

Greenline

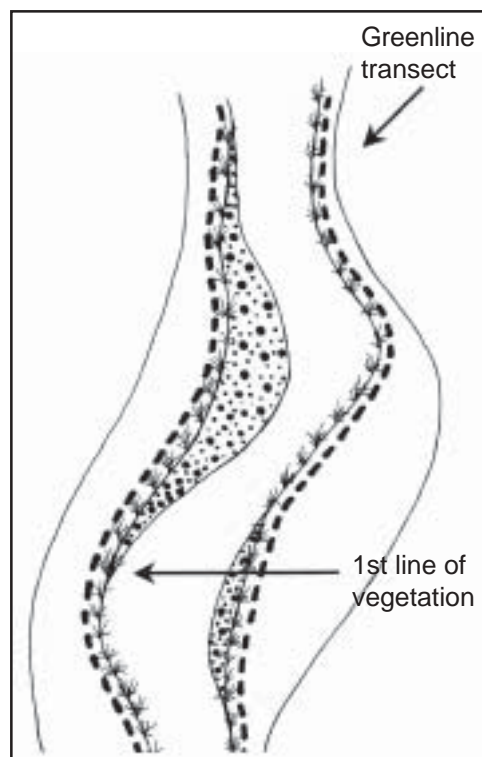
Time – 30 minutes

Persons – 2

Materials –

- Flagging
- Tape measure
- Greenline worksheet
- Plant guide (optional)

The Greenline Transect



1. Measure a 100 foot stretch along the stream. Place a flag near the water at the beginning and end points.
2. Standing at the first flag, note the vegetation type that is closest to the water and record it in row 1 of the worksheet.
3. Take one pace toward the other flag and stop. A pace is a normal stride you would take while walking. Look toward the water and record the vegetation type closest to the water by placing a slash mark in the appropriate box. See the Teacher Resource page for definitions of vegetation types.
4. Repeat these steps until you reach the other flag.
5. Tally the number of slash marks in each box and record this for each category in row 2.
6. Add up all the observations and record that total in row 3.
7. For each vegetation category, divide the number in row 2 by the number in row 3, and record in row 4. This will give the proportion of the greenline that is made up of that vegetation category.
8. For each vegetation category, multiply the number in row 4 by the factor in row 5 and record in row 6. This will give you the “site score” for each vegetation category. Because sedges and rushes have the strongest roots and prevent erosion the best, they receive the highest factor - “10.” Bare ground doesn’t prevent erosion so it receives the lowest factor – “1.”
9. Add the individual site scores in row 6 to get the “total site score” for that stretch of stream.
10. Compare the site score to the “site scores” box on the worksheet to determine the health of the greenline.

Canopy Cover

Time – 30 minutes

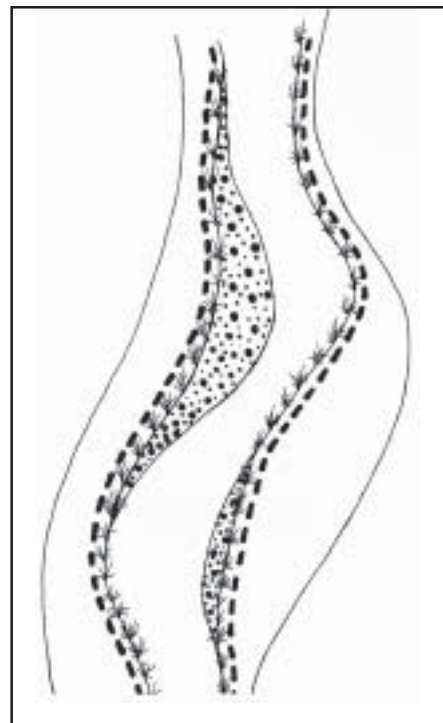
Persons – 2

Materials –

- Ocular tube
- Measuring tape
- Canopy cover worksheet

1. Measure a 100 foot stretch along the stream. Place a flag near the water at the beginning and end points or use the same measurements set out by the greenline group.
2. Standing at the first flag, point the ocular tube straight into the air (90 degree angle) and look through it with one eye. Your partner who is recording data can tell you how to adjust the tube until it is pointing as straight up as possible.
3. Tell the recorder whether the “X” at the end of the tube points at sky (a “miss”) or a part of a tree or bush (a “hit”). Record this in the first row on the canopy cover worksheet.
4. Take one pace toward the other flag and stop. A pace is a normal stride you would take while walking. Again, point the ocular tube straight into the air and record a hit or a miss.
5. Repeat these steps until you reach the other flag.
6. Add the total hits and misses and record in the second row.
7. Add the two scores recorded in row 2. This will tell you the “total number of observations” you took along the transect (the greenline). Record this total in row 3.
8. Divide the number of “hits” in row 2 by the total observations in row 3 and multiply by 100. This will give you the percentage of canopy cover for the transect.

Canopy Cover Transect



Ground Cover

Time – 35 minutes

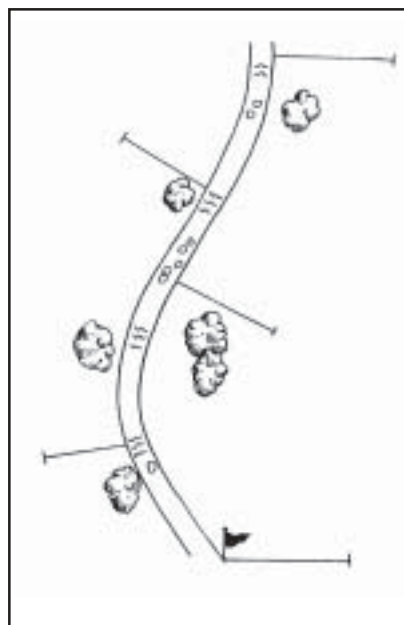
Persons – 2

Materials –

- Measuring tape
- Ground cover worksheet

Note: Riparian ground cover transects start at the stream edge and extend 20 paces away from the stream, into the riparian vegetation.

Ground Cover Transect



1. You will collect data along five separate transects in your stream stretch, spaced out at approximately equal distances along your stream reach. If possible, you should run two transects on one side of the stream and three on the other to get a better picture of the total riparian zone. Refer to the figure to the right for help locating these transects.

2. Begin at your first transect. Starting at the stream's edge, take one pace away from the stream. Touch your finger to the ground at the tip of your front foot.

3. Note the ground cover type that your finger touches. The categories are: bare ground, live vegetation, litter (dead vegetation or sticks) or rock. Record the type with a slash in the appropriate box on the ground cover worksheet. Note that each column on the data chart is for a separate transect.

4. Repeat steps 2 – 3 for 20 paces. Then move on to the second transect. Repeat for all 5 transects.

5. When you've finished with all five transects, add the totals for each row (cover type). This will give you the percentage of each type of ground cover in the riparian zone. To check your math, add your percentages for each ground cover type. They should total 100%.

The percentage of each ground cover type provides a measure of ground cover that can be compared to other sites or used to compare changes over time (between different years or seasons). As a general rule, though, a healthy riparian zone will be covered by a mixture of litter, rock and vegetation. Important exceptions to this are desert streams, which have very sandy banks.