

# Invasion of buckthorn overtime

## About me

My name is Dylan Doporcyk, and I am currently a junior at UWSP majoring in forestry restoration and management. I currently work as the restoration crew leader at Schmeekle reserve and there we deal with an endless amount of buckthorn.

## Maps

- Lowest aggregate height per acre was in 2010 at 89,000ft. The highest was in 2021 at 736,000ft.
- The East side of the map has always had more buckthorn than the west.
- Between 2018 and 2021 removal of buckthorn started and has shown to be effective where it was carried out.
- Areas above 120,000 ft is detrimental to native plant life.

## Conclusion

Going forward treatment of the area will become a priority. Chainsaws and brush cutters will be used to remove the adult buckthorn which is then put into a chipper. When the plants are young, a herbicide such as Garlon 3A will be applied in consecutive years until the buckthorn is completely removed.

## Methods

Data collected for the 2010 and 2018 buckthorn maps was collected by the NR451 class. Data collection of the 2021 map was collected by me. To get measurements, a home-made device was used from 1/2-inch PVC piping. To construct this device, two 10ft long PVC pipes were cut in half creating four 5ft long pieces. Then they were attached together with couplers, allowing pieces of the measurement tool to be easily added or subtracted in the field. Next, electrical tape was added every 1 foot of the measurement tool so in total there was 20 ft measured out. Avenza maps was used to locate all 24 points that were used in the data collection. Once at the pin on the map, a circle was measured with a 3.75ft radius by one person standing in the middle of the circle holding a tape measure, and another person holding the other end of tape and walking in the circle. Next, each buckthorns' height in the circle was measured by rounding up to the nearest foot by using the measuring instrument. Each number is called out and was wrote down by the second person in a notebook for each of the 24 plots. When all the plots were measured each one was added up and then multiplied by 1000 to get the aggregate height per acre. Lastly, using Arc Gis the 2021 buckthorn map was made.

