

## QUICK CALCULATIONS FOR THE FIELD

### Length:

Feet to Meters Cheat Sheet	
Feet	Meters
1	0.305
10	3.05
25	7.62
50	15.24
100	30.48
1 Yard	0.91



Area Conversion Chart			
Hectare	x 10000	=	Square meters*
Acres	x .4046	=	Hectares
Acres	x .0016	=	Square miles
Acres	x 4046	=	Square meters
Square feet	x .093	=	Square meters

\* Length and width of 1 hectare are 100m

### Area:

- Below is the equation for the area of a circle:
  - $Area = \pi(radius)^2$       Where  $\pi = 3.14$

Radius Cheat Sheet	
Radius (m)	Circle area (square m)
0.6	1
0.8	2
1	3
1.1	4
1.3	5
1.8	10
2.2	15
2.5	20
5.6	100

- When recording a radius, do not record anything less than .6m (= 1 square meter)

- **SIGHT ESTIMATIONS:**

Site Estimation Cheat Sheet	
1 acre	Half standard soccer field
1 square mile	320 standard soccer fields
1 square meter	Half the area of a doorway
100 square meters	Half of a tennis court

- From 49 Sky Oaks Road to Bon Tempe Lake Trailhead = .5 mile (example; pick your own familiar local landmarks)
- This German shepherd is inside a square meter box.



**Calculating Labor Hours (for Weed Manager or other):**

- .05 hours = 3 min
- .1 hours = 6 min
- .25 hours = 15 min
- .33 hours = 20 min
- .66 hours = 40
- .92 hours = 55 min

## DISTANCE ESTIMATION EXERCISES

### 1. Pacing

A pace is two steps. Knowing how many meters in a pace, or 10 paces, will help you in many mapping, monitoring, and orienteering situations. Understanding how your paces change with differences in terrain will make your distance estimates more accurate.

Lay out a meter-tape to 20 meters over a piece of flat, level ground. Walk as you usually would, counting your paces (or steps) over the 20 meters. Record the number of paces (or steps) in 20m, turn around, and walk back, counting your paces. Repeat this 5 times. Repeat the exercise on a slope and on variable terrain.

# of paces (or steps) in 20 meters:

	Flat ground	Uphill	Downhill	Variable
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
Total	_____	_____	_____	_____
Meters/pace	_____	_____	_____	_____

To determine the number of meters in your pace, divide the number of meters by the number of paces (e.g., if it took me 25 paces to go 20m my pace would be 0.8m, and in 10 paces I would travel about 8m). How different is it in each situation?

### 2. Cover Estimation

Use the “cheat sheet” with different cover levels represented to visually estimate cover within a square meter quadrat frame.

Using cover classes. Discuss implications of using ranges of cover values (i.e. cover classes).

Practice estimating cover of trees (all types and split by species), shrubs, (broom, coyote brush etc.), and grasses. Notice how lifeform skews cover estimates.

Gross area versus infested area:

Gross = the area of the polygon around the entire infestation

Infested = the area actually covered by the plant (“squished” to 100% cover), sometimes obtained by multiplying gross area by % cover (or midpoint of cover class)

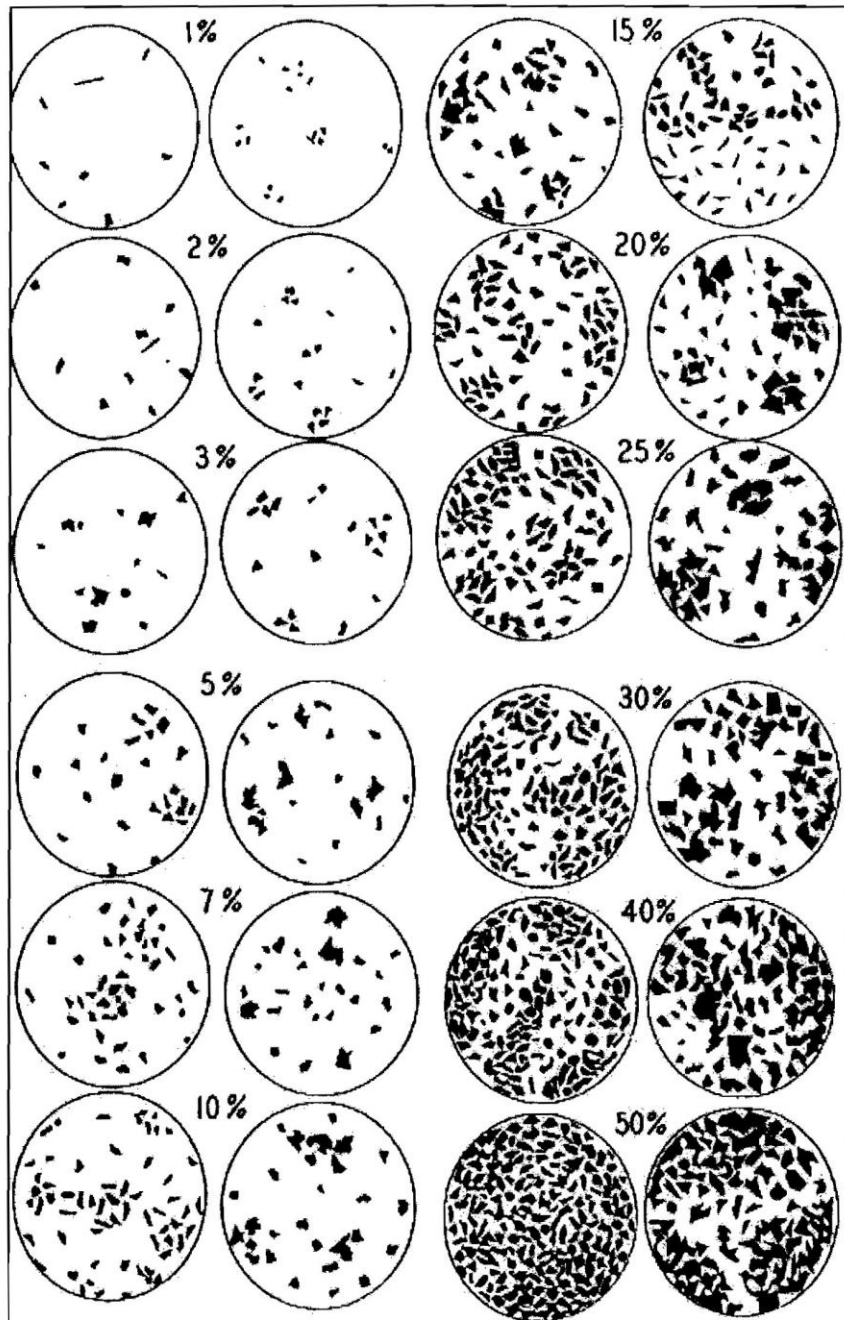


Figure 13-4. Reference plots for cover estimation.

CNPS COVER DIAGRAMS

