

# Ohanapecosh ~ 280 yrs

## Information for Field Researchers

Transects are 200 m long x 20 m wide

Transect 3 is the 'focus' transect with rigged trees

NPS Park Permit is NOT Required

Stem 600 is NOT rigged

Created by Anne Fiala

Updated June 2006



k Ohanapecosh

# Ohanapecosh - Site #4



- Permitting for this site is through the National Park Service:

<http://science.nature.nps.gov/research/ac/ResearchIndex>

Figure 1. Study site locations. Numbers refer to sites as described in the text.

# Nearest Hospital - Morton

- SLIGHT RIGHT onto US-12 (Portions may be closed seasonally).40.9 miles
- Turn RIGHT onto 2ND ST / WA-7 / NATIONAL PARK HWY.0.2 miles
- Turn LEFT onto NE ADAMS AVE.0.2 miles
- End at **Morton General Hospital**  
521 Adams Ave, Morton, WA 98356, US
- Phone: (360) 496-5112

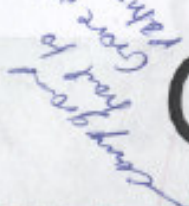
# Driving Directions

Directions	Distance (miles)
Merge onto I-5 S toward PORTLAND.	36.8
Take the US-12 E exit- EXIT 68- toward MORTON / YAKIMA / MT. ST. HELENS	0.2
Turn LEFT onto AVERY RD W / US-12. Continue to follow US-12	72.4
Turn LEFT onto WA-123 (Portions may be closed seasonally)	3.6 to the Ohanapecosh campground on your left
To continue from the campground to the OH site – continue North on 123 – to access transects 1, 2, and 4 you will continue to the pullout/road that is on the east side of the road and is the entrance to a gated road. Park here.	0.8
To access T3 walk or drive up to the west-side of the road pullout north of the gated road pullout for T1, T2, T4. This is the first pullout that is south of laughing water creek (i.e. if you pass the bridge over laughing water creek you've gone too far – the pullout is 0.2 miles south of this bridge).	~ 0.2



camp ground  
grave to  
father

- Good



0      45      90      180 Meters

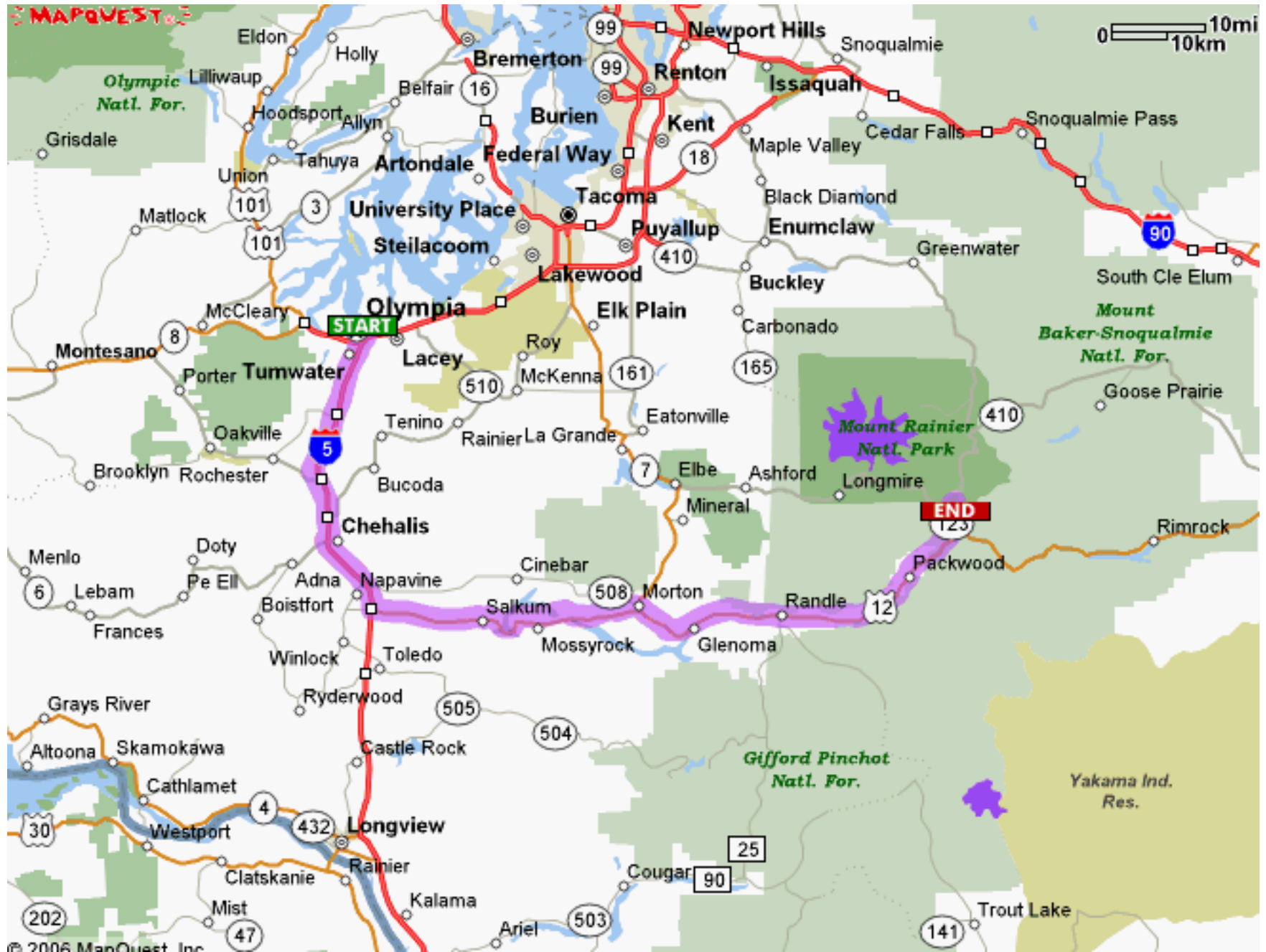
# Locating Transects

Transect	Directions
T1	From the east-side pullout that has the gated gravel road, walk east up the road ~ 50 meters. At this point you will be in the middle of T1. Consult the detailed stem map to see where in the plot you are.
T2	From the east-side pullout walk South on the road until you see a clumping of 3 trees on the west side of the road directly adjacent to the road. The trees are a large (?>100 cm dbh) Douglas-fir, a very small (?~10 cm dbh) hemlock, and medium-sized western redcedar (?~40 cm dbh). The western redcedar is closest to the road, followed by the hemlock which is tucked between the redcedar and Douglas-fir. There is a metal rectangular tag located on the South side of the western redcedar. From this grouping of trees travel ~ 14 meters at a bearing of 250 degrees to the start of T2.
T3	From the pullout that is located on the west-side of the road, walk north slightly up the road to just past the cliff area on the East-side of the road where you can hike up the trail (?10-20 m up the road – not far!). You will see a trail and up the trail there is pink flagging that will lead you to the middle of T3. You have to cross the stream on this trail and then you are in T3. Further East beyond the transect is a dam and pond – if you have reached this area or the gravel road, you have passed the transect and need to go back.
T4	The north end start of T4 appears to be ~105 m at a bearing of ~42 degrees. The north end start of T4 appears to be south ~ ?75 m from the south end of T3.

\* There is another permanently tagged plot with oval tags that overlaps with parts of T1 and T4 – this is NOT for our study – do NOT touch these tags! Refer to the circular metal tags.



# Driving Directions



# Camping

## Ohanapecosh Campground

- **Ohanapecosh Campground**

**Location:** SE corner of the park, 11 miles north of Packwood off SR 123 ([.jpg map](#)) ([.pdf map](#))

**Elevation:** 1914 feet

**Campsites:** 188 individual sites (2 Accessible) & 1 group site (12 to 25 campers).

**Season:** Friday of Memorial Day weekend - Columbus Day

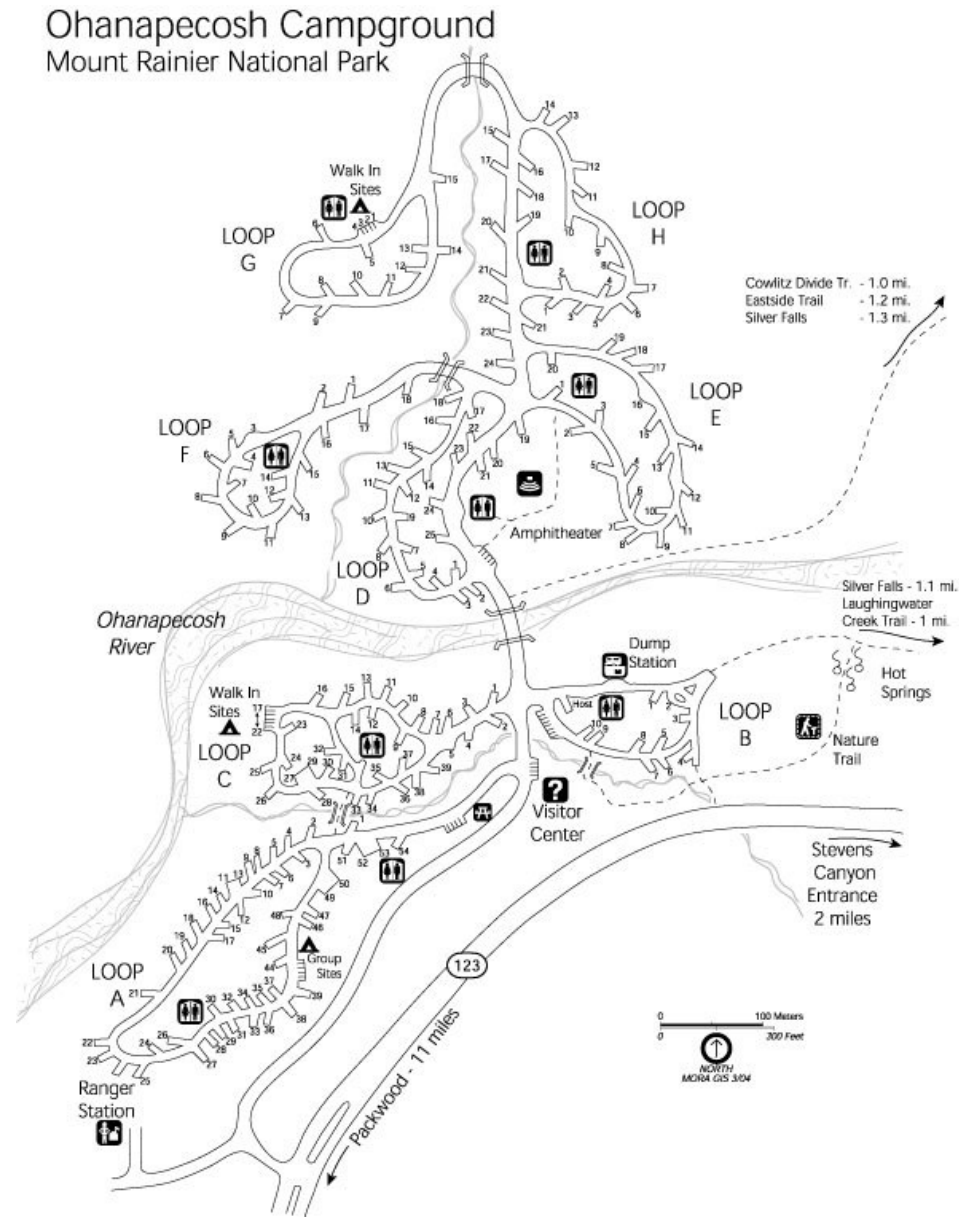
**Availability:** Regular sites are available on a first-come, first-served basis from Friday of Memorial Day weekend until late June and from Labor Day until Columbus Day. Register at campground. Site-Specific reservations are available and recommended from late June through Labor Day. Group Camping sites are available through reservation from the Friday of Memorial Day weekend until Columbus Day. [Reservation information.](#)

**Facilities:** Water, flush toilets, trailer dump station, fire grates, tables, refuse and recycling cans, visitor center, amphitheater, hiking trails and fishing. No RV hookups. No showers. Maximum RV length is 32 feet and maximum trailer length is 27 feet.

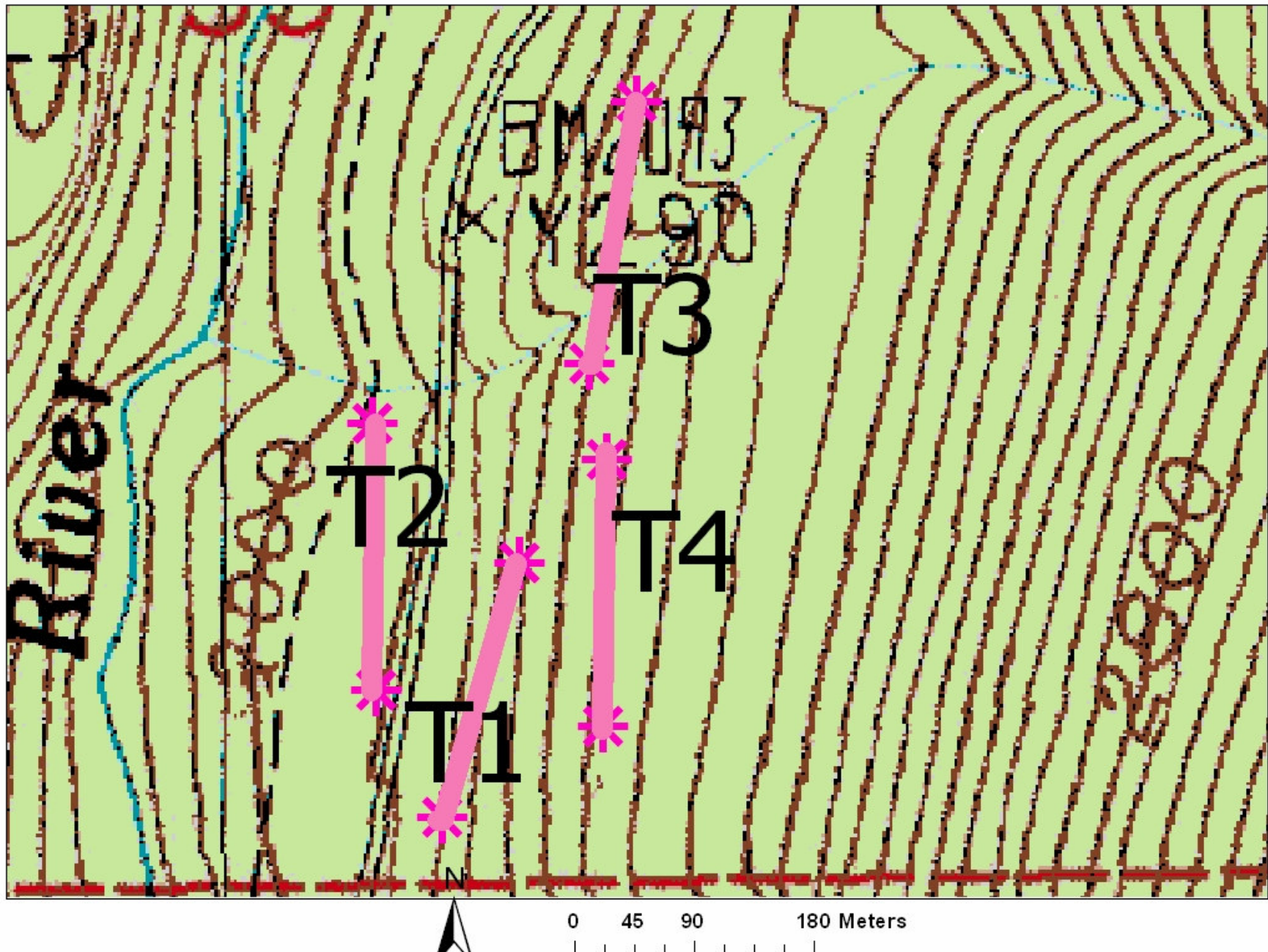
**Fees:** Late June - Labor Day: \$15; Remainder of the season: \$12. Group site: \$40. There is a cancellation fee of \$13.65 which also applies to reservation changes.



# Ohanapecosh Campground

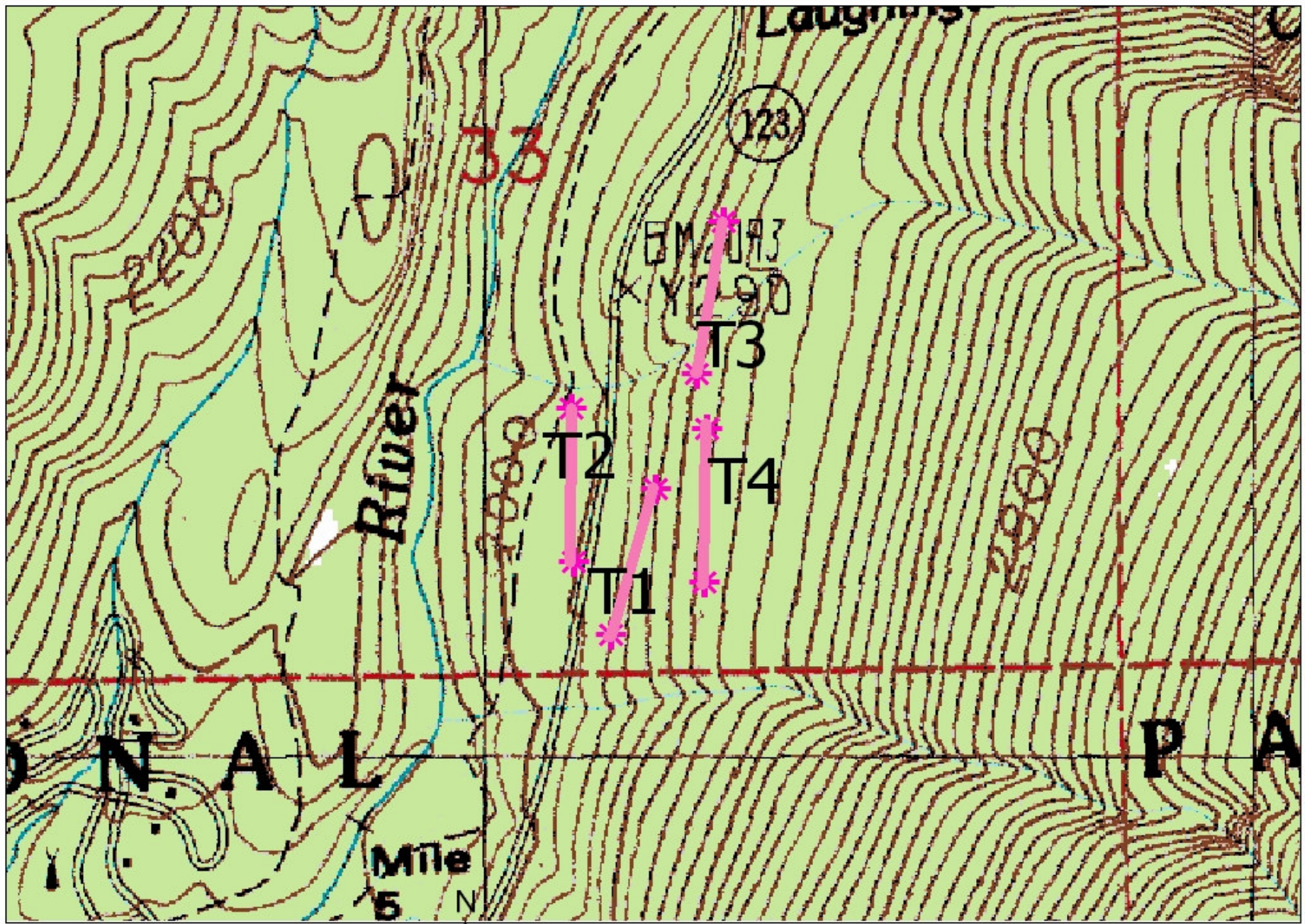


# Ohanapecosh





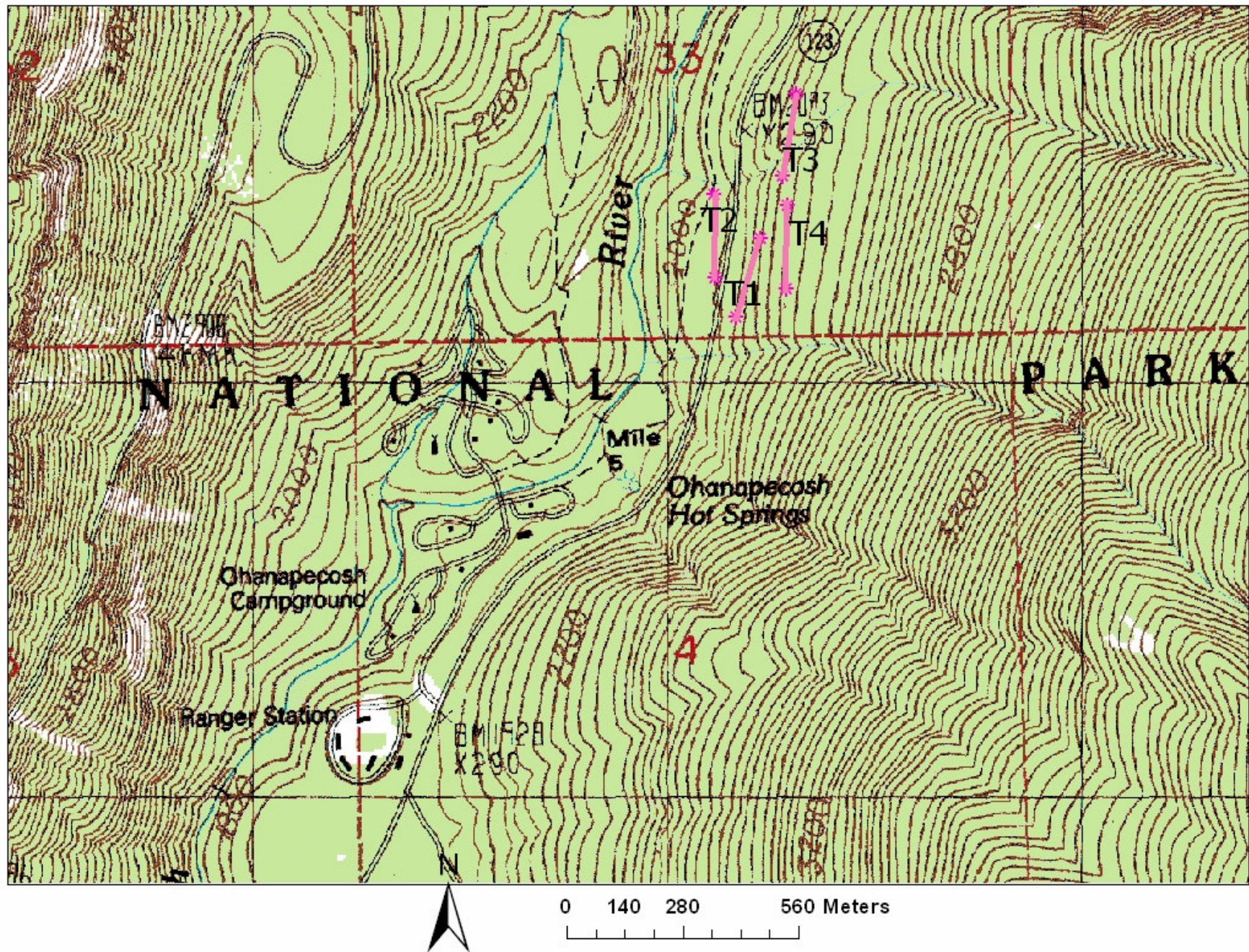
# Ohanapecosh



0      80      160      320 Meters



# Ohanapecosh





**Table 1. Summary of site characteristics. The Carbon River stand is on an alluvial flat, and the Cedar Flats stand is on swampy ground thus reducing a need for summer precipitation at both sites. Precipitation data does not include condensation from fog, which can add 10–30% at all of these sites.**

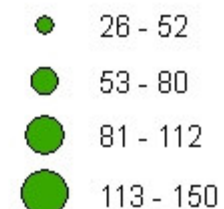
Site	Elevation (m)	Age	Slope (% aspect)	Plant association*	Precipitation (cm)			Temp (°C) (annual Ave.)
					Ann.	July–Sep.	Snowfall	
PL Plantation	624	50	0–15% SE	<i>TSHE/BENE</i>	253	12	233	0–17.5 (8.0)
MC Martha Creek	582	100	5–20% S	<i>TSHE/BENE/GASH</i>	253	12	233	0.6–17.8 (8.5)
PC Panther Creek	732	157	0–15% W	<i>TSHE/BENE/GASH</i>	264	13	254	0–17.5 (7.8)
OH Ohanepecosh	622	~280	0–10% SW	<i>TSHE/ACTR</i>	197	14	385	2.2–14.2 (7.9)
TC Trout Creek	613	~500	0–10% S	<i>TSHE/VAAL/GASH</i>	253	12	233	0–17.5 (8.0)
CR Carbon River	607	~500	0%	<i>TSHE/POMU/OXOR</i>	346	18	137	3.1–11.8 (7.5)
CF Cedar Flats	411	~650	0%	<i>TSHE/TITR</i>	317	20	77	5.0–14.4 (9.7)
CH Chinook	841	~950	0%	<i>ABAM/VAAL</i>	210	17	462	–0.6 –13.8 (6.6)

\* Based on Topik et al. 1986 and Franklin et al. 1988. *TSHE*, *Tsuga heterophylla*; *BENE*, *Berberis nervosa*; *GASH*, *Gaultheria shallon*; *ACTR*, *Achlys triphylla*; *VAAL*, *Vaccinium alaskaense*; *POMU*, *Polystichum munitum*; *OXOR*, *Oxalis oregana*; *TITR*, *Tiarella trifoliata*.

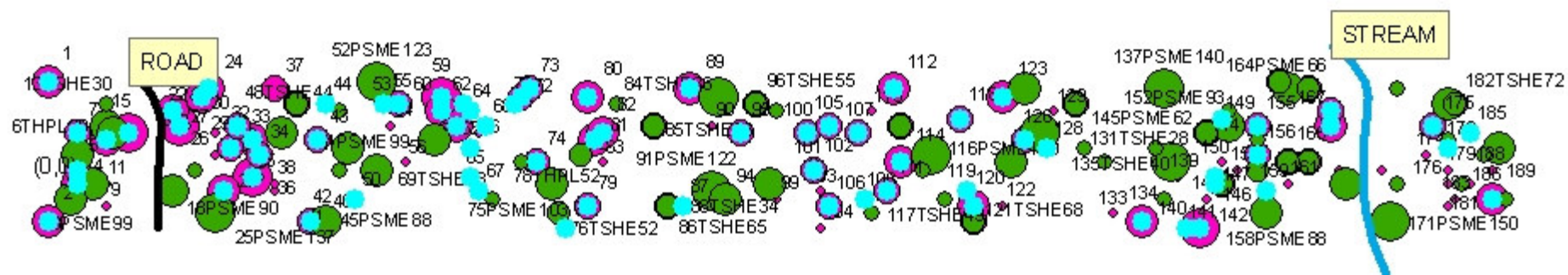
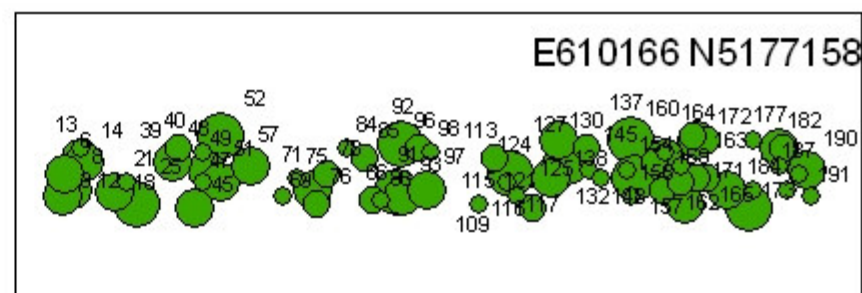


# Ohanapecosh UTMs

		Easting	Northing	Angle	Length (m)
OH	T1	610224	5177349	197	200
		610166	5177158		
OH	T2	610117	5177254	359	200
		610114	5177454		
OH	T3	610312	5177696	190	200
		610277	5177499		
OH	T4	610290	5177427	181	200
		610287	5177227		



Ohanapecosh Transect 1 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue

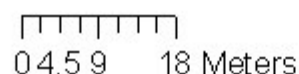


E610224 N5177349

200 m long x 20 m wide  
 angle = 197 degrees

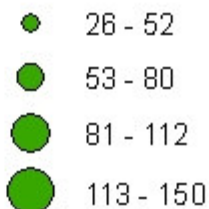


1 centimeter equals 8.811475 meters

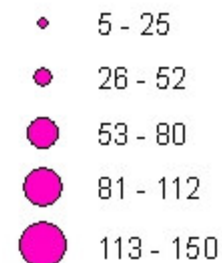


OH\_T1\_tagged Events OH\_T1\_all Events

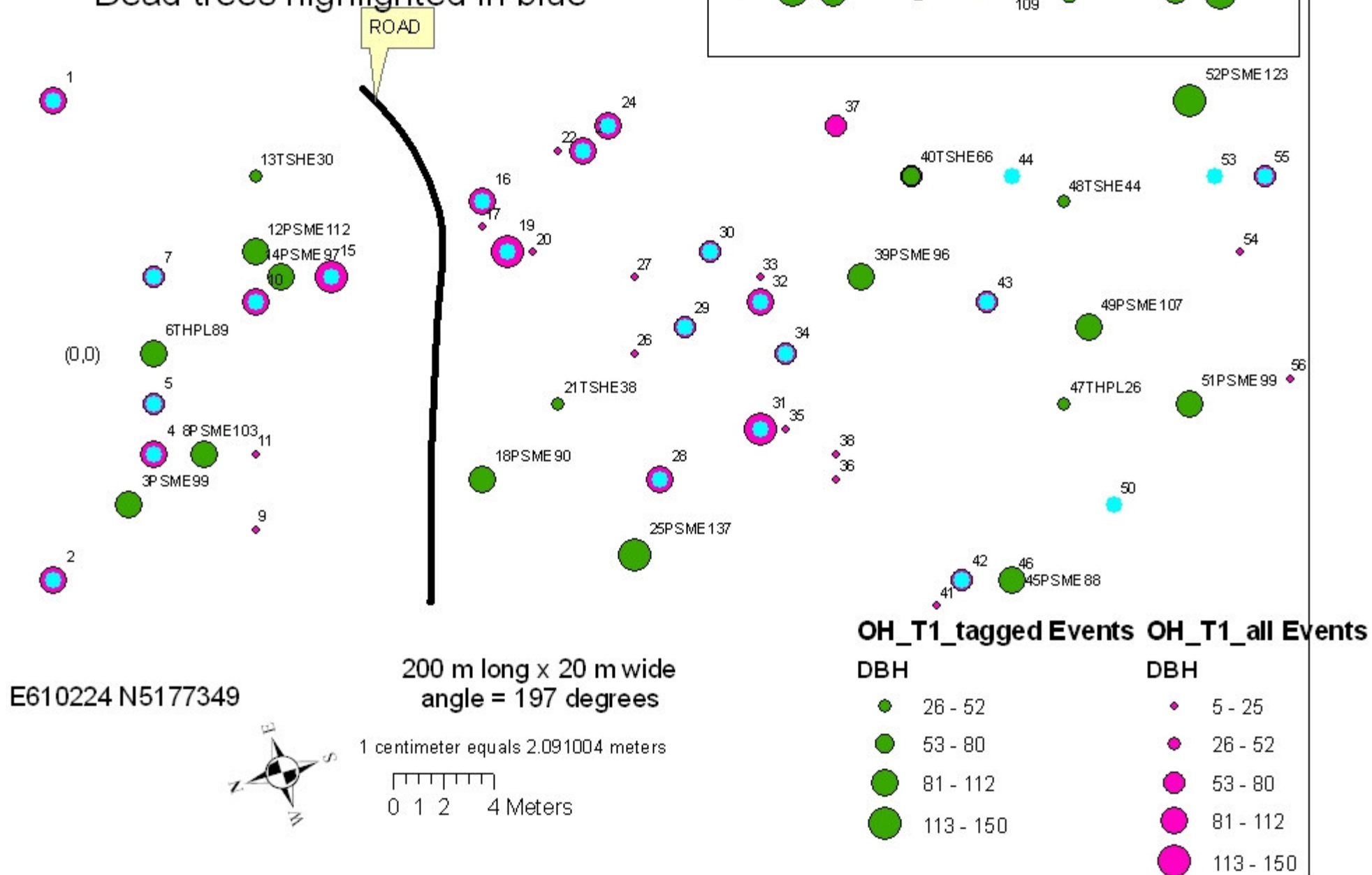
DBH



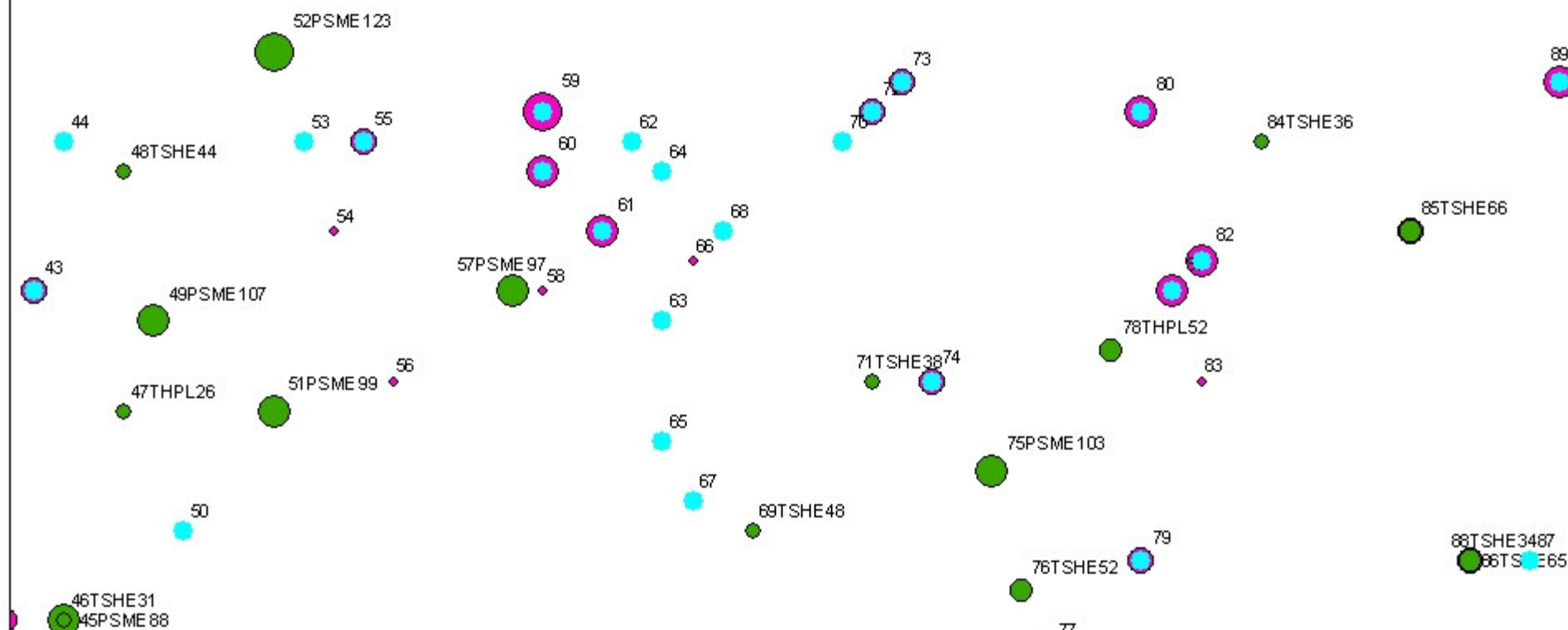
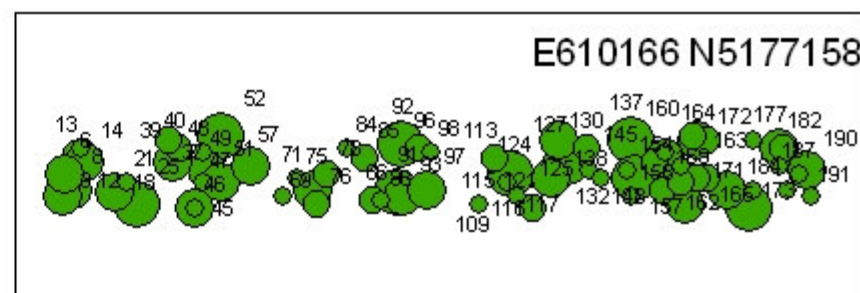
DBH



# Ohanapecosh Transect 1 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue



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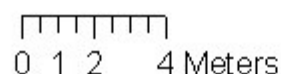


E610224 N5177349

200 m long x 20 m wide  
 angle = 197 degrees

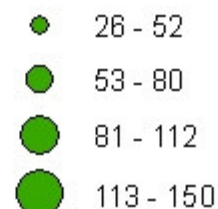


1 centimeter equals 2.093599 meters

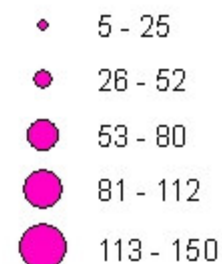


OH\_T1\_tagged Events OH\_T1\_all Events

DBH

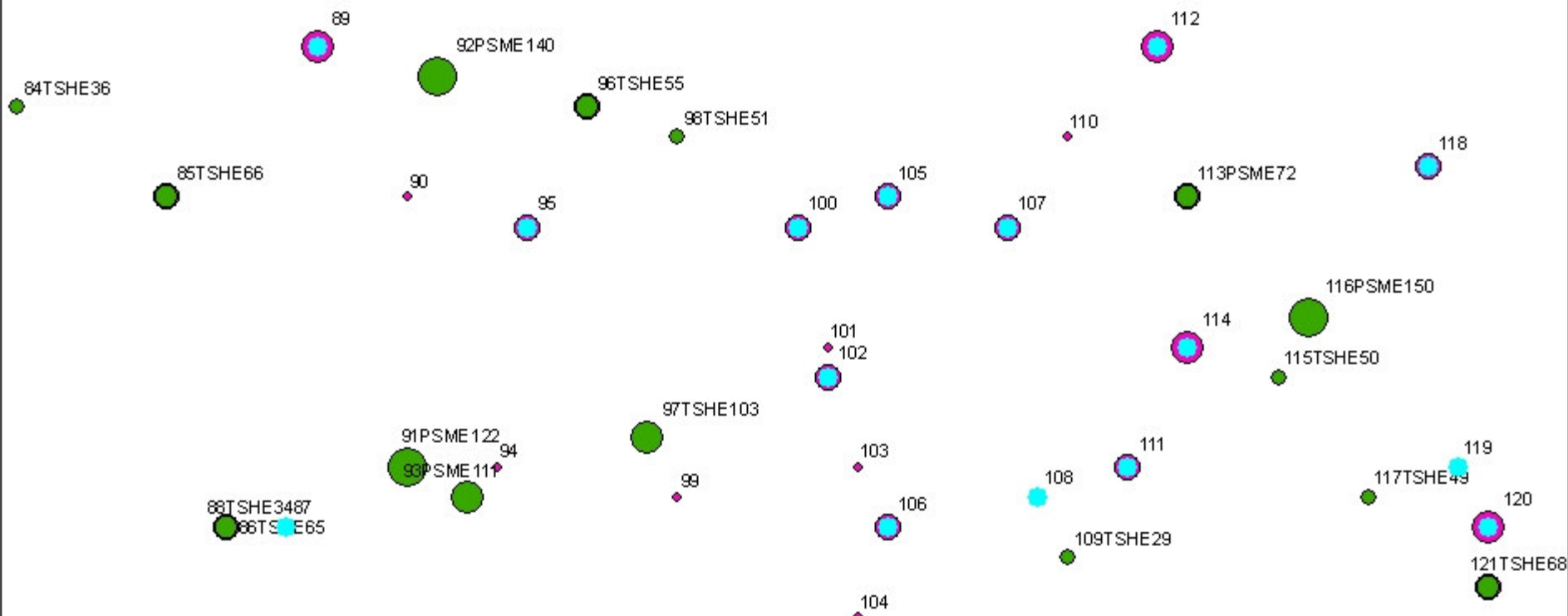
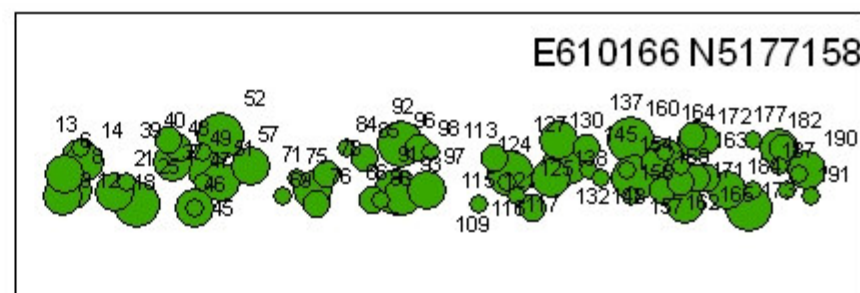


DBH





Ohanapecosh Transect 1 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue

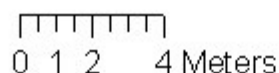


E610224 N5177349

200 m long x 20 m wide  
 angle = 197 degrees

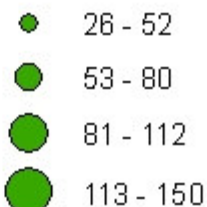


1 centimeter equals 2.093599 meters

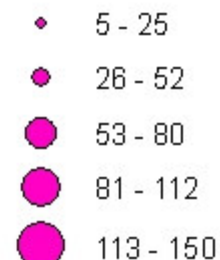


OH\_T1\_tagged Events OH\_T1\_all Events

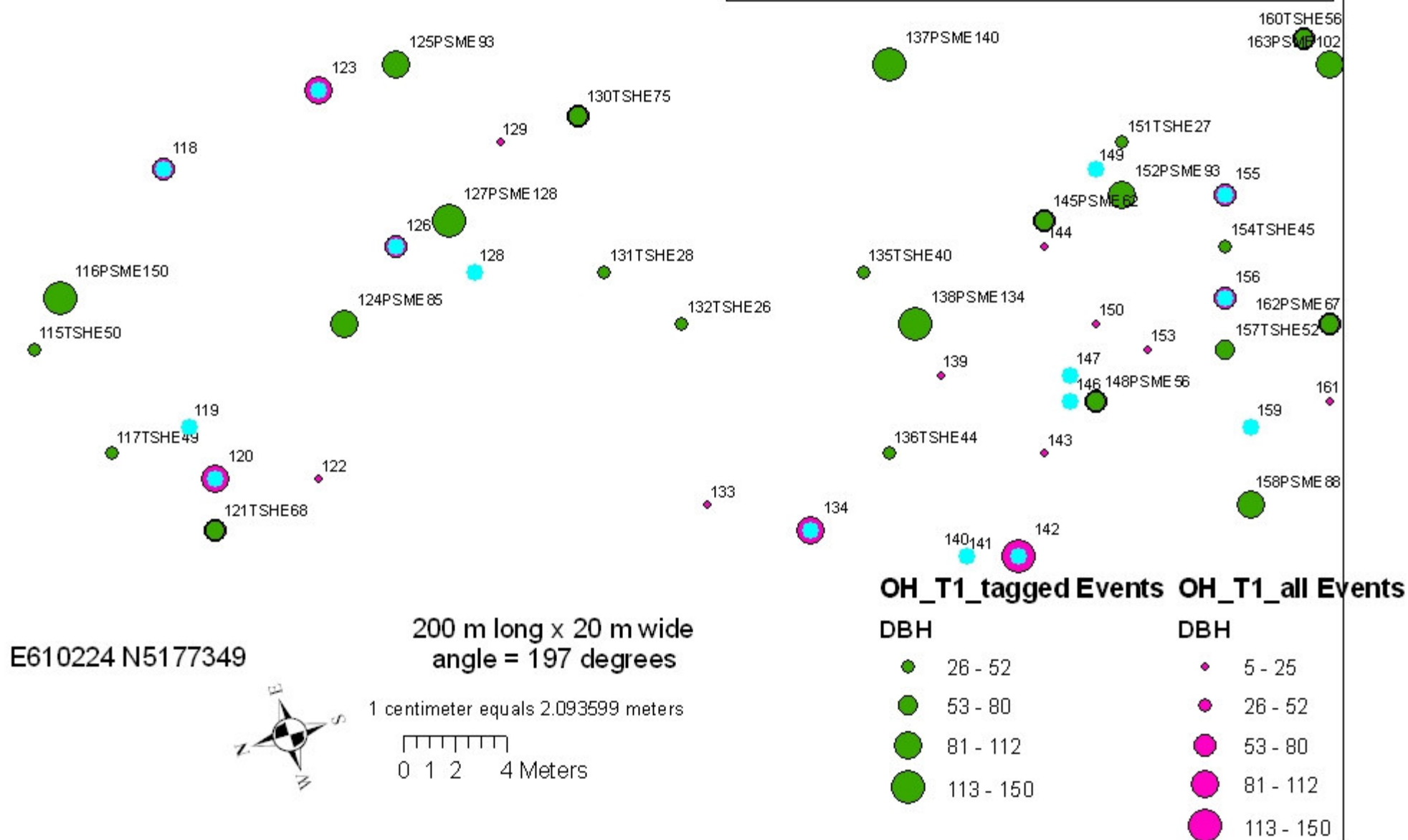
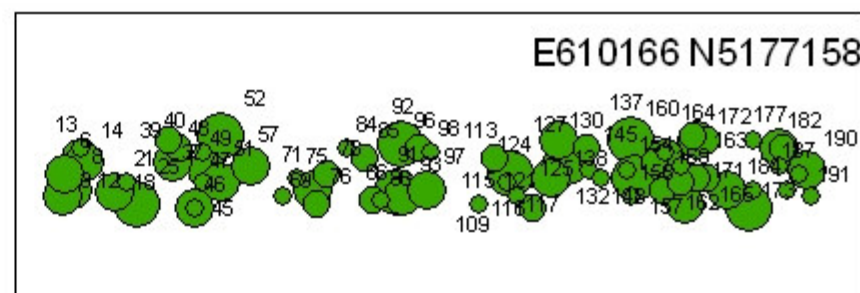
DBH



DBH



# Ohanapecosh Transect 1 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue





## Ohanapecosh Transect 2

Live tagged trees  $\geq 25\text{cm}$  dbh in green

E610117 N5177254

200 m long x 20 m wide  
angle = 359 degrees

1 centimeter equals 8.769774 meters

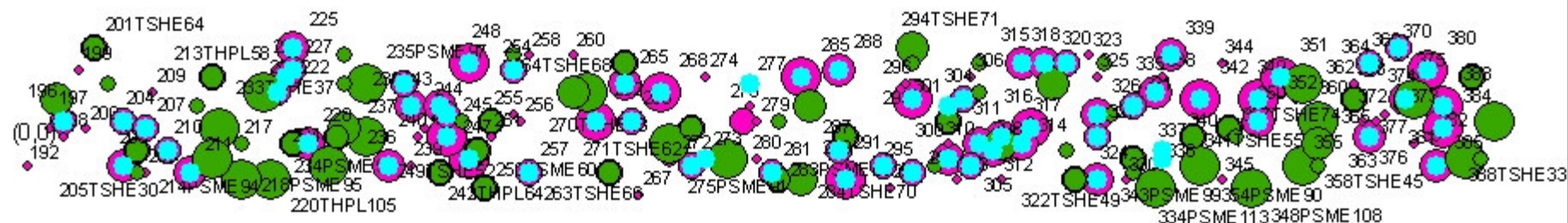
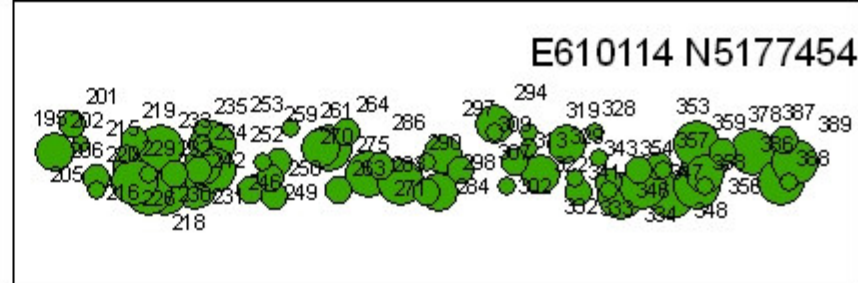
0 4 8 16 Meters

**OH\_T2\_tagged Events****DBH**

- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 114



Ohanapecosh Transect 2 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue



E610117 N5177254

200 m long x 20 m wide  
 angle = 359 degrees

1 centimeter equals 8.775774 meters



0 5 10 20 Meters

## Legend

OH\_T2\_tagged Events OH\_T2\_all Events

DBH

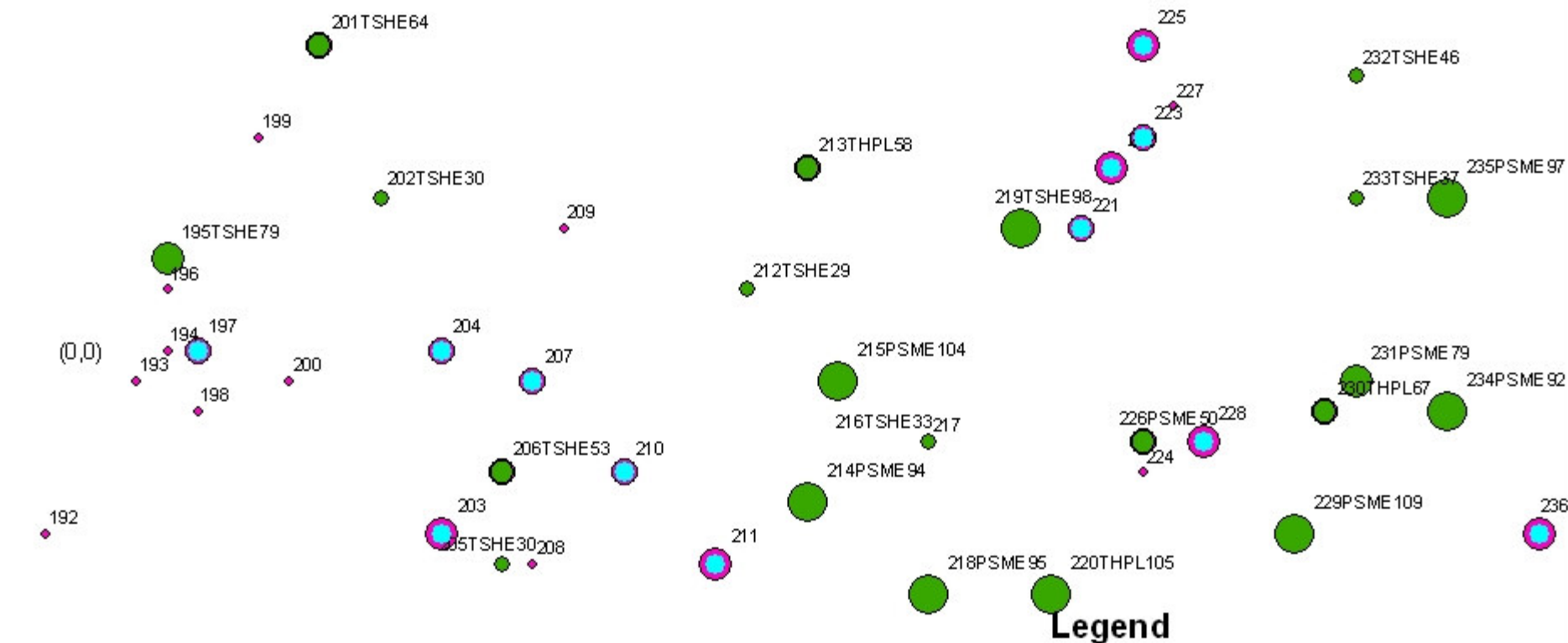
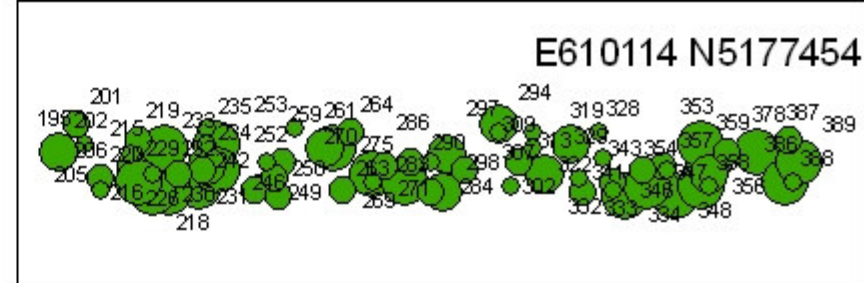
- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 114

DBH

- 5 - 25
- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 130



Ohanapecosh Transect 2 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue



### Legend

OH\_T2\_tagged Events OH\_T2\_all Events

DBH

- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 114

DBH

- 5 - 25
- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 130

E610117 N5177254

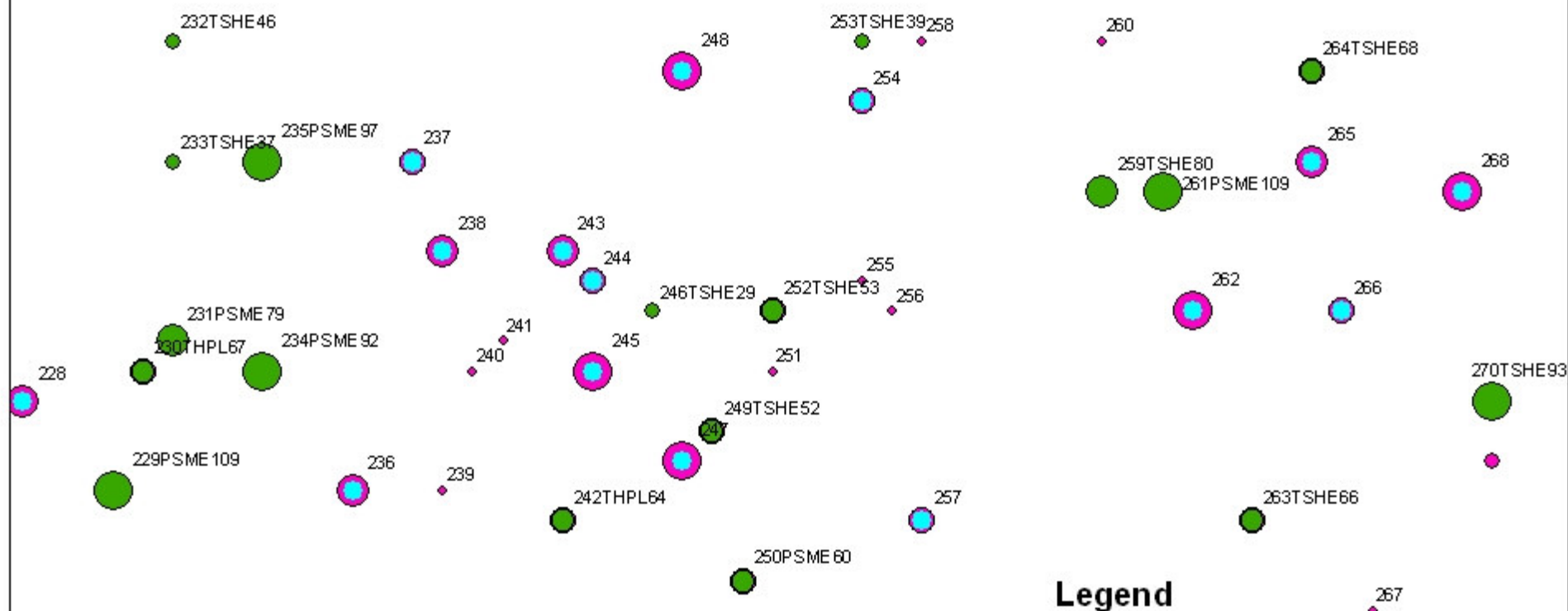
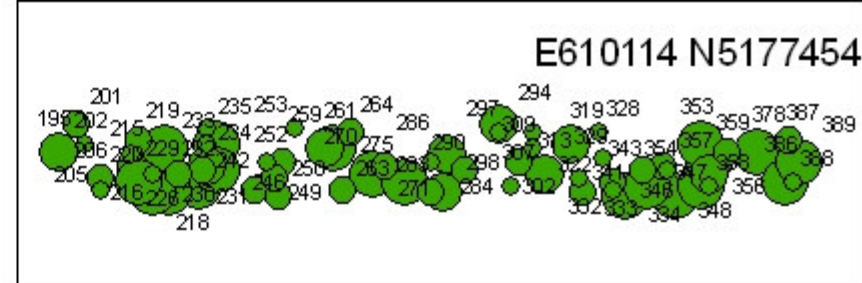
200 m long x 20 m wide  
 angle = 359 degrees

1 centimeter equals 2.083131 meters

0 1.25 2.5 5 Meters



Ohanapecosh Transect 2 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue



E610117 N5177254

200 m long x 20 m wide  
 angle = 359 degrees

1 centimeter equals 2.082532 meters

0 1 2 4 Meters



### Legend

OH\_T2\_tagged Events OH\_T2\_all Events

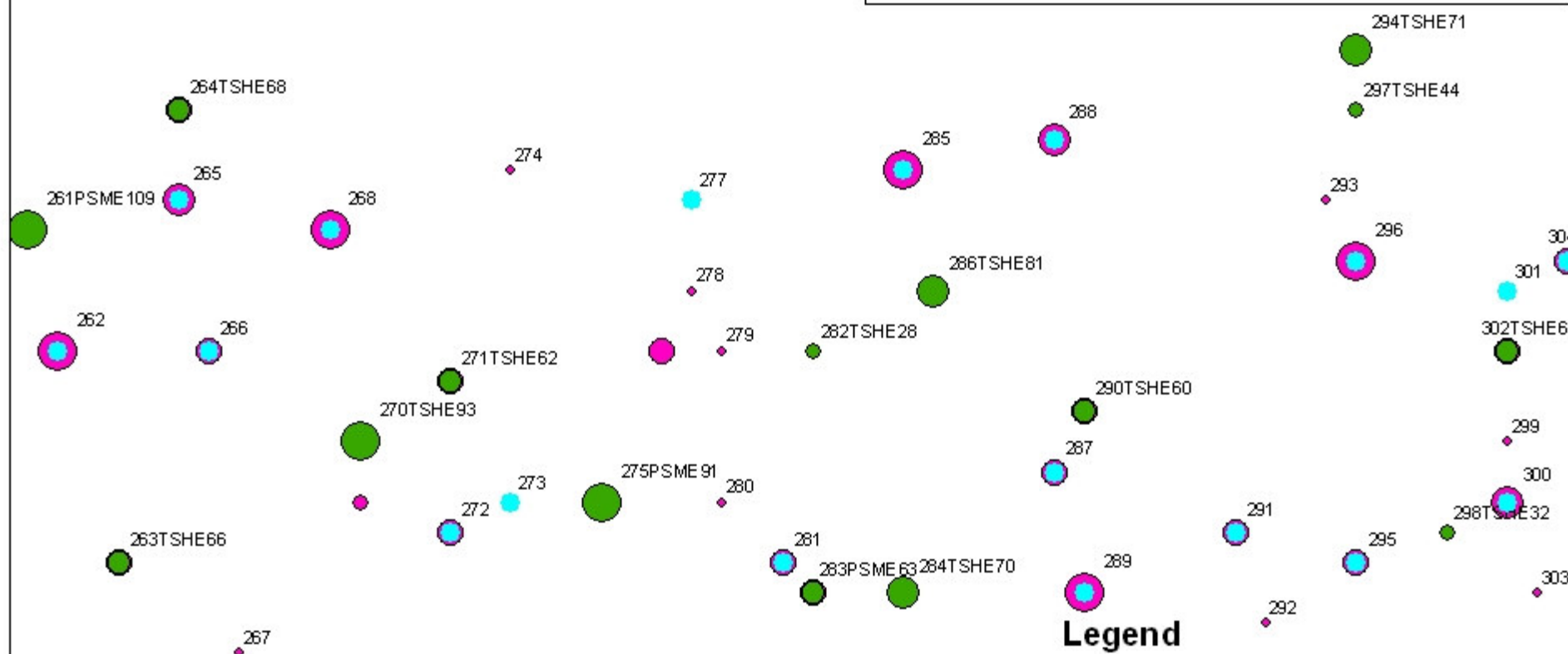
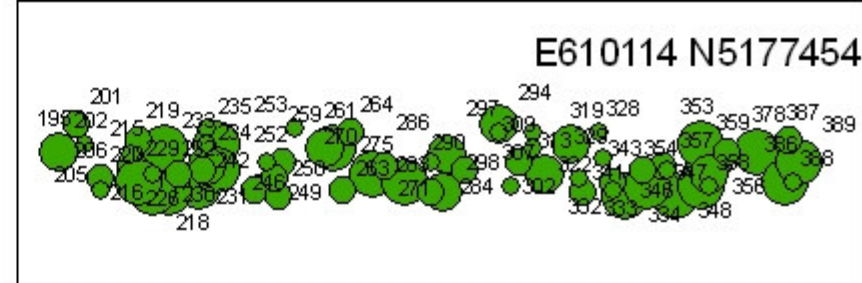
DBH

- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 114

DBH

- 5 - 25
- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 130

Ohanapecosh Transect 2 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue



E610117 N5177254

200 m long x 20 m wide  
 angle = 359 degrees

1 centimeter equals 2.082532 meters

0 1 2 4 Meters



### Legend

OH\_T2\_tagged Events OH\_T2\_all Events

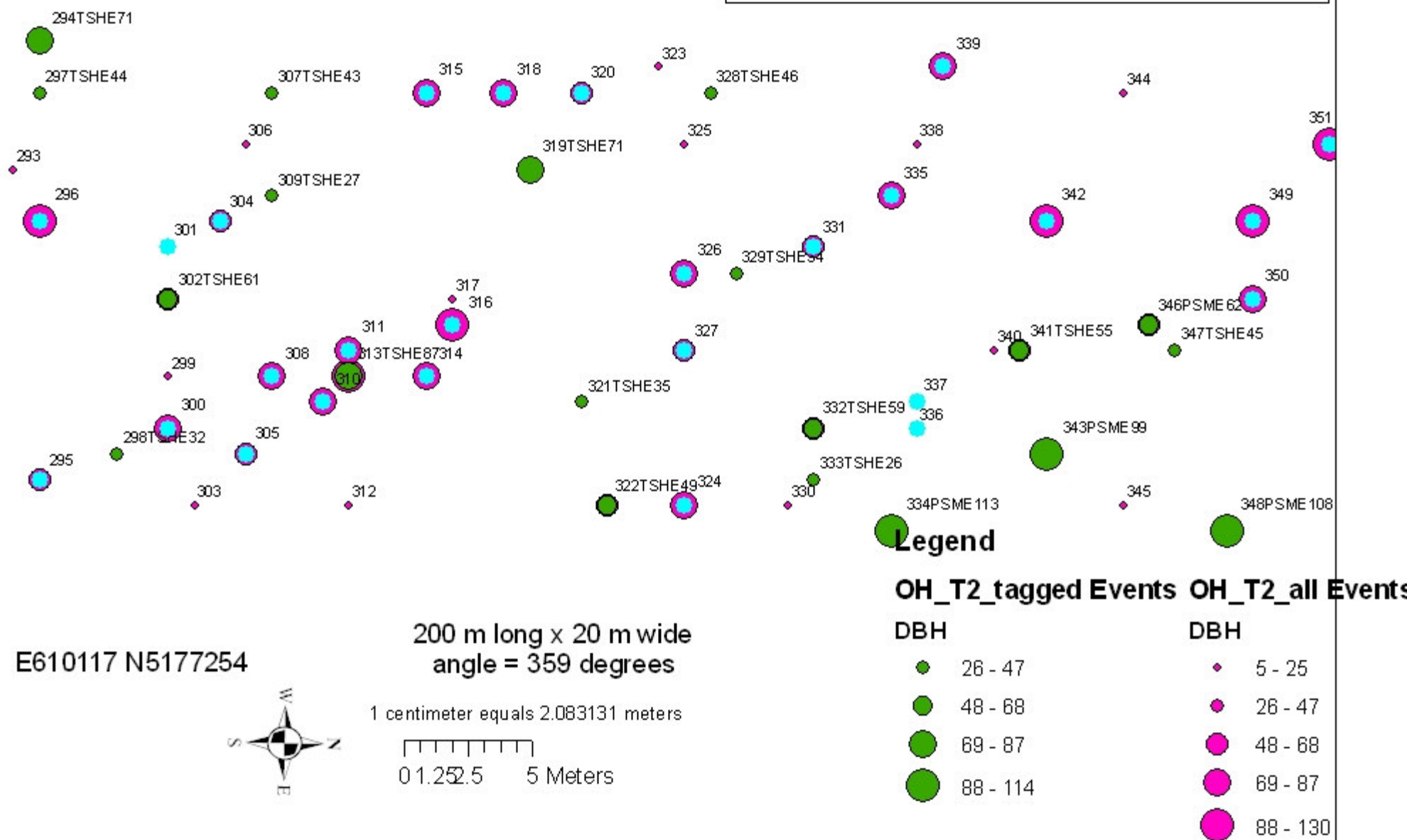
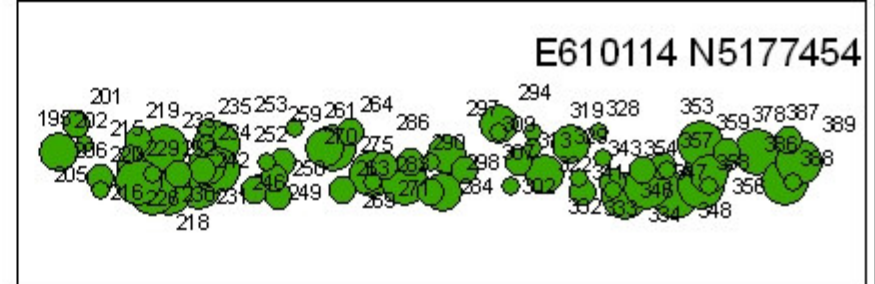
DBH

- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 114

DBH

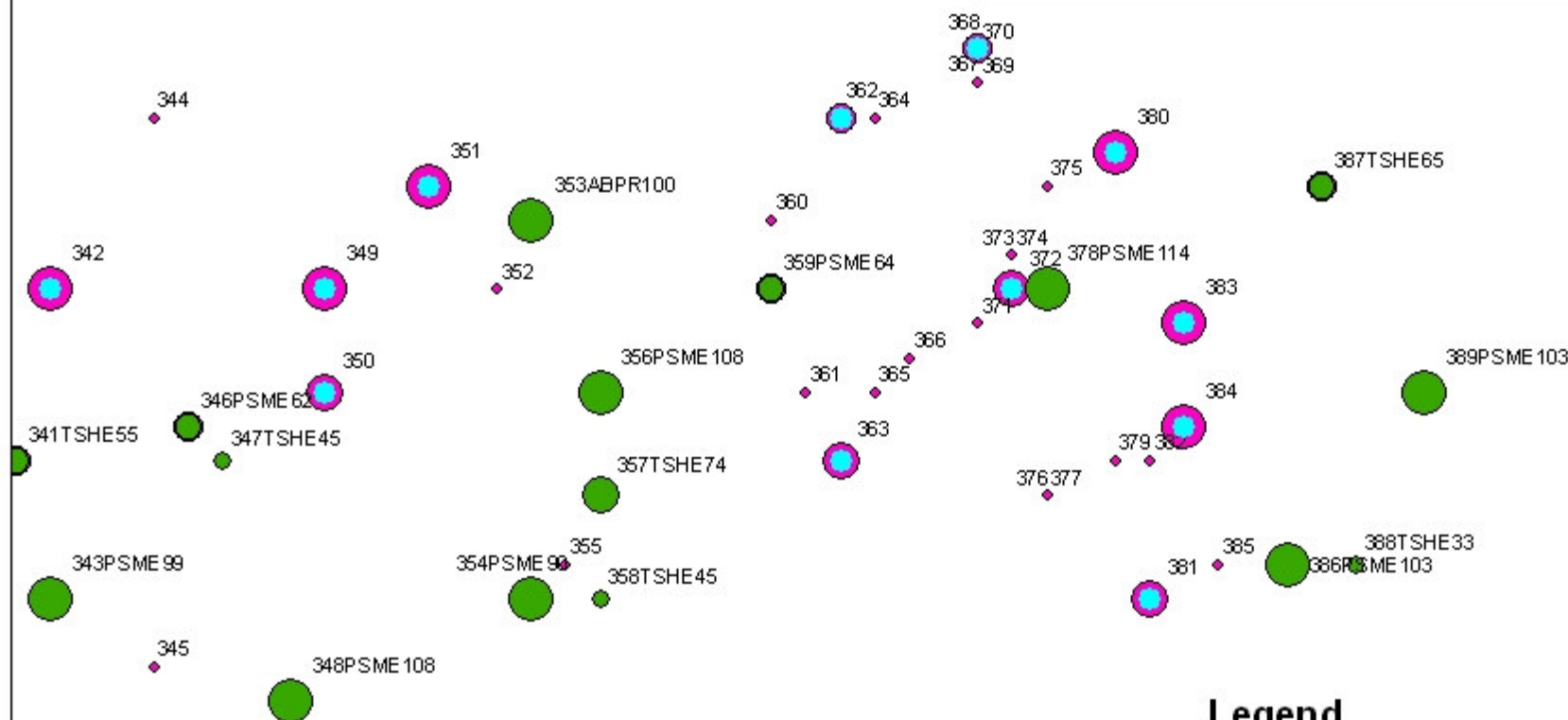
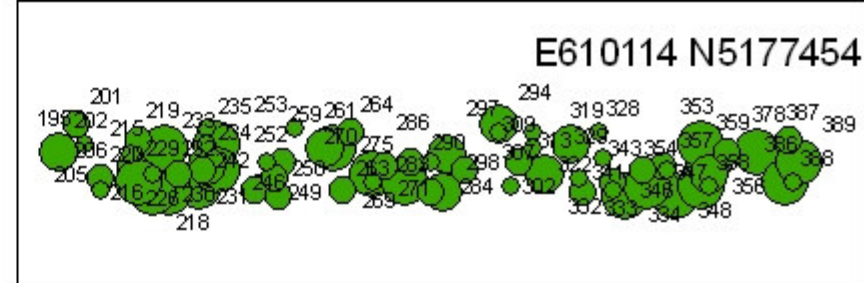
- 5 - 25
- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 130

Ohanapecosh Transect 2 (all trees)  
Live tagged trees  $\geq 25$ cm dbh in green  
Dead trees highlighted in blue





Ohanapecosh Transect 2 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue



E610117 N5177254

200 m long x 20 m wide  
 angle = 359 degrees

1 centimeter equals 2.083131 meters

0 1.25 2.5 5 Meters



## Legend

OH\_T2\_tagged Events OH\_T2\_all Events

DBH

- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 114

DBH

- 5 - 25
- 26 - 47
- 48 - 68
- 69 - 87
- 88 - 130







200 m long x 20 m wide  
angle = 190 degrees

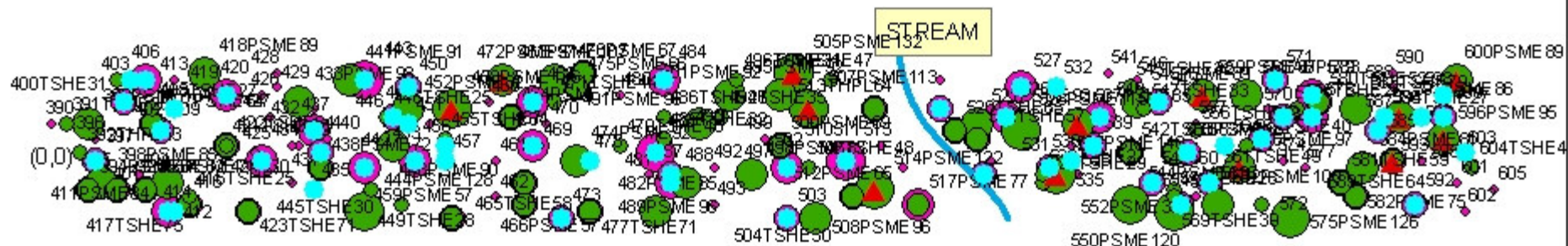
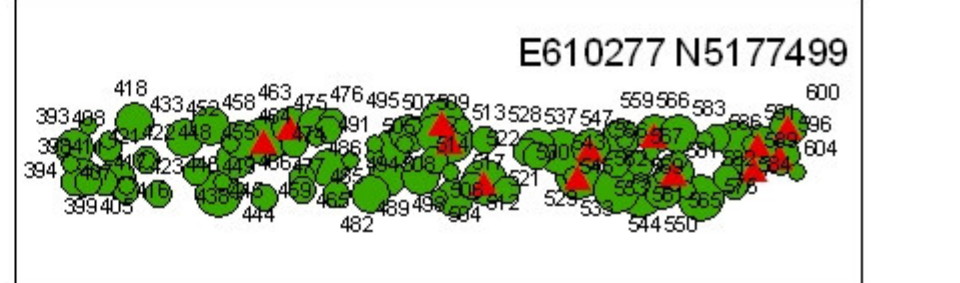


0 5 10 20 Meters

### OH\_T3\_tagged Events

 25 - 49  
 50 - 77  
 78 - 107  
 108 - 140

Ohanapecosh Transect 3 (all trees)  
 Live tagged trees  $\geq 25$ cm dbh in green  
 Dead trees highlighted in blue  
 Red triangles are the rigged trees



## Legend

OH\_T3\_tagged Events OH\_T3\_all Events

DBH

- 25 - 49
- 50 - 77
- 78 - 107
- 108 - 140

DBH

- 5 - 25
- 26 - 49
- 50 - 77
- 78 - 107
- 108 - 140



OH\_T3\_tagged Events selected

E610312 N5177696

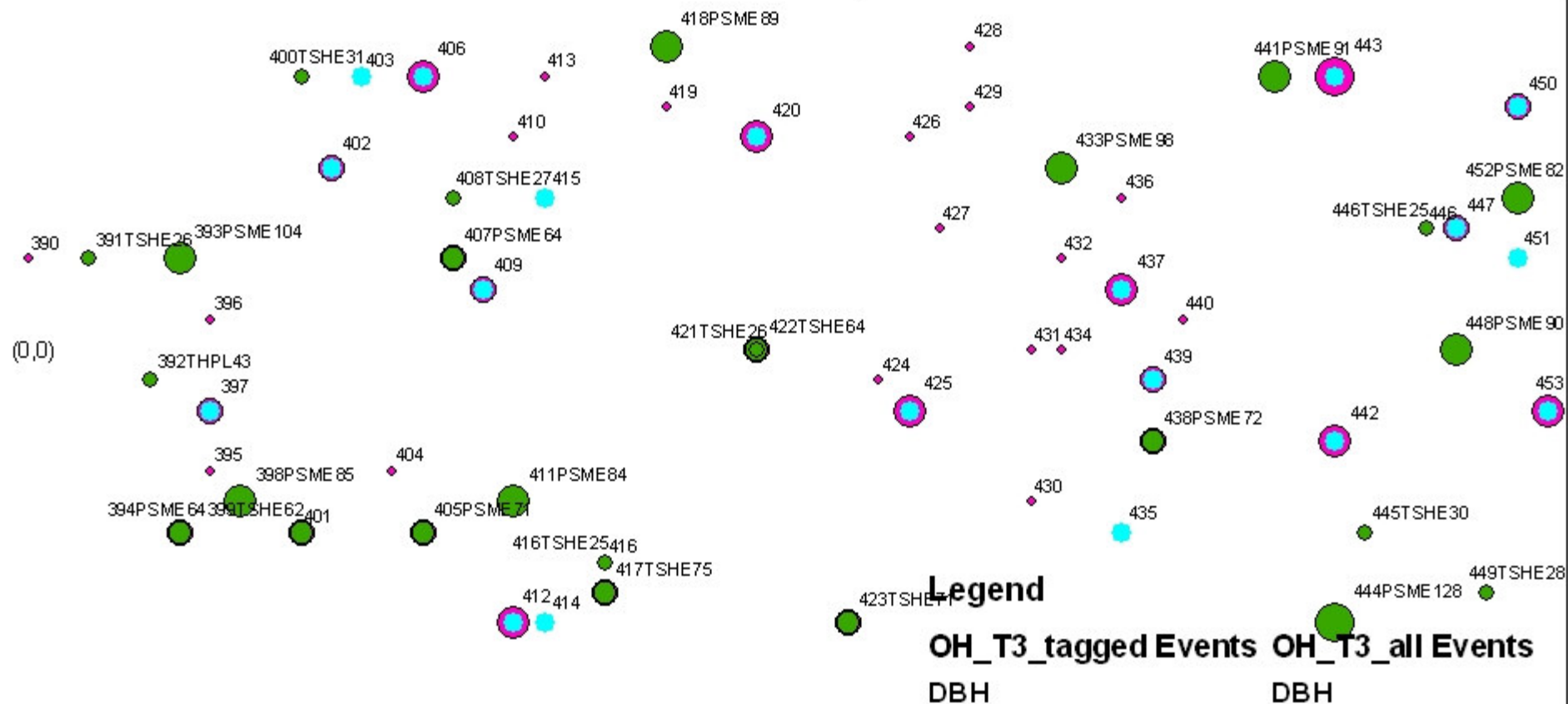
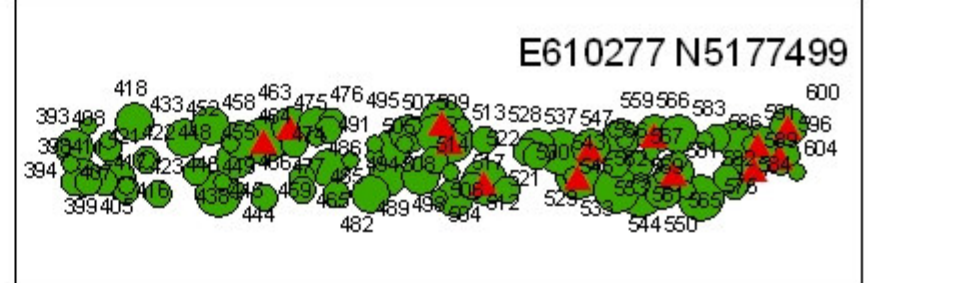
200 m long x 20 m wide  
 angle = 190 degrees



1 centimeter equals 8.718054 meters

0 4.5 9 18 Meters

Ohanapecosh Transect 3 (all trees)  
 Live tagged trees  $\geq 25$ cm dbh in green  
 Dead trees highlighted in blue  
 Red triangles are the rigged trees



E610312 N5177696

200 m long x 20 m wide  
 angle = 190 degrees



1 centimeter equals 2.072663 meters

0 1.25 2.5 5 Meters

### Legend

OH\_T3\_tagged Events OH\_T3\_all Events

DBH

- 25 - 49
- 50 - 77
- 78 - 107
- 108 - 140

DBH

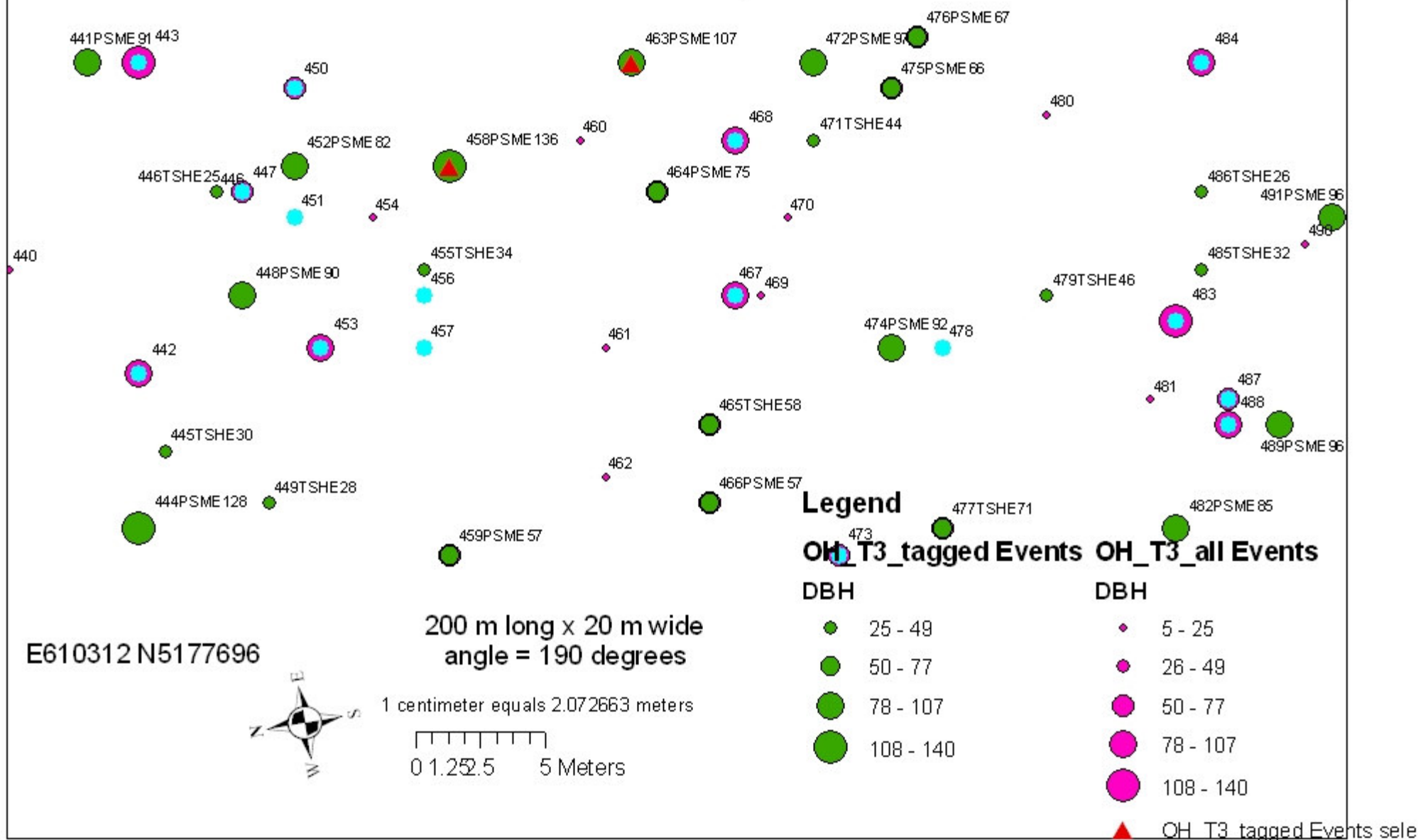
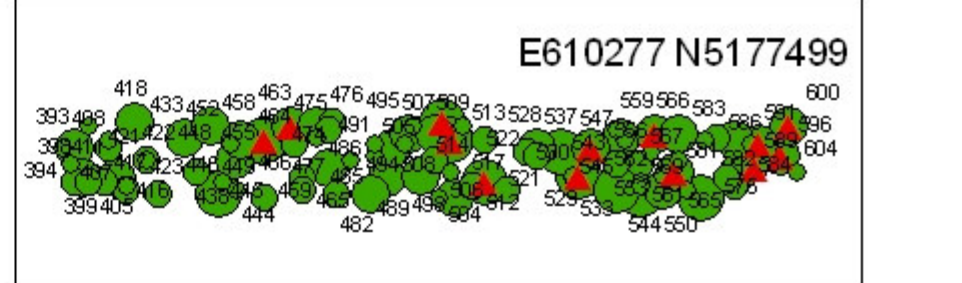
- 5 - 25
- 26 - 49
- 50 - 77
- 78 - 107
- 108 - 140



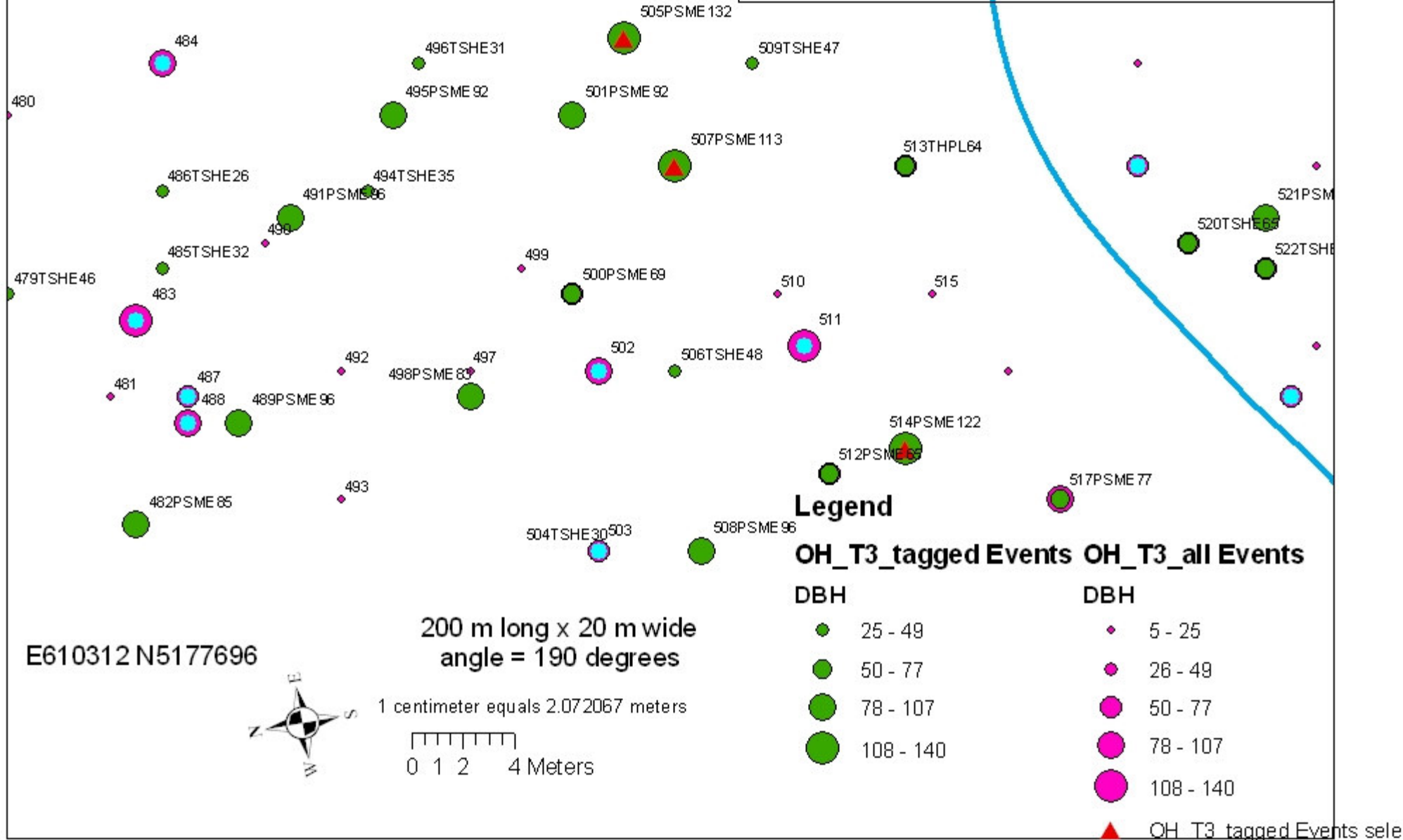
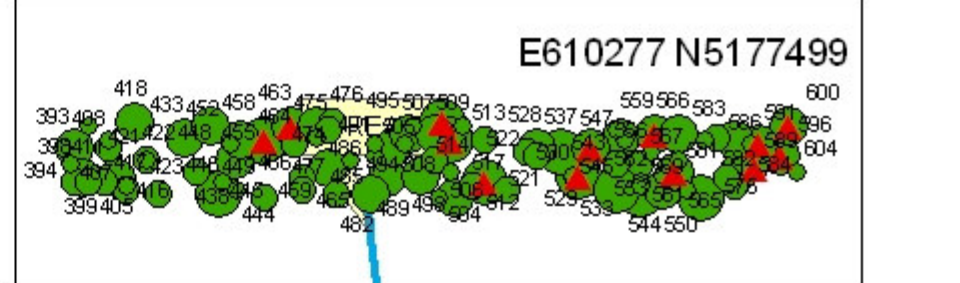
OH\_T3\_tagged Events selected



Ohanapecosh Transect 3 (all trees)  
 Live tagged trees  $\geq 25$ cm dbh in green  
 Dead trees highlighted in blue  
 Red triangles are the rigged trees



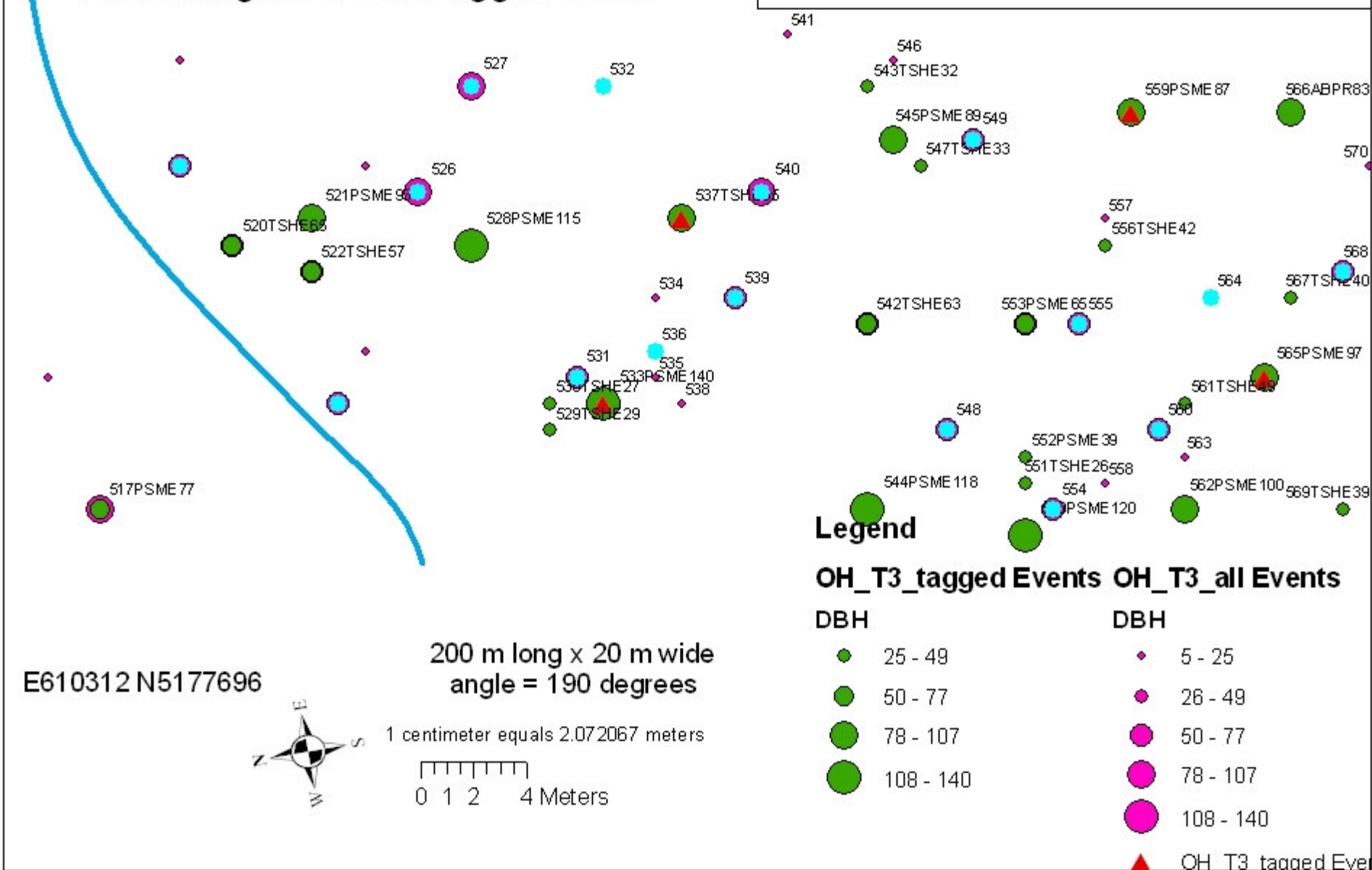
Ohanapecosh Transect 3 (all trees)  
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 Red triangles are the rigged trees



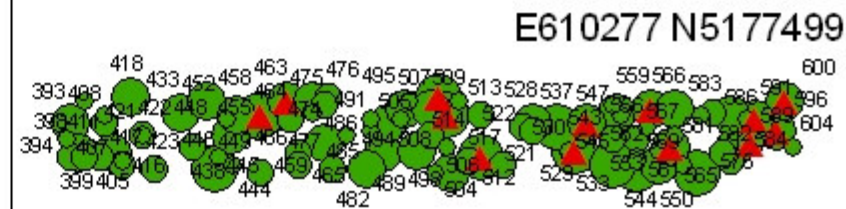


# Ohanapecosh Transect 3 (all trees)

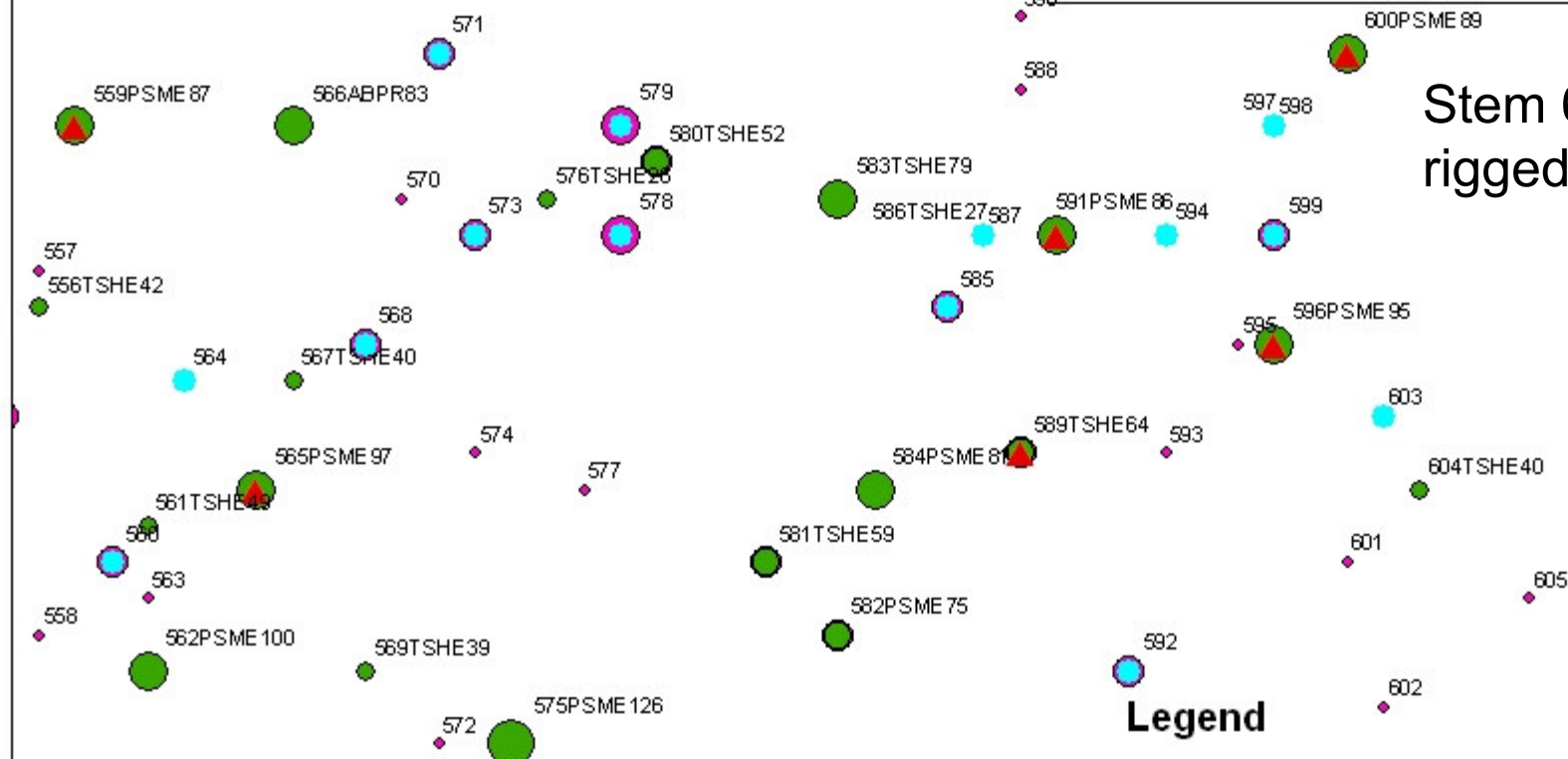
Live tagged trees  $\geq 25$ cm dbh in green  
Dead trees highlighted in blue  
Red triangles are the rigged trees



Ohanapecosh Transect 3 (all trees)  
 Live tagged trees  $\geq 25$ cm dbh in green  
 Dead trees highlighted in blue  
 Red triangles are the rigged trees



Stem 600 is NOT  
 rigged



### Legend

OH\_T3\_tagged Events OH\_T3\_all Events

DBH

- 25 - 49
- 50 - 77
- 78 - 107
- 108 - 140

DBH

- 5 - 25
- 26 - 49
- 50 - 77
- 78 - 107
- 108 - 140



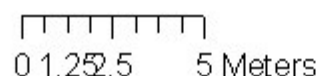
OH\_T3\_tagged Events selected

E610312 N5177696



200 m long x 20 m wide  
 angle = 190 degrees

1 centimeter equals 2.072663 meters



## Ohanapecosh Transect 4

Live tagged trees  $\geq 25\text{cm}$  dbh in green

E610290 N5177427

200 m long x 20 m wide  
angle = 181 degrees

1 centimeter equals 8.769774 meters

0 4 8 16 Meters

**OH\_T4\_tagged Events****DBH**

- 26 - 50
- 51 - 81
- 82 - 106
- 107 - 145

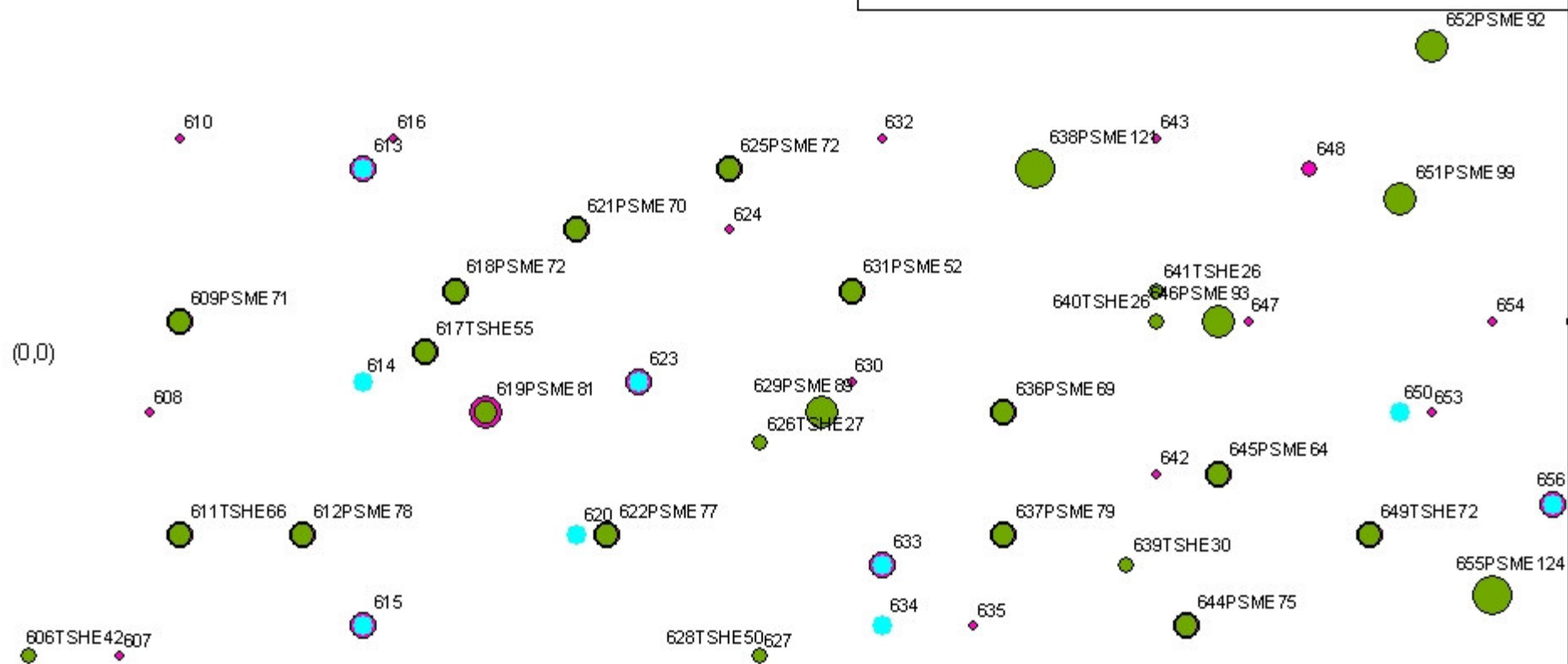
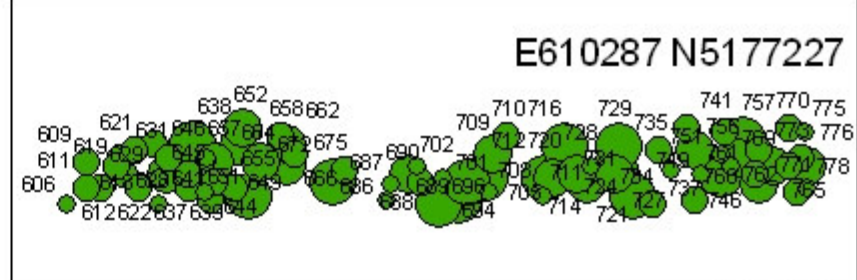
Ohanapecosh Transect 4 (all trees)  
 Live tagged trees  $\geq 25\text{cm}$  dbh in green  
 Dead trees highlighted in blue

E610287 N5177227





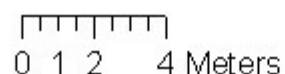
# Ohanapecosh Transect 4 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue



E610290 N5177427

200 m long x 20 m wide  
angle = 181 degrees

1 centimeter equals 2.083131 meters



OH\_T4\_tagged Events OH\_T4\_all Events

DBH

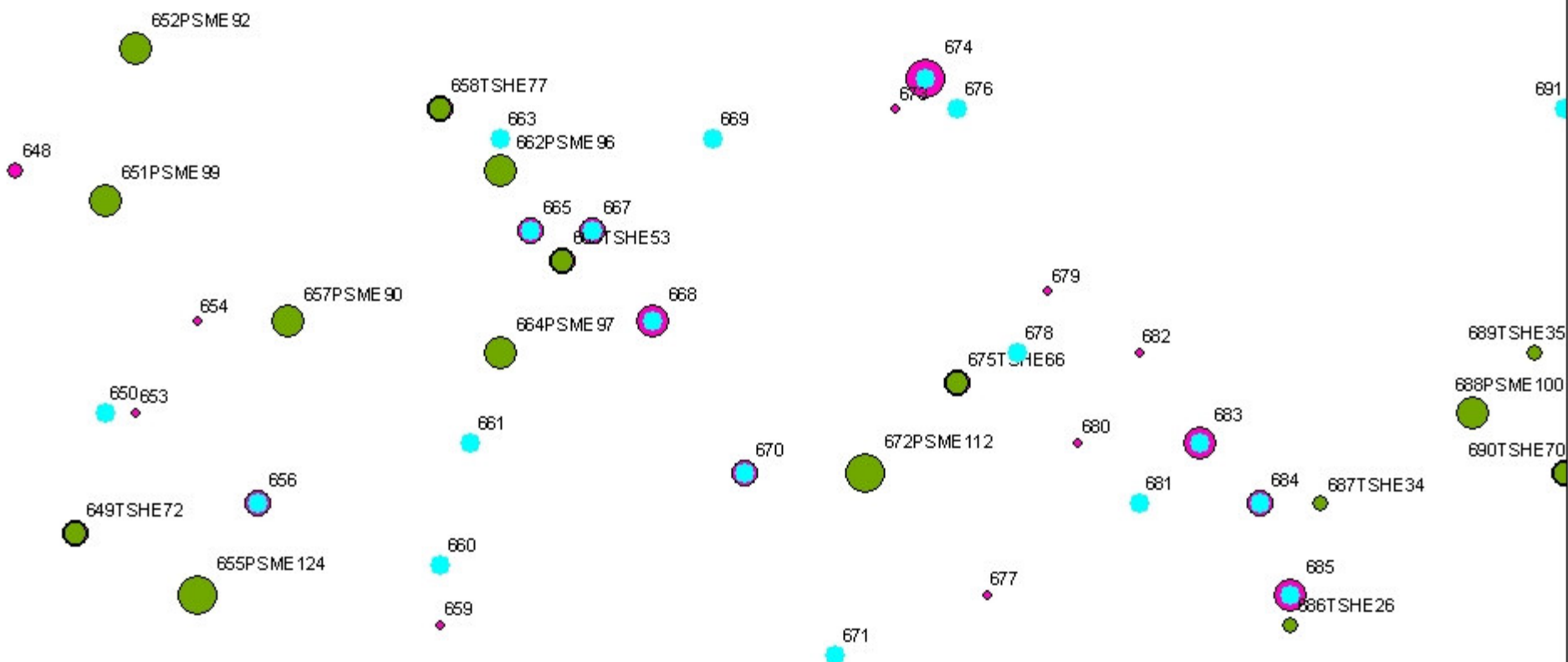
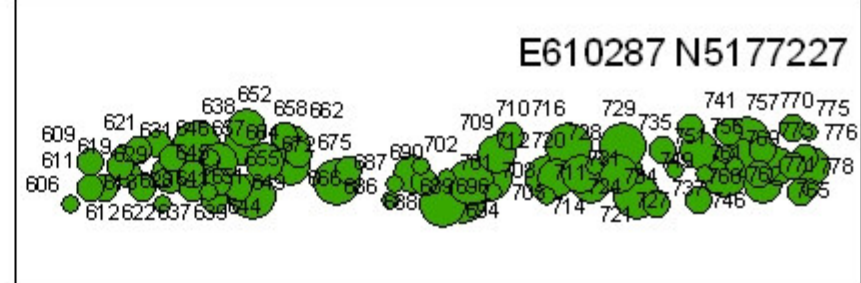
- 26 - 50
- 51 - 81
- 82 - 106
- 107 - 145

DBH

- 5 - 25
- 26 - 50
- 51 - 81
- 82 - 106
- 107 - 145



# Ohanapecosh Transect 4 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue



E610290 N5177427

200 m long x 20 m wide  
angle = 181 degrees

1 centimeter equals 2.083131 meters

0 1 2 4 Meters



OH\_T4\_tagged Events OH\_T4\_all Events

DBH

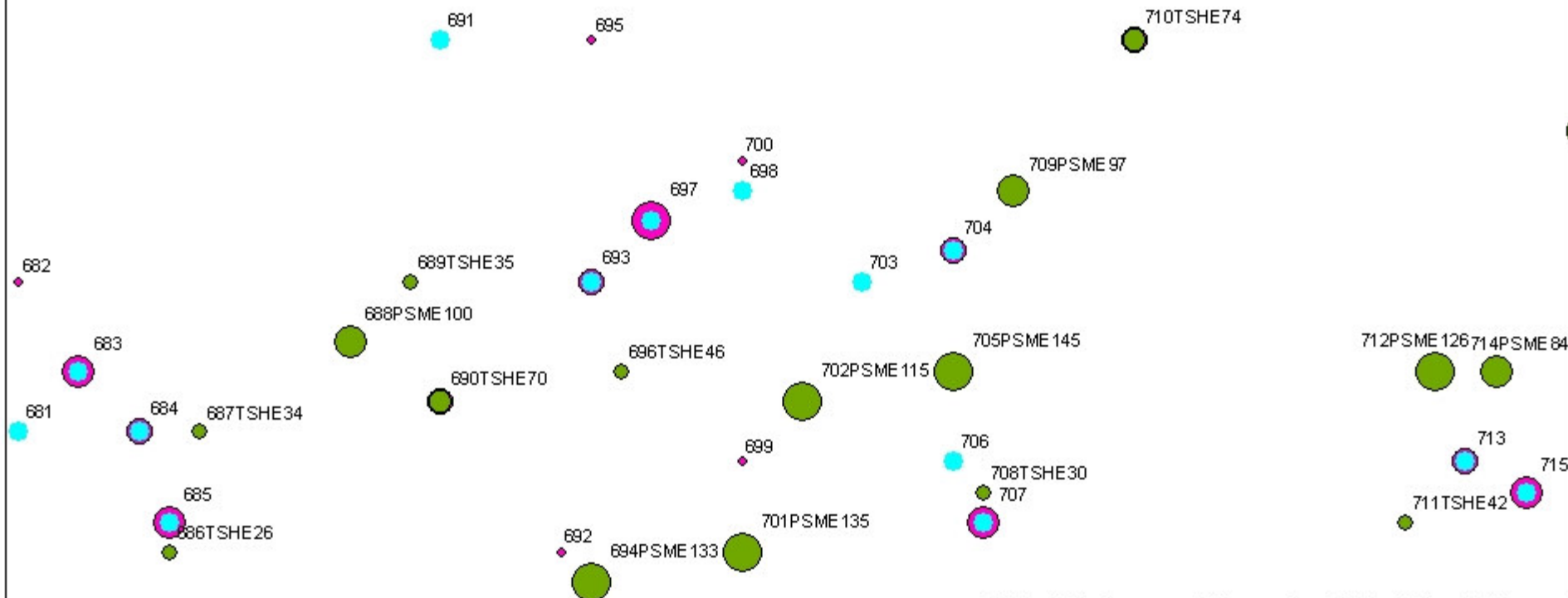
- 26 - 50
- 51 - 81
- 82 - 106
- 107 - 145

DBH

- 5 - 25
- 26 - 50
- 51 - 81
- 82 - 106
- 107 - 145

# Ohanapecosh Transect 4 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue

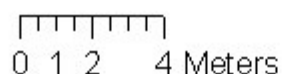
E610287 N5177227



E610290 N5177427

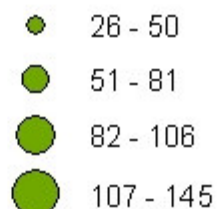
200 m long x 20 m wide  
 angle = 181 degrees

1 centimeter equals 2.083131 meters

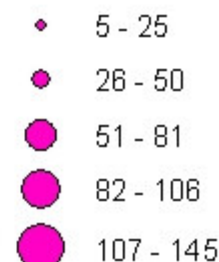


OH\_T4\_tagged Events OH\_T4\_all Events

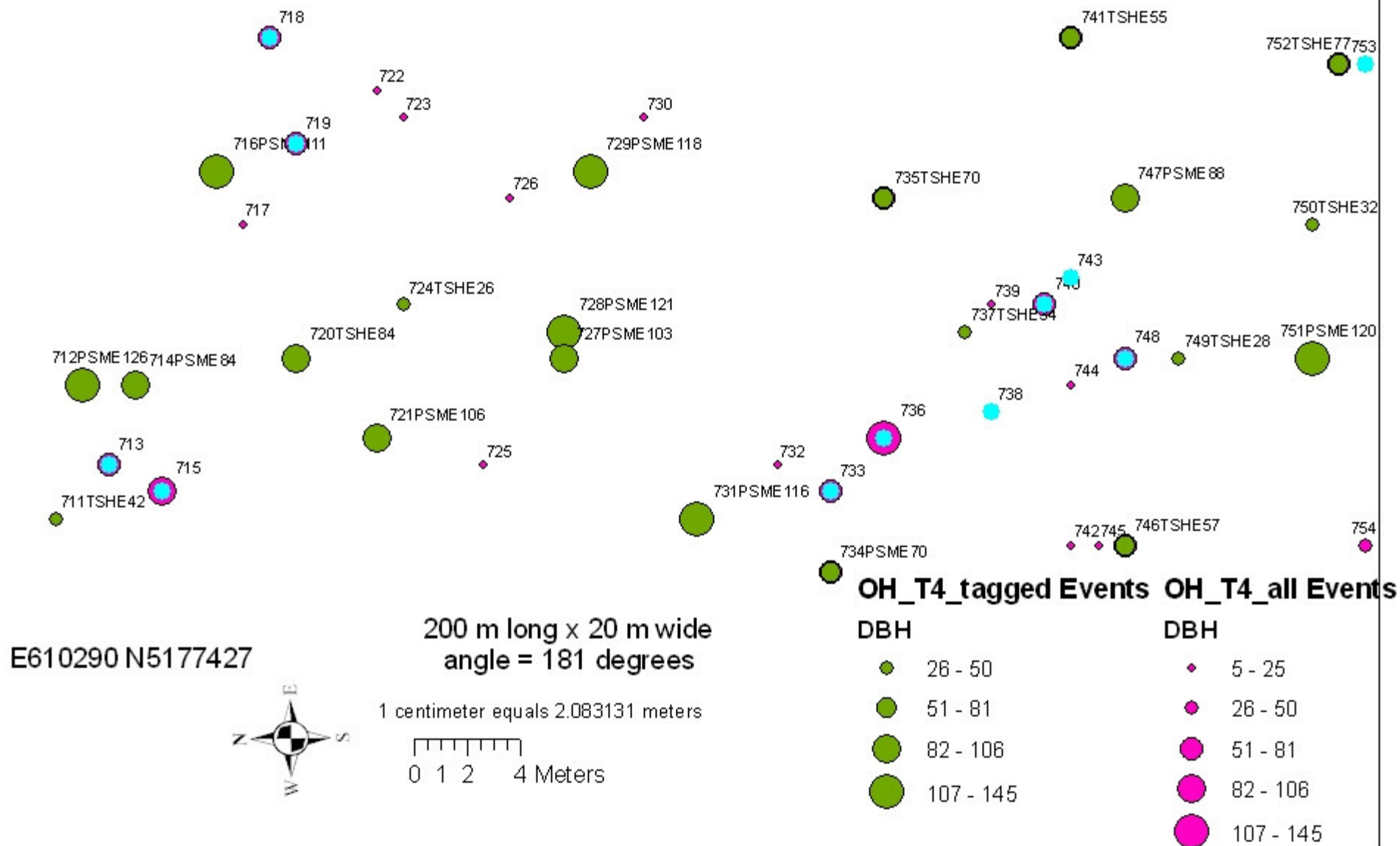
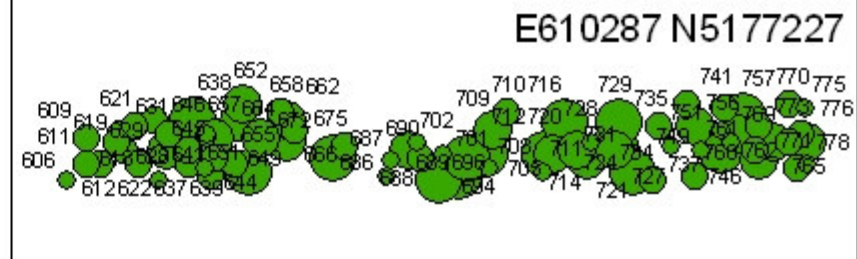
DBH



DBH



# Ohanapecosh Transect 4 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue





# Ohanapecosh Transect 4 (all trees) Live tagged trees $\geq 25\text{cm}$ dbh in green Dead trees highlighted in blue

