

San Geronimo Valley Stream Conservation Area Field Survey Protocols

A. SCA condition (evaluated per parcel)

- 1) Establish Top of Bank: walk the length of the property parallel to the stream while identifying top of bank. Place TOB green flags ~ every 20 feet to help delineate.
- 2) Measure and record setback distances: from top of bank, measure and record setback distances to all primary living structure(s), setback distances to all secondary structures, and fencing using the **Leica DISTO A5** laser distance meter (range finder).
 - a) Turn range finder on and make sure it is set to feet and inches - it should appear like this at the bottom of the display: - - - ft.
 - b) Point range finder at target and press ON/DIST button once, holding meter fixed on target until it sounds one short beep.
 - c) Read meter and record distance.
 - d) If the range finder emits a long beep and displays an info 255 error code, then retake the measurement. If the problem persists use a flat target such as a clipboard.
 - e) If the target is too far away to see the laser's red dot, use the telescopic viewer on the side of the meter and target with cross hairs.
- 3) Conduct Land Use Survey: This data is collected for the entire area from lot line to lot line wide and from top of bank to 100 ft. from top of bank long for each parcel. Determine % land use using checklist provided. Apportion land use by percentage for the uses listed on the sheet. If you note extant riparian corridor/forest go to Section B next.
 - a) Measure the total length of the stream at top of bank from property line to property line. Use range finder to assist with measurements.
 - b) Multiply measured distance by 100 ft. to determine total SCA area. (Note: this calculation can be done afterwards in the office)
 - c) Use range finder to find length and width of individual land use areas such as paved, structures, pool, patios, etc., and note in space provided. (Note: calculate the area of each individual land use in the office and then use it to determine the % land cover of the total SCA area calculated in previous step, recording each % on data sheet.
 - d) The total of all six land cover categories (and 'other' if applicable) should total 100%.

B. SCA (evaluated per 30'x100' study area)

- 1) When you're estimating plant cover to the edge of the drip line of the riparian forest, divide the vegetation into three elevation zones according to the following size classes:
 - a) upper canopy (>5m);
 - b) lower canopy (0.5m – 5m) and;
 - c) ground cover (<0.5 m)
- 2) Record the percentage cover within each elevation zone according to the following classes:
 - a) Upper Canopy – Native Trees and Saplings & non-native trees and saplings

- b) Lower Canopy- Native Trees, Shrubs and Saplings & non-native trees, shrubs & saplings
 - c) Ground Cover – Woody Shrubs & Saplings, non-native herbaceous ground cover , native herbaceous ground cover, forest duff, and bare ground.
- 3) To establish the transect line study area, measure the total length of the stream at top of bank from property line to property line. Use range finder to assist with measurements.
 - 4) Roll the 10 sided die to establish a percentage (i.e. 8 = 80% or .80) and multiply (total length of measured stream bank) x (percentage). If you roll a 0 or 00 then roll again.
 - 5) Always starting from the downstream property line, measure this calculated distance along top of bank going upstream.
 - 6) Mark this point as the center of the study area transect at top of bank with a red marking flag.
 - 7) Note distance to the edge of riparian forest on data sheet, and then follow these steps:
From the center flag, measure to the edge of the drip line of the riparian forest and again at 100 ft. out from top of bank perpendicular to the stream channel and mark each location with matching red center flags.
 - 8) From each of the three center flags, measure perpendicular 15 ft. upstream and 15 ft. downstream to establish the study area boundary with six blue flags.
 - 9) If it is a narrow lot and the measured study area boundary lines cross over the property line then shift the study area boundary area upstream or downstream (depending on the property line) just enough to remain within the property boundary
 - 10) Once all four perimeter lines are set then use the GPS camera take GPS coordinate readings using the center red flag at top of bank.
 - 11) Divide the study area into two 30 ft. wide sections: Section A is from 0 ft. - edge of the riparian forest drip line, and Section B is from the drip line - 100 ft.
 - 12) To improve the accuracy of the estimates, you can use two tape measures to divide each 30' wide section into four equal sections, estimate the land cover percentages within each quadrant, and then take an average (only for heavy vegetation).
 - 13) Use cover percentages in Section A (distance from Top Of Bank to edge of riparian forest) to fill out the Vegetation Class, dominant species, Number of native trees, and Native tree size classes on the field sheet.
 - 14) Native trees are sized using the DBH (Diameter at Breast Height) tape. The measurement is taken at a height of 4.5 ft. If a tree is forked, and the fork begins below the 4.5 ft mark, then measure each fork individually. If the fork begins above the 4.5 mark, then measure the tree as a whole.
 - 15) Section B (from the edge of the riparian forest to 100 ft.) will be used to record the last column 'notable native species and distance from TOB' results on the field sheet. These are either stand alone or grouped species within the 30 ft x 100 ft. study area but separated from the riparian forest.
 - 16) Record all outfalls between the two property lines noting size, material, and condition. If the pipe diameter is greater than 15" then take GPS coordinate readings with the GPS camera.
 - 17) Use the back of the field sheet to record any additional comments or measurements.
 - 18) When the evaluations for the site are completed collect and remove all of the flags and equipment.