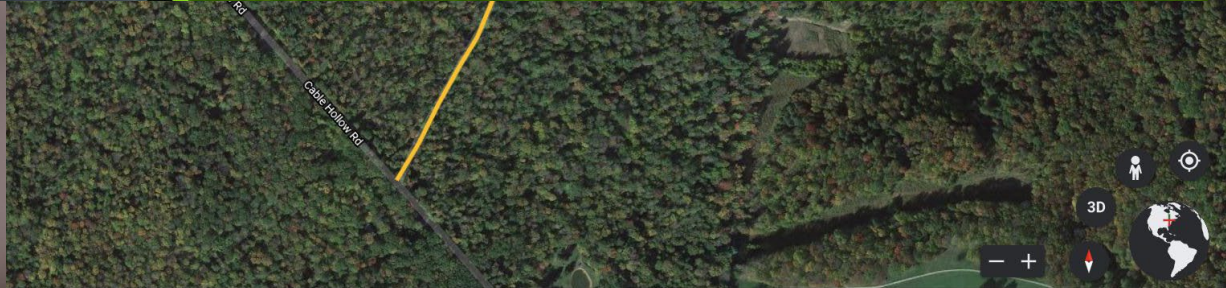
- Planning land management
  - Roads, buildings, treatments
- Record of management
  - Harvests, vegetation treatments
- Useful for next owners
  - Areas of interest, historical record
- Can be used when engaging a professional
  - Consulting forester, service forester



# How do I use GIS?

---

- Printed map
- Digitization
- Field collection



# Google Earth

- Free
- Web or desktop
- Good for novice GIS users
- Does allow for field collection and upload of data










# Google Earth

---



- Can digitize points, lines, and polygons
- Can add polygons with descriptions of harvests, treatments, or special interest areas











 Hardwood Harvest  

Description

**B** *I* |      


50 acre hardwood harvest completed in 2023


+ Media

Outline

Width

4 px







Fill

Opacity

50%





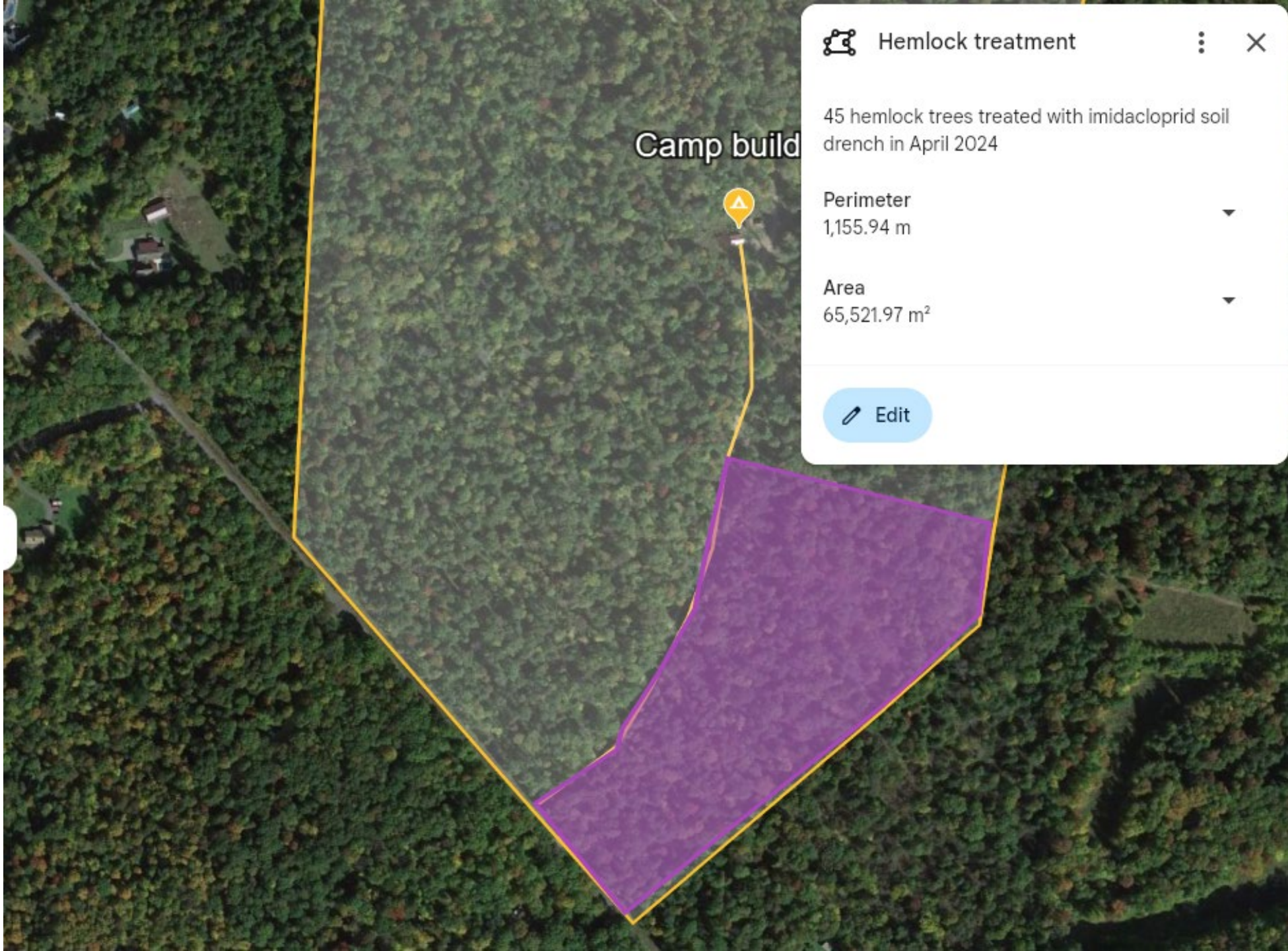
More settings



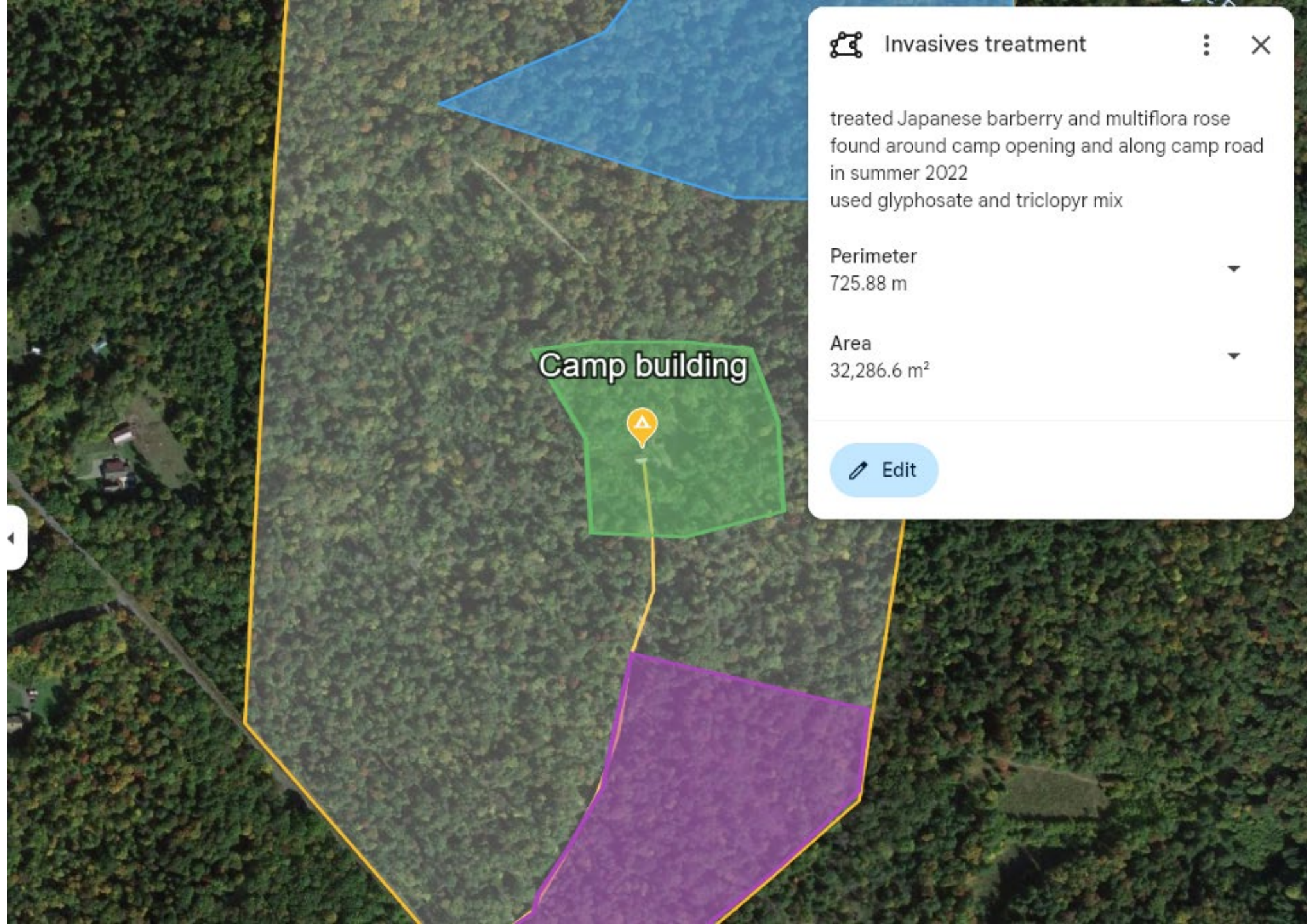
 View

 Saved to Google Drive









## Invasives treatment



treated Japanese barberry and multiflora rose  
found around camp opening and along camp road  
in summer 2022  
used glyphosate and triclopyr mix

Perimeter

725.88 m



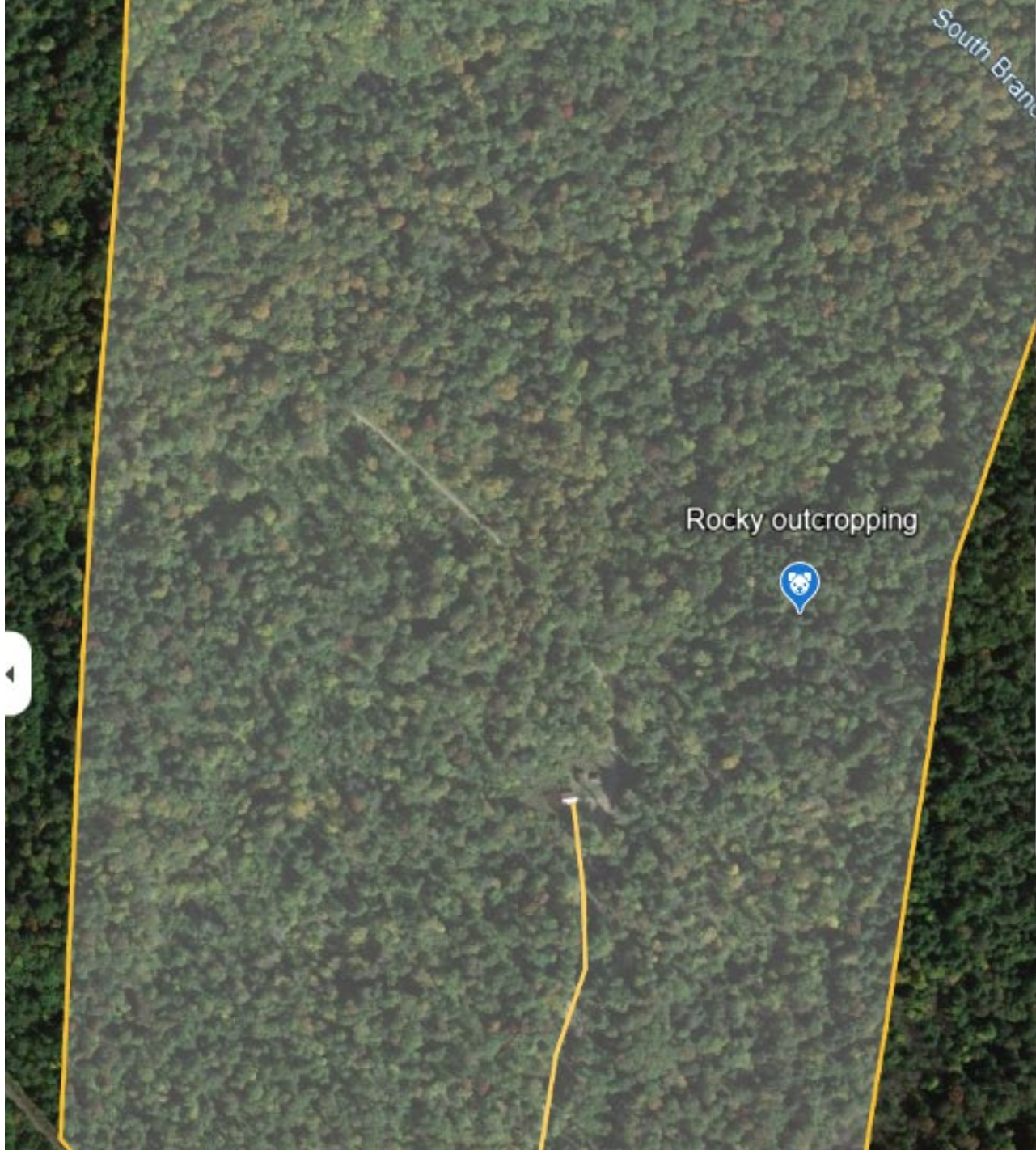
Area

32,286.6 m<sup>2</sup>



Edit





Rocky outcropping















Location

41°58'07"N 79°01'19"W




Edit




-  Camp Road
-  Camp Property
-  Hardwood Harvest
-  Trail
-  Camp building
-  Hemlock treatment
-  Invasives treatment
-  Treestand
-  Treestand
-  Log landing
-  New logging road
-  Rocky outcropping

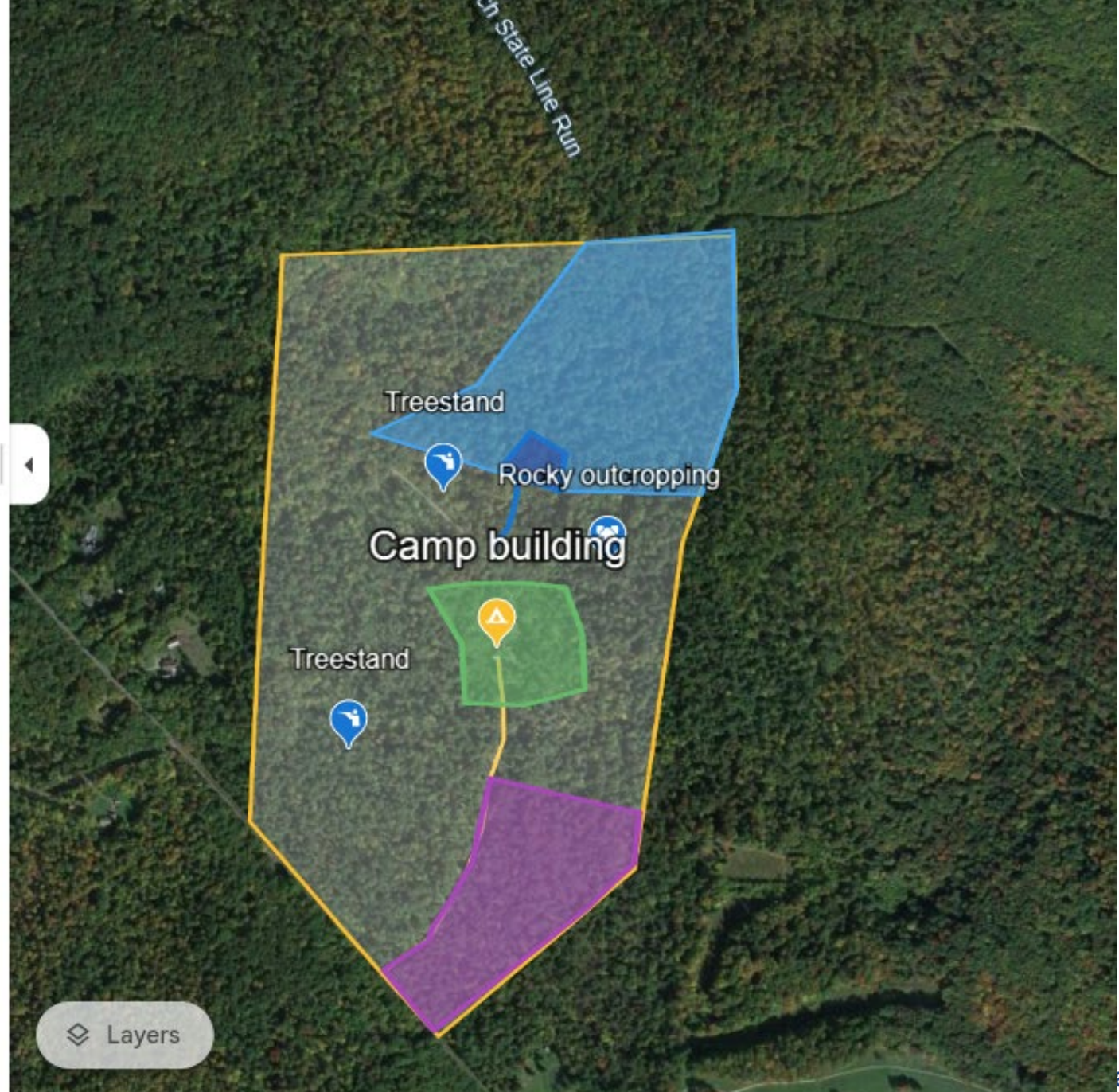
Hide pinned projects



 Layers

Google  100%

 500 m



ate Extension