

Santa Clara County Stream Inventory

Bird Count Instructions

Because very little quantitative biological information exists on Santa Clara County's rivers and streams, the Coyote Creek Riparian Station, in cooperation with the Santa Clara Valley Audubon Society and the Santa Clara County Creeks Coalition, was funded by the U.S. Environmental Protection Agency to conduct an assessment of this county's creeks, rivers and streams. Citizen volunteers are needed to contribute time and talent to the collection of valuable data on stream characteristics, water quality, botanical resources and wildlife use. Data gathering locations (or points) have been established on various creeks in Santa Clara County. These points are spaced 500 meters apart and teams of volunteers trained in various aspects of environmental assessment techniques will gather quantitative data at each point.

The method chosen to collect information on bird use of riparian habitats is known simply as the "Point Count". This method was first developed and used widely in Europe and has only recently been adopted in the U.S. Currently, a number of programs are using point counts to document breeding bird population trends in the U.S. and Canada. The methodological description below was adapted from Dr. David F. DeSante's Monitoring Avian Productivity and Survivorship (MAPS) program. The point count protocol relies in part upon subjective variables such as individual judgments and abilities. These issues are understood and accepted as limitations of the study. By using this established approach, we will be able to compare stream inventory data to other studies.

Each point must have at least four point counts conducted during the year - one each in the spring, summer, fall, and winter. See Bird Census Schedule for the ideal birding period during each "season". Volunteer commitment of time averages 3 hours per season.

Accessing the Point

The Santa Clara Valley Water District has granted the Stream Inventory project access to their easements on the streams in Santa Clara County. Frequently, however, the teams must enter the stream via private property.

In these cases, the bird teams may be required to contact the homeowners before entering the property. In every case, the homeowner will already have been contacted by the Volunteer Coordinator or the Field Leader, and permission to enter will have been obtained. In most cases, the bird censuser will merely need to contact the **homeowner to give them 24-48 hours notice** that they will be arriving. In some cases, a convenient time will have to be arranged between the censusers and the owner. Please follow the access procedure set up with owners of your points: in most cases they have the right to deny access if they become upset. If any trouble should arise contact the Volunteer Coordinator immediately.

Approach the census points with care -- generally creeks are not maintained for public use and hazardous conditions may be present. Censusers must use their best judgment to ensure their

safety. Never attempt to census alone -- the protocol and CCRS field procedures require the buddy system. If you feel uncomfortable with any aspect of accessing the points you have been assigned, please discuss it with the Field Leader or the Volunteer Coordinator. Before entering the field, please review the Field Protocol available from your Field Leader or the Volunteer Coordinator.

Selecting the Observation Site

Each survey point is staked at or near the edge of the riparian corridor. The riparian corridor is defined as the vegetative community growing in association with the stream. It is generally linear in form and distinct from the adjacent, upland vegetation in both structure and species composition. The riparian vegetation will generally be comprised of large leafed, deciduous trees with an understory of blackberry, poison oak, or other shrubs or vines. As the land slopes up away from the waterway, a distinct, often sharp vegetative change occurs to urban landscape or more arid communities such as oak woodland or annual grasslands. Where man-made structures encroach into the riparian vegetation in such a way as to significantly divide and/or degrade the habitat (such as a road or a building) the riparian corridor ends at that impact. A large fence or brick wall would meet this criteria, but a low wire fence might not.

Once a bird team has received their census point assignments, they should reconnoiter each point in order to select an observation site. This site must be within 5 meters up- or downstream of the stake and up or down either bank, as long as the team remains within this 10 meter belt transect and in an area that is safe and appropriate for birding year-round. The optimum observation site will be at the outer edge of the riparian corridor facing the stream, with a clear view of the corridor and the water. Unfortunately, this may not always be possible. Select the best possible observation site with consideration for changing seasons and conditions, as **once it has been selected it cannot be changed**. Both the observer and recorder will remain at this spot for the duration of the census. Either the Bird Field Leader or the Volunteer Coordinator should help the teams determine the extent of the riparian corridor and select an observation site.

Collection and Recording of Data

All point counts must be conducted between sunrise and 11 am. Counts should not be conducted on rainy days as birds are normally inactive. Before approaching the observation site, the recorder should fill out the weather information at the top of the data form. This information should correspond to conditions at the creek, not at home. If the weather changes significantly between points, begin a new sheet with the updated weather information. Use the chart at the end of this protocol to aid in wind speed estimation.

The censusers should approach each point with as little disturbance to the birds as possible. A bird flushed from the riparian corridor within 50 meters of a point as a censuser approaches or leaves the point should be counted as being at the point provided that no other individual of that species is recorded from that point during the count period. Use the "Arrival Notes" section of the data sheet to record interesting information noted on the approach to the point. Counts should begin immediately when the observer reaches the observation site and should end exactly ten minutes later. Use a digital time piece, but avoid "beeps" or electronic noises as they may serve to attract birds.

During the observation period, keep noise and movement to a minimum. Do not "chase" birds to obtain or confirm ID. Passing birds which were not identified should be recorded as unidentified bird species as noted in "*Which Birds To Tally*" section below. You may move around within a step or two at the observation site, sit, squat or use a stool during the census. **No attracting devices or sounds (pishing)** should be used at any time during the count period at each point or when traveling between points. Notes from during and after the count can be logged in the "Departure Notes" section of the form. Feel free to note observations in other subject areas in this section as well, such as other wildlife seen or impacts to the creek noted.

Which Birds to Tally

All individual birds seen or heard for unlimited distances **within the riparian corridor** should be tallied, although individuals thought to have already been counted at previous points should be indicated as such. Birds not associated with the riparian corridor should be ignored unless and until they move into the corridor. Birds which are observed by call only cannot be tallied unless the censuser is certain that bird is within the riparian corridor. Censurers must use their best judgment in determining birds "associated" with the riparian corridor.

Birds using the stream as a flyway, even at considerable altitude, can be tallied as fly-throughs). This might include herons, egrets, or belted kingfishers "cruising" along the corridor. Birds flying above the crowns of riparian trees and at right angles to the stream are unlikely to be associated with the corridor and should not be counted. This might include gulls traveling from the bay to the dump, or morning doves moving from one backyard feeder to another. In either case, these birds were not flying along the contours of the corridor or did not perch on any riparian vegetation. Birds which are "on the wing" but which stay in the area longer than a simple flythrough should be counted in the column representing the distance where they were first observed. Thus a hummingbird or swallow "working" the area at the point as the censusers arrive would be marked down as <50 meters.

Remember, you want to count each individual bird only once at each point. Thus, you must try to keep track of mobile individuals so that you don't count them more than once. On the other hand, you must listen carefully to separate countersinging or calling birds that often sing or call close together, especially near a territorial boundary. Avoid becoming flustered during the first minute or two of the count; ten minute counts are really quite long and will give you time to sort things out.. Also important to remember is that we are gathering baseline data; we are therefore interested in "common" species as well as unusual species.

Individuals should be tallied separately, depending upon both their location relative to the census point, and the time relative to the start of the 10-minute census period. Thus, individuals detected within the vegetation surrounding the point should be tallied separately for distances from the point of less than 50 meters and greater than 50 meters, and fly-throughs (at any distance) should also be tallied separately. Individuals should also be tallied separately, depending upon when they are first encountered at a given point, for three different subsets of the count period (0-3 minutes, 3-5 minutes, and 5-10 minutes). If a bird is present throughout the entire census, it is tallied in the first time interval only. Thus, all different individuals should be tallied during the first three minutes of the count period, but only new individuals not already counted would be added during the two

subsequent time periods. Birds observed by sight are recorded with a simple tally mark, while birds identified by song are recorded with the symbol of a musical note (please see the sample data sheet).

If you identify an unusual bird or one not on the expected bird list, use the *Unusual Bird Sighting Documentation Sheet* to note identifying attributes of the animal. Notify the Field Leader or the Volunteer Coordinator of unusual or exciting finds! Also, please note and report any **nesting Belted Kingfishers, Northern Rough-winged Swallows, Red Shouldered Hawks or Wood Ducks**, whether on or off the census points, including access information for future documentation.

If you cannot identify the species of the bird, record all individuals to the closest phylogenetic categories (i.e. unknown hummingbird sp., unknown crowned-sparrow sp., unknown gull species, or unknown passerine sp.). Do not chase birds to obtain or confirm ID. Also, be careful not to spend too much time trying to ID one elusive bird, and thereby miss several others. If, after the census, you feel confident that you have found and identified one of the previously unidentified birds, document this in the notes. Do not alter your original data.

Troubleshooting

Unforeseen events may occur which make data collection difficult or impossible. The Field Leader or the Volunteer Coordinator are available to help if the following information does not:

Can't find the stake/point: Occasionally the stakes marking the census point are removed or lost. If you are familiar with the point and are confident you are in the right spot go ahead and census as usual. Please report the missing stake to the Volunteer Coordinator. If you are unsure where the point is, contact the Field Leader or the Volunteer Coordinator for assistance.

A short-term but severe impact is occurring at the point: When an unusual and severe impact such as streambank maintenance or a mob of kids is occurring in the creek you may choose to skip that point and return later in the "season" for the point count. If the impact seems common to the area, however, such as a cat sitting on the fence or heavy traffic on the road, the point count should take place as usual. Note any conditions which could affect bird populations in the comments section of the data sheet.

Something interrupted the count midway: Minor "interruptions" such as a truck or plane going by should not stop the count, but should be noted on the data sheet. Major interruptions may occur, such as the approach of a curious bystander, which significantly impact the team's ability to finish the count. If this occurs, you should start over, or if it is necessary to leave, should return at the earliest possible time to redo the count.

The homeowner is unavailable/unwilling to allow access: Do not attempt to "sneak." Call the Volunteer Coordinator.

The access gate will not open: Call the Volunteer Coordinator.

Dumping or other suspicious behavior: If you observe signs of dumping, encroachment, damage to the creek, or other issues of concern, document the location of the problem and its nature, and

provide access information. Do not enter private property to investigate or attempt to confront the perpetrator. Report the incident to the Volunteer Coordinator ASAP.

If Volunteer Coordinator is unreachable: Chris Fischer can generally be reached days at (408) 262-9204, and evenings/weekends at (415) 364-8723. If she is unavailable to handle your urgent concern, ask for Charles Preuss with the same day number, or evenings/weekends at (415) 364-5168.

Data Reporting

All data is recorded in the field on copies of the standardized point count data sheets provided by the Coyote Creek Riparian Station. Record the data in as neat and legible a condition as possible. Transcribe the data onto a fresh data sheet only if necessary, as soon as possible after you leave the field. **When data have been transcribed, the original data sheet must be turned in with the transcription.** This is very important, as occasionally errors can be made in the transcription process, and we need to be able to refer to the original if there are questions. Make a **copy** of the completed data sheet(s) as soon as possible and send the original(s) to the Field Leader. Keep the copy safe in a folder or file in case the originals are lost in the mail. Call the Field Leader to alert them to the arrival of the data, and let them know of any exciting or interesting occurrences ASAP.

Use of Data

The bird census is one of several biological variables that Stream Inventory volunteers are collecting. All the data are entered into a database and computerized mapping system (Geographic Information System or GIS) and developed into a comprehensive, watershed level source of information about the presence and condition of wildlife habitat in Santa Clara County. This information will be available to anyone who is interested.

BEAUFORT SCALE

<u>NAME</u>	<u>MPH</u>	<u>DESCRIPTION</u>
Calm	less than 1	Calm; smoke rises vertically.
Light Air	4 to 7	Wind felt on face; leaves rustle, vane moved by wind.
Gentle Breeze	8 to 12	Leaves and small twigs in constant motion; wind extends flag.
Moderate Breeze	13 to 18	Raises dust and loose paper; small branches are moved.
Fresh Breeze	19 to 24	Small trees in leaf begin to sway; crested wavelets form on inland water.
Strong Breeze	25 to 31	Large branches move, telegraph wires whistle, umbrellas used w/difficulty.
Moderate Gale	32 to 38	Whole trees in motion; inconvenience in walking against wind.
Fresh Gale	39 to 46	Twigs break off trees; generally impedes progress
Strong Gale	47 to 54	Slight structural damage occurs
Whole Gale	55 to 63	Trees uprooted; considerable structural damage
Storm	64 to 72	Very rarely experienced; accompanied by widespread damage.
Hurricane	73 to 136	Devastation occurs (do not attempt census).

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Unusual Bird Sighting Documentation Sheet

Observer Name: _____ Recorder Name: _____

Other Observers: _____

Date: _____ Time: _____ Weather: _____ Optical Equipment: _____

Location (include description to allow others to find the place, as well as a description of the type of habitat, i.e. riparian or woodland): _____

In order to properly document a rare or unusual bird sighting, please fill the form out to the best of your ability. Fill this form out immediately after the sighting, in the field if possible. Record only the details you are confident in based on your observation -- do not guess or refer to the field guide. Notify the Field Leader or the Volunteer Coordinator soon after you leave the field.

Species: _____ Number, Age, Sex: _____

Distance From Bird: _____ Relative Size of Bird: _____

Head and Neck (describe forehead, crown, auricular, malar region, median line, etc.):

Eye and Loes (describe supercilium, ring, stripe, color, etc.):

Upper and Lower Mandibles:

Upper Parts (describe nape, back, rump, upper tail coverts, etc.):

Under Parts (describe throat, belly, side, flank, crissum, etc.):

Rectrices (describe inner, middle, outer tail feathers, color pattern, shape, etc.):

Wing (describe color, length, shape, linings, bars, coverts, leading and trailing edges, etc.):

Vocalization: _____

Behavior: _____

Other notes on reverse of sheet (include a photo or sketch if possible):