



Standard Operating Procedure (SOP) 4:

Marking and Relocating Sampling Plots V2.4

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Revision History Log

Prev. Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
1.0	Oct. 2006	T. Gardali	Minor wordsmith and suggestions	NPS internal review comments	2.0
2.0	June 2012	S. Jennings, D. Humple, R. Cormier, L. Porzig	Updated point count station narratives (locations and descriptions); created some that were missing	GPS coordinate did not match landscape; vegetation or other feature prevented access to original station	2.1
2.1	Feb. 2015	M. Dettling, D. Humple	Updated point count station narratives (locations and descriptions)	GPS coordinate did not match landscape; vegetation or other feature prevented access to original station; vegetation or other features changed and prior description was outdated	2.2
2.2	Dec. 2017	M. Dettling, D. Humple, R. DiGaudio, H. Allen	Updated point count station narratives (locations and descriptions); dropped COCA transect	Vegetation or other features prevented access to original station; vegetation or other features changed and prior description was outdated	2.3
2.3	Dec. 2018	M. Dettling	Updated narratives for Muddy Hollow, lower Redwood Creek, and upper Redwood Creek; formatting; standardized coordinate system for all narrative	Habitat conditions	2.4

This Standard Operating Procedure is available in digital format from [San Francisco Bay Area Network website](#) and the [NPS Data Store](#).

This Standard Operating Procedure explains the procedure for establishing and marking sampling plots to (1) locate point count stations, (2) locate net lanes, and (3) establish, modifying and mark point count stations. Detailed descriptions of all sampling sites are provided.

Locating Point Count Stations

All pre-existing point count stations are relocated with a combination of means: (1) they might be previously marked with colored flagging for visual location and are re-flagged if deemed necessary and helpful for that season; (2) GPS coordinates; (3) a narrative is written for each transect describing any details and important features useful for relocating the points; and (4) maps showing location of entire transect and individual points.

Locating Net Lanes

All pre-existing net lanes, where possible, are relocated through (1) permanent nets; (2) permanent net equipment (net poles, ropes); (3) marked flagging identifying both ends of the net lane; (4) maps revealing locations of net lanes; and/or (5) GPS locations of net lanes. However, net lanes are relocated only by experienced banders with knowledge of those net lanes in order to avoid minor movements of mist-nets.

Modifying and Marking Point Count Stations

- Point count stations are already established and selected. Consideration to add new point count stations will require modification of this SOP.
- Occasionally biologists will encounter previously established point count stations for which (1) the GPS coordinates do not appear as accurate as possible (due to suboptimal conditions when coordinates were originally recorded), and (2) for which physical features have changed and therefore the narrative is either misleading or requires updating. If coordinates appear inaccurate and current conditions appear optimal for recording new coordinates, the biologist will record the updated coordinates and provide them to the Point Blue GIS Specialist and the SFAN Data Manager, change the coordinates on the narrative, and change them in any GPS units that contain them. When narratives need to be updated, the biologist will make sure this is changed for all locations of the narrative (keeping the retired version in an electronic folder specifically for this purpose).

Point Count Site Narratives

Each narrative contains all relevant information necessary for relocating point count locations. UTM coordinates are available for all sites.

Abbott's Lagoon/Kehoe Ranch (ABKE), Point Reyes National Seashore, Marin County, CA

Point Blue Point Count Directions – ABKE (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 16

Getting there: Points 9-16 are near Abbott's Lagoon. Park either in the Abbott's lot or on the side of the road and walk north along the road to riparian (around mile marker 3.62). Points 1-8 are at the Kehoe Ranch. Continue in a car in the direction of Tomales Point. Park at the Kehoe Beach trailhead (mile marker 5.56). For efficiency, start count at either pt 16, 8, or 1.

Notes: GPS works well. Rubber boots and rain pants for tall grass and some marshy spots. Poison Oak avoidable. Points are approximately 200 meters apart. Degrees are relative to magnetic, not true, north. Transect is in 2 sections, and you must drive between the two. ~20min walk from ABKE_8 to Kehoe parking area. ~30min walk to ABKE_16 from Abbott's parking lot. ABKE_8 moved ~10m in 2017.

Points 9 – 16 are near Abbott's Lagoon. Points 9 and 10 are on west side of road; 11-16 are on east side of road.

ABKE_10: Easiest access seems to be to leave the road near the reddish shed (which is on east side of road) to avoid Poison Oak patch. Point is before you reach the lagoon, on south side of swampy area. Point between lupine and low-growing coyote bush.

ABKE_9: Go straight up the slope along a deer trail, heading uphill from and parallel to the patch of willows. Point is at the uphill side of the far edge of the last willow clump along the lagoon, about 7m up from willow edge. Poison Oak in area.

ABKE_11: Go back to road and cross to east side. Go under barbwire, point is along the willows about 20 meters in from the road, on south side of willows. Poison Oak at point.

ABKE_12: Go back to road, then north to north side of the willows. Cross barbwire, walk on ridge above riparian until near the point, then down towards the willows. Point is 65° and about 20 meters from the corner of fence.

ABKE_13: Continue east along willow edge, crossing the fence (ends at riparian so easiest to cross there) and the levee. Keep straight, heading towards leftmost (north most) willow patch, point is at beginning edge of the patch. ABKE_13 is about 290 meters from ABKE_12.

ABKE_14: Continue east. Point is along willows at the next fence. (Point used to be on other side of fence, but access too difficult, so stand at fence).

ABKE_15: Cross fence a little uphill at gate. Continue east. Point is about 30 meters after the next willow patch begins, along willow edge.

ABKE_16: Continue east. Pass smaller willow patch, and point is at beginning of the last willow patch you will come to before the 2nd "pond".

Points 1-8 are at the Kehoe Ranch. Points 1 and 2 are on west side of road; points 3 – 8 are on east side of road.

Point Blue Point Count Directions – ABKE (page 2 of 3)

ABKE_1: Take trail on west side of the road. Cross through the cattle gate further up the trail, then go 105 meters; point is on your left along the willow edge. Point is off trail about 10m through tallish veg.

ABKE_2: This point is actually back toward the road. At the west edge of the cypresses and privy, cut in heading left (south) to the willows. Follow along the west edge of the willows, and go about 2/3 of the way to the other side. You will be walking through a marshy area with chest high sedges. Point is on this west edge of the willows.

ABKE_3: Go back to road and walk north up the road about 75 meters and go under fence where easy. Walk up creek. Point is at willow edge near steep bank down to creek. Work your way around blackberry patch to get to point.

ABKE_4: Continue in same direction along creek (crossing a fence) towards salmonberry patch. Point is at willow edge across from salmonberry patch.

ABKE_5: Continue along creek. Point is at the start of the next willow patch almost immediately after crossing the fence.

ABKE_6: Continue along creek. Point is on a willow in the 2nd grassy cove, just past where creek is carved out away from willows at tiny “peninsula”. Peninsula becoming overgrown, but still visible in 2014. Cows might be in the area.

ABKE_7: Continue along creek, crossing fence where dirt road crosses creek. Staying on west side of riparian, follow GPS to point. No good landmarks. Cows may be in the area.

ABKE_8: Point is on east side of riparian. Cross creek by going back south to dirt road which crosses creek. Then go northwest to point following GPS. Point is at willow edge a little south of a deep gully. Can then cross gully to get to road (which you walk to get back to car). Point moved ~10m in 2017 because of vegetation getting thicker.

Coordinates: DD, WGS84/NAD83

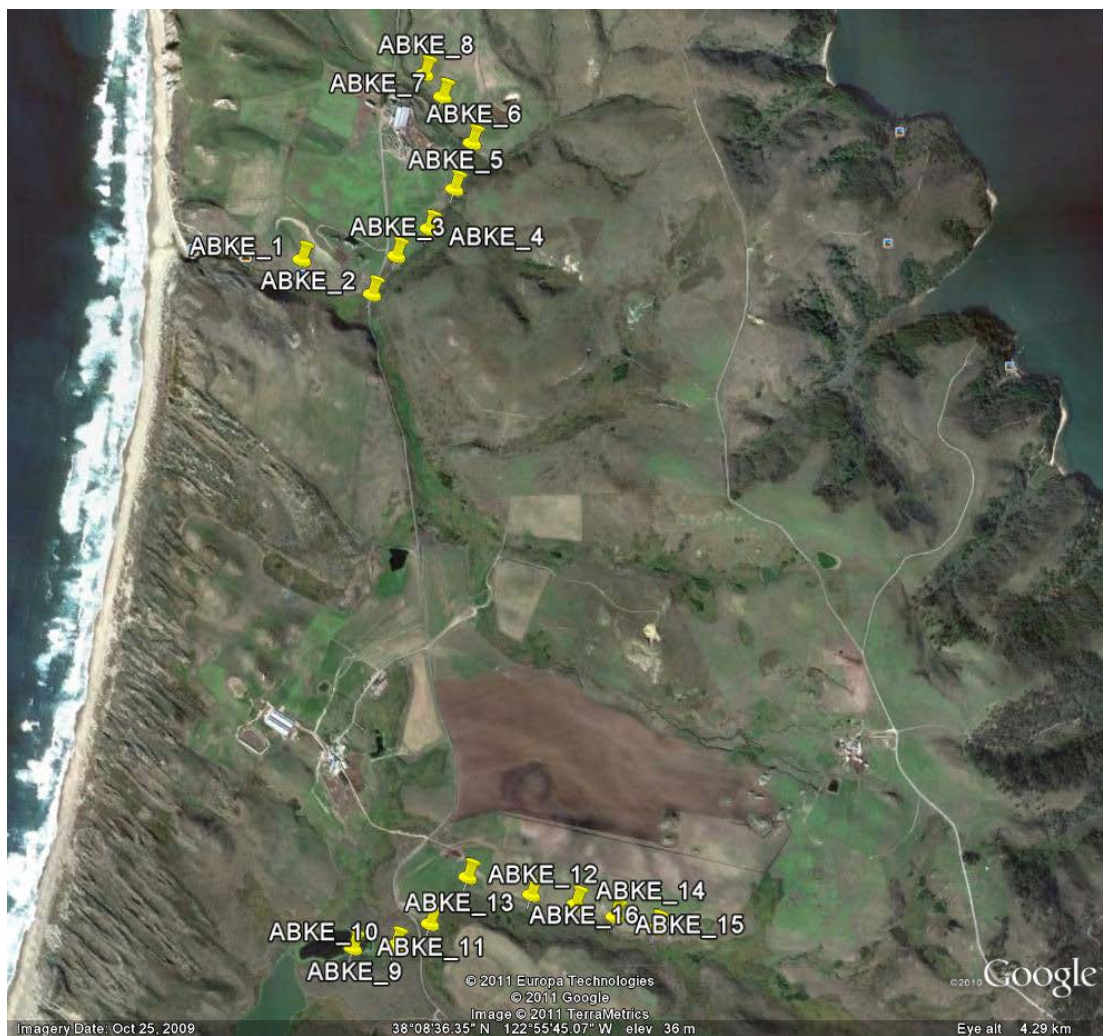
Site ID	Latitude	Longitude
ABKE_1	38.15338	-122.94260
ABKE_2	38.15191	-122.93953
ABKE_3	38.15351	-122.93778
ABKE_4	38.15461	-122.93613
ABKE_5	38.15620	-122.93483
ABKE_6	38.15801	-122.93392
ABKE_7	38.15983	-122.93540
ABKE_8	38.16083	-122.93637
ABKE_9	38.12574	-122.94002
ABKE_10	38.12588	-122.93784
ABKE_11	38.12673	-122.93608
ABKE_12	38.12866	-122.93414
ABKE_13	38.12792	-122.93092
ABKE_14	38.12756	-122.92866
ABKE_15	38.12707	-122.92668
ABKE_16	38.12660	-122.92460

Point Blue Point Count Directions – ABKE (page 3 of 3)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~1998	2011	Humple	Standardization	Needed coordinates/map
2011	Aug 2011	Cormier	Updated veg changes & re-gps'd pt 2	Changes had occurred, and coordinates off for 2 points
2011	2014	Dettling	Updated, veg changes and wording	Updates, standardizing
2014	2017	Dettling	Moved ABKE_8, updates	Veg changes, clarifying

Map:



Arroyo Hondo (ARHO), Point Reyes National Seashore, Marin County, CA
Point Blue Point Count Directions – ARHO (page 1 of 2)

Project: Palomarin

No. Points: 6

Getting there: Up arroyo road/trail from Palo.

Notes: GPS does not work very well. No Poison Oak since all points are on trail. Bearings are magnetic north. Not flagged. Narrative written by someone for whom which 100 paces=65 meters; 100 meters=161 paces. Not sure how helpful the paces are.

ARHO_14: 230 paces from gate, heading up arroyo on dirt road/trail. Opposite from bank of thimbleberry and buckeye tree. At *Ceanothus* tree on the right, beneath a Doug-fir; lots of *Equisetum* (horsetail) nearby. Also 50 m before “bridge” of two large bay laurels around right hand bend.

ARHO_15: 220 paces from ARHO_14. Look for Douglas-fir tree straight up the road at 306 degrees. Point is just past gentle right hand curve (through grove of bays and Doug-firs) in clearing just at the start of a line of buckeyes on the left.

ARHO_16: About 400m from ARHO_15. 10 m before rocky cut in hill on the right (with small rock slide). Canyon narrow. Open view of creek on the left. Road is in direction of 321 degrees.

ARHO_17: 475 paces from ARHO_16. Cross the creek twice. Point is 30 m past 2nd crossing just before small clearing. At this point the road travels in a direction of 353 degrees, almost due north. Lots of sword ferns on steep bank on east side of road.

ARHO_18: 200 paces from ARHO_17. On top of small rise in road next to maple tree. 20 m past metal pipe on left side of road that crosses small drainage. New GPS point taken in 2014. GPS does not work well at this point, but GPS was consistently off. Old coords -122.7410643973, 37.94299844188.

ARHO_19: Very topmost reach of the water road near entrance of foot trail (which is now mostly overgrown). New “parking area” as of 6/25/97 – a cleared space about 4meters in diameter.

Coordinates: DD, WGS84/NAD83

Site ID	Latitude	Longitude
ARHO_14	37.93301	-122.73456
ARHO_15	37.93440	-122.73613
ARHO_16	37.93769	-122.73840
ARHO_17	37.94087	-122.73916
ARHO_18	37.94267	-122.74089
ARHO_19	37.94528	-122.74321

Point Blue Point Count Directions – ARHO (page 2 of 2)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
<2005	2005	Viola Toniolo	Undocumented	Undocumented
2005	2008	Humple	Changed into correct format with project, revision history, etc.	Hadn't been converted yet; still needs more by someone who has point counted it.
2008	2010	Humple	Added coordinates & map. DEJU current	Lacked them
2010	2014	Dettling	Clarifying directions, updated GPS ARHO_18	A few landmarks changed. One point had bad GPS point.
2014	2017	Dettling	Updates	Clarifying

Map:



Bear Valley (BEVA), Point Reyes National Seashore, Marin County, CA

Point Blue Point Count Directions – BEVA (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 16

Getting there: From Bolinas take Hwy 1 north to Olema, turn left onto Bear Valley Rd. Go to Olema Marsh if starting at BEVA_45 or park near the admin offices at the Visitor Center if starting at BEVA_44.

Notes: GPS works well. Small amount of Poison Oak, avoidable. Rubber boots and rain pants for marshy areas and tall, wet grass. BEVA_45 is out of order of efficient access between points. Runs parallel to Upper Olema Creek transect; potential for coordination with person counting that transect.

BEVA_45: 100 meters up Olema Marsh Road.

BEVA_30: On trail at intersection of Limantour Road and Bear Valley Road, on willow at gravel drainage ditch. At “WHOA” sign.

BEVA_31: Walk along horse trail until GPS says you are ~15m from point (this is near a 35MPH sign on the opposite side of the road), then go into veg at a spot without Poison Oak. Point is at a group of coyote brush at the edge of willows.

BEVA_32: Continue along horse trail, point is at overhanging vegetation, willows with furrowed bark. Point is on left side of trail.

BEVA_33: Continue along horse trail, go left under oaks where you can see a meadow on the other side and up the meadow. Point is at end of meadow by willows.

BEVA_34: Back to the trail then off trail as meadow opens up after the fenced off culvert. Point is set back in a nook and ~30m into willows, before first willow “gate.” Point is near a group of gnarled, older willows.

BEVA_35: Through first willow “gate,” point is halfway to second willow “gate,” behind big sawgrass patch and into willows.

(Next three points can also be accessed from the trail in a very wet year)

BEVA_36: Through second willow gate which is becoming overgrown. This gate has a noticeable transition from taller to shorter willows where you cross a ditch. Watch for PO. Point behind sawgrass patch - there is a patch of coyote bush here, next to sawgrass. Point is on willow in ~10m from edge.

BEVA_37: Head SSW and through some willows (thin understory) to the trail. Follow trail to the opening to the next meadow, head through meadow to point. Point is at edge of cattail marsh ~3m into willows and thick sedge.

BEVA_38: Go back to trail. Follow it and take a left when it hits the gravel road. In ~50m, go left through opening in oaks into grassy field. Follow grassy area downhill to point at edge of alders within nettles and hemlock.

BEVA_39: Follow grassy area to maintenance yard. Go around yard on Eucalyptus grove side, then through the parking lot down the fence line to the creek. Point is on creek edge down from the corner of the fence.

Point Blue Point Count Directions – BEVA (page 2 of 3)

BEVA_40: Back out to the edge of the riparian. Follow riparian edge or road to next point. Point is on west side of creek before the road crosses the creek. Bushwhack into point wherever it seems easiest. Point is under a small oak.

BEVA_41: Cross the creek where the road goes over it. Go towards barn. Point is near gravel road that crosses creek. Point is on east side of riparian on a willow.

BEVA_42: Follow riparian edge and hop fence to get onto Earthquake trail. Point is at end of corral, in alders, off paved trail. Go down towards creek under heavily leaning alder.

BEVA_43: Follow paved trail until it curves around, get off and follow riparian zone. Point is in riparian under large bay with trunk leaning over to touch ground to form arch.

BEVA_44: Follow riparian edge. You will hit a trail, follow it to the right for ~80m, then cut through field towards riparian and large oaks. Point is along grassy riparian edge, on willow across from solitary huge oak.

Coordinates: DD, WGS84/NAD83

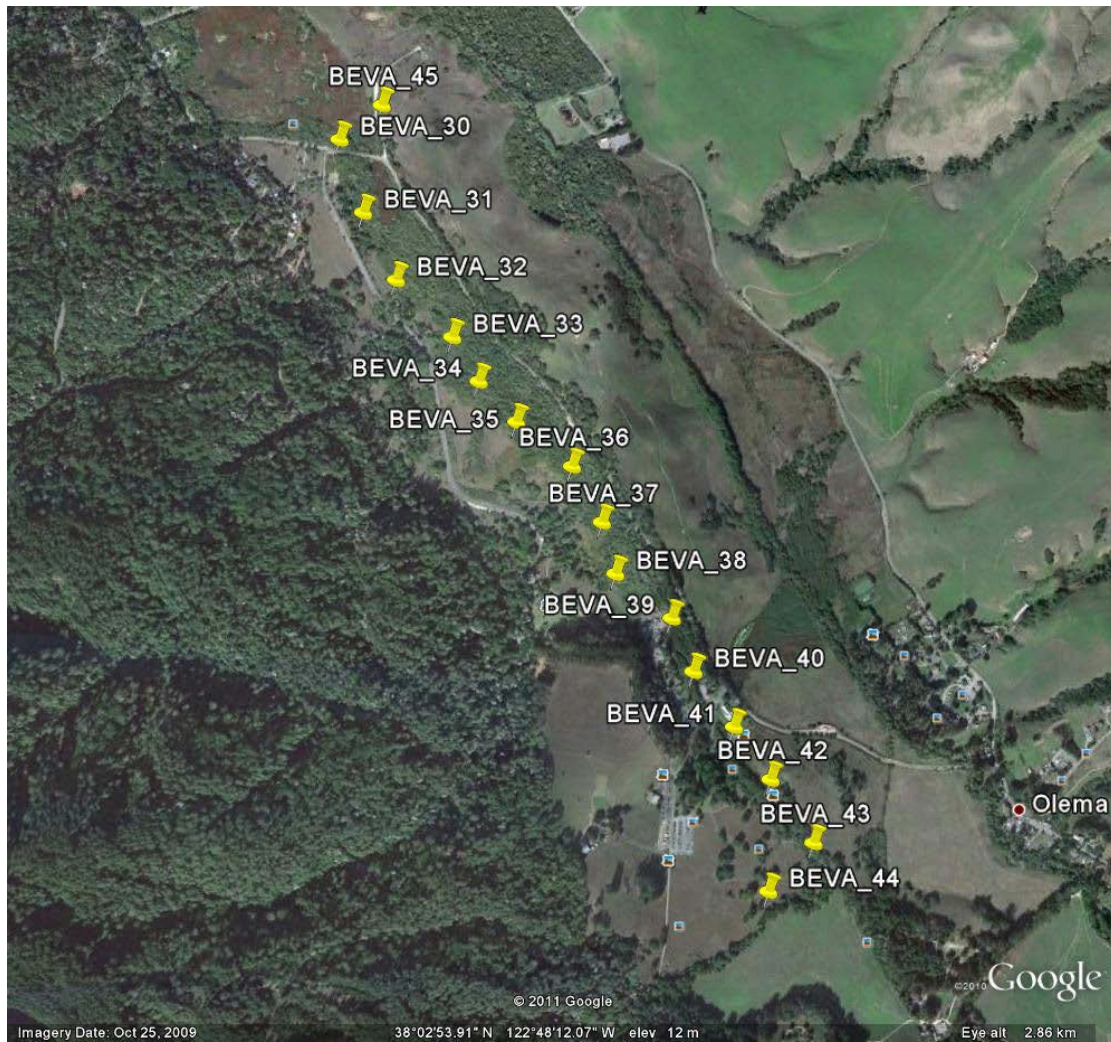
Site ID	Latitude	Longitude
BEVA_30	38.05809	-122.81108
BEVA_31	38.05618	-122.81049
BEVA_32	38.05436	-122.80917
BEVA_33	38.05343	-122.80768
BEVA_34	38.05167	-122.80637
BEVA_35	38.05059	-122.80510
BEVA_36	38.04941	-122.80322
BEVA_37	38.04793	-122.80221
BEVA_38	38.04657	-122.80176
BEVA_39	38.04539	-122.79986
BEVA_40	38.04399	-122.79914
BEVA_41	38.04252	-122.79778
BEVA_42	38.04114	-122.79656
BEVA_43	38.03947	-122.79512
BEVA_44	38.03821	-122.79665
BEVA_45	38.05901	-122.80965

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~1998	2011	Humple	Standardization	Added coordinates/map
2011	2011	Porzig	corrected descriptions; updated 33 - previous now inaccessible- CADC point updated	Changes had occurred
2011	2014	Dettling	Updated and clarified directions	Updates, standardizing
2014	2017	Dettling	Updates	Clarifying

Point Blue Point Count Directions – BEVA (page 3 of 3)

Map:



Coast Trail/Laguna (CTLA), Point Reyes National Seashore, Marin County, CA
Point Blue Point Count Directions – CTLA (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 13

Getting there: Once in Point Reyes NS, take Limantour Spit Road toward Limantour Beach (direction of Muddy Hollow). Approximately 1.5 miles before the beach and opposite from Muddy Hollow, take a Left onto side road, signed for hostel and Clem Miller Education Center. If starting at 17, continue past the hostel, turn right into parking area for Laguna Trailhead; if starting at 29, park on side of road by Coast Trailhead (near pt 19). ~35 min from Bolinas.

Notes: GPS works well. Bring rubber boots (some marshy spots) and dress for poison oak (bring tecnu, extra set of clothes), unavoidable at a few points. Points are on or off Coast Trail (not Laguna Trail). Points ~200m apart.

Points 17-19 are across from hostel off road between parking lot and Coast Trailhead, off road; **points 20-29** are on or off Coast Trail

CTLA_17: Access via pseudo-path down to creek before bridge that leaves parking lot (on left side of bridge when facing road with back to rest of parking lot), and walking creek up to get as close as you can to point. Point at alder growing horizontally across creek.

CTLA_18: Walk back way you came and walk road towards hostel/Coast Trail. Walk into riparian from road when get close to point, which is at edge of willows and marshy spot, next to grassy hummocks (could only get to within 7m of point in 2017 due to veg).

CTLA_19: Head back to road and continue in same direction, then follow footpath (becoming overgrown, but still visible) to left just before metal culvert down into riparian, crossing gulch on the way. Point is above creek, becoming overgrown with blackberry.

CTLA_20: Head back to road and continue to Coast Trail to the left. Point is along trail at start of scrub on left side of trail.

CTLA_21: Continue on trail. Point is off trail (Poison Oak), to access look for animal trail in even if overshoot point. Point is on riparian side of first (more northerly) of 2 lone alders in meadow.

CTLA_22: Continue on trail, point is off-trail (difficult bushwhacking, much Poison Oak) at largest alder at edge of swamp and at far end of meadow. Can't see swamp from trail. Get down at more open forby spot ~20m before brown culvert marker and before nearest spot to point, via animal paths and bushwhacking as best you can.

CTLA_23: Continue on trail, point is off-trail on willow in alder patch. Head to riparian on animal path ~10m before brown flexi-plastic culvert markers.

CTLA_24: Continue on trail, point is on trail at willow amidst alder patch, at unmarked brown culvert marker.

CTLA_25: Continue on trail, point is 25m off trail (Poison Oak) under alders at edge of riparian amidst small cattail marsh. Access from trail quite a bit further past point, where creek bank comes close to trail, then bushwhack to creekbed and walk upstream to point.

Point Blue Point Count Directions – CTLA (page 2 of 3)

CTLA_26: Continue on trail, point along trail 4m before culvert and brown culvert marker, at end of twinberry patch, at coyote brush.

CTLA_27: Continue on trail and after it crosses the creek, point on right side of trail. Area is wet and marshy underneath alders. Point was moved (only ~10m) in 2014 due to trail improvements.

CTLA_28: Continue on trail, point off trail 15m to right on large alder. Follow GPS to point.

CTLA_29: Continue on trail, point off trail ~40m before trail starts to bend left and along last stretch of alders, go in 15m to right. Follow GPS to point.

Coordinates: DD, WGS84/NAD83

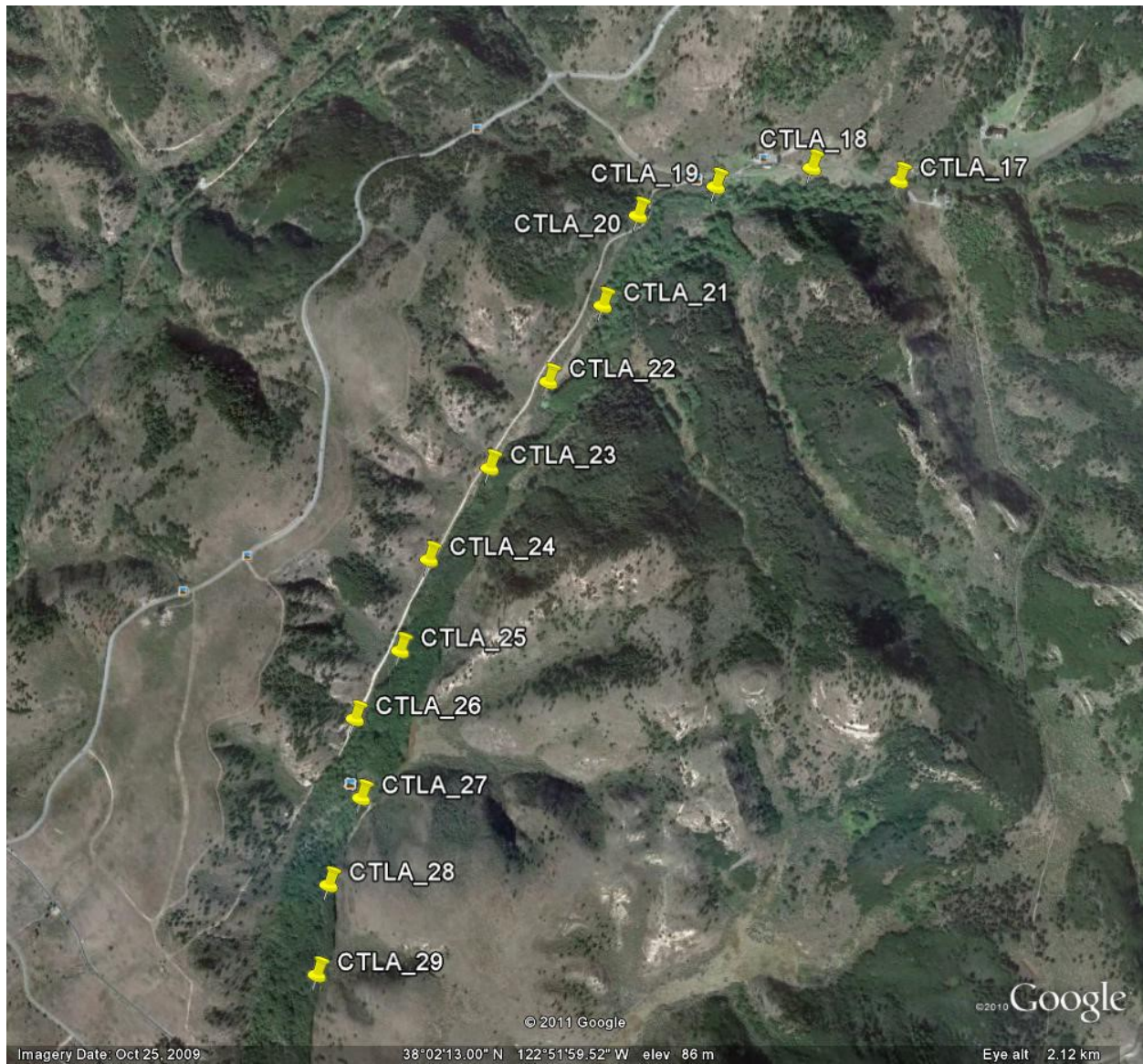
Site ID	Latitude	Longitude
CTLA_17	38.04337	-122.85883
CTLA_18	38.04363	-122.86093
CTLA_19	38.04328	-122.86325
CTLA_20	38.04273	-122.86514
CTLA_21	38.04103	-122.86599
CTLA_22	38.03957	-122.86731
CTLA_23	38.03792	-122.86874
CTLA_24	38.03616	-122.87023
CTLA_25	38.03441	-122.87094
CTLA_26	38.03310	-122.87204
CTLA_27	38.03160	-122.87180
CTLA_28	38.02989	-122.87270
CTLA_29	38.02815	-122.87299

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
1997	~2002		Not summarized.	Not summarized at the time.
~2002	2011	Humple	Standardization, and fine-tuning of point descriptions. DEJU current	Added map/coordinates; changed details since had been so long
2011	2014	Dettling	Standardize, update, moved CTLA_27 due trail improvements	Update, trail changes, standardizing
2014	2017	DiGaudio	Modified text for 18, 22, and 25	Veg changes

Point Blue Point Count Directions – CTLA (page 3 of 3)

Map:



Gerbode Valley (GERB), Golden Gate National Recreation Area, Marin County, CA

Point Blue Point Count Directions – GERB (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 18

Getting there: Marin Headlands, 2nd Sausalito exit: right off exit, through underpass, left to headlands through tunnel with 5-minute light; take Bunker Road from the tunnel. Pts 20-25 are along or near Bunker Road and can be done by car; 8-19 done on foot with pts 8-13 on or off Miwok/Bobcat Trails, and pts 14-19 continue along riparian from pt 13 but off-trail entire time. ~20 min from Mill Valley (1 hour from Bolinas).

Notes: GPS works well. Bring compass and rubber boots (one marshy spot). Rain pants helpful because of long grass. A couple points with Poison Oak, hard to avoid. Very windy area so helpful to check weather for wind predictions before choosing the best day to count.

GERB_25: Along Bunker Road, 1st point you come to from 101. Park at pullout by side road by Equestrian Xing sign (near GERB_24). Point is just after 3rd telephone pole when back on Bunker Road from side road. Do from side of road.

GERB_24: Continue west on Bunker Rd, park at side road/pullout by Equestrian Xing sign, on right. Point is on the side road in coyote bush at end of riparian clump which is on same side of road that point is. Construction in 2014 does not look complete, so will likely change.

GERB_23: From GERB_24, walk the side road over piles of dirt (2017) to the point in willows which are becoming overgrown.

GERB_22: Back to car, continue west on Bunker Rd, park at next side road which is <50m from point. Point is 302 deg 18m from sickly Doug fir across side road.

GERB_21: Continue in car west on Bunker Rd, very shortly park at next side road across from stables. Follow side road to walking bridge. Point is at riparian edge to left of bridge on far side (away from bridge) of twinberry.

GERB_20: Either continue on side road on foot to parking lot or back to car and drive to parking lot. Point is on edge of riparian and parking lot. Veg might grow quickly making it hard to access point.

For 8-19: continue driving west past pt 20 on Bunker Rd, past Field Rd, cross bridge, park at trailhead on right, just after bridge.

GERB_8: ~3 minutes from trailhead, and 50m after marsh where riparian corridor begins. Point off trail to the right at riparian edge.

GERB_9: Walk along trail to just past willow clump that crosses trail. Then walk off-trail to right along far edge of willows to point, just past 90 degree bend in willows.

GERB_10: Continue on trail. ~75 m further from brown stake on left side of trail and bend in trail. 30m from isolated willow clump on left of trail with white stake. Point is off-trail to right across marsh to riparian edge. Rubber boots nice to have.

GERB_11: Continue on trail. At 1st trail junction go right on Bobcat Trail; at next junction veer left. Point on left just off-trail, 10m in from willow edge at spot where willows slightly leave road edge (may need to do point from edge, dense).

Point Blue Point Count Directions – GERB (page 2 of 3)

GERB_12: Continue on trail, then head left off-trail just before trail bends slightly left. Go through meadow to willow edge above creek.

GERB_13: Go back to trail and continue. Point is off-trail 85m to left near riparian edge after euc. grove. May need to do point from edge of riparian since veg is becoming thick. **Note: after pt 13 do not return to trail but walk along riparian corridor to pts 14-19.**

GERB_14: Walk parallel to riparian for 200m, point is just after small gully on north side, in a little from the willow edge.

GERB_15: Continue along riparian edge on overgrown but discernable road. Road is helpful for the rest of the points. Point is ~7m in but do from willow edge, across from patch of coyotebush 30m from edge.

GERB_16: Continue along overgrown road/riparian edge. Point is where willows come to a point (126deg 90m from isolated willow patch to east) on westerly side of trail.

GERB_17: Continue along overgrown road/coyotebrush edge. Stay on edge of coyotebrush until near point (~60m), then bushwhack in using deer trails. Point is at willow edge which is hard to get to. Watch for Poison Oak.

GERB_18: Go back out of coyotebrush the way you came in. Continue along overgrown road/coyotebrush edge which will go up a slight rise. Near the top of the rise the coyotebrush thins/shortens, go towards point here. Point is at willow edge. Coyotebrush at willow edge becoming thick, may not be able to get to in future.

GERB_19: Go back to overgrown road and follow it until it peters out, then go past an odd low growing, dark green, evergreen type shrub. Then follow deer trails/bushwhack towards point. Difficult to get to point, cut/flag path while scouting. Poison Oak unavoidable.

Coordinates: DD, WGS84/NAD83

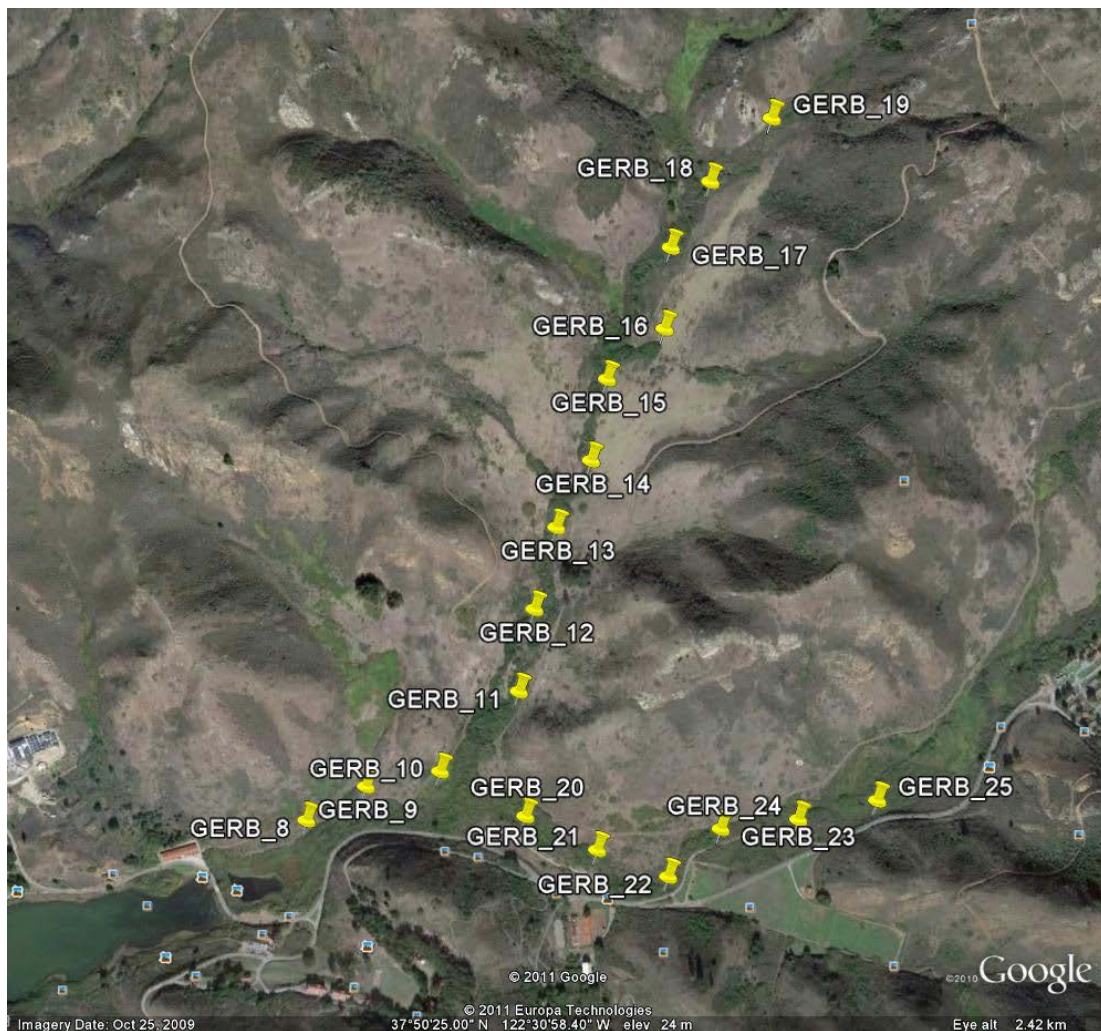
Site ID	Latitude	Longitude
GERB_8	37.83315	-122.52359
GERB_9	37.83392	-122.52188
GERB_10	37.83426	-122.51975
GERB_11	37.83608	-122.51749
GERB_12	37.83794	-122.51704
GERB_13	37.83978	-122.51642
GERB_14	37.84128	-122.51543
GERB_15	37.84310	-122.51498
GERB_16	37.84421	-122.51335
GERB_17	37.84601	-122.51318
GERB_18	37.84745	-122.51208
GERB_19	37.84880	-122.51039
GERB_20	37.83327	-122.51730
GERB_21	37.83251	-122.51525
GERB_22	37.83194	-122.51323
GERB_23	37.83302	-122.51175
GERB_24	37.83325	-122.50955
GERB_25	37.83369	-122.50733

Point Blue Point Count Directions – GERB (page 3 of 3)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~1998	2011	Humple	Standardization & Word version created; modified point descriptions due to changes that had occurred. DEJU current	Needed map/coordinates; site changes had occurred and/or details different
2011	2014	Dettling	Updates to descriptions	Changes in veg, construction, standardizing
2014	2017	Dettling	Updates to descriptions	Changes in veg, clarifying

Map:



Lagunitas Creek (LACR), Golden Gate National Recreation Area, Marin County, CA
Point Blue Point Count Directions – LACR (page 1 of 3)

Project: Palomarin (PALO)

No. Points: 18 points

Getting there: To begin at LACR_65, park at Platform Bridge Rd/Sir Francis Drake Blvd. and walk up the bike path. To begin at LACR_62, park in the large turnout on Platform Bridge Rd. at the point. Points 48-62 are all located on the west (riparian) side of Platform Bridge Rd.

Notes: Points all along bike path or along or just off road. 200 meter interval. GPS works well. Points 63-65 on the Cross Marin Trail. Historically marked with pink/black or orange flagging and tree tags. Can easily bike transect if you're comfortable leaving bike by side of road at the handful of points that you have to go in towards the creek to do. Rain pants not necessary (helpful only at a couple points) and thick pants helpful (blackberry). Rubber boots not necessary and in fact sturdy hiking boots more helpful. Some Poison Oak. Lots of car noise.

LACR_65: The point is 400 meters down the bike path trail, the tag is on a willow across from a willow patch. Willows on both sides of trail – point at brown plastic stake/marker (CM37).

LACR_64: Backtrack on bike trail. Point is flagged pink (small bit still there in 2017) on creek side of path across from an alder grove. Near 10ft tall exposed rock on uphill side of trail.

LACR_63: Located before the bike trail goes under the bridge if walking from LACR_64 to LACR_63. The tag is on an oak (*Quercus agrifolia*) on the creek side of the bike path, directly across from a cement retaining wall.

LACR_48: Go north on Platform Bridge Rd. The point is on a roadside willow located about 10 meters before beginning of the gravel turnout with the gate and road into the meadow (banding station). Orange flag low on willow (below road level) in 2014.

LACR_49: Go through the gate, towards the riparian until you hit the gravel wash, and walk north on the gravel wash. The tag (not seen in 2014) is on a large willow in a small group of large willows, near Net # 5 (on road-side not creek-side of net, near to net end that's closer to net 6). Area changes annually! Flagged medium sized willow with orange in 2017. Note that banding was discontinued in 2017 so net lanes will become overgrown.

LACR_50: Go back up to the road, then north to mile marker 2.02. Good entrance to riparian across from sign (some poison oak, watch for barbwire though didn't see any in 2017), then ~20m downstream. Point is at creeks edge. Also nearby is a large alder at creeks edge with many exposed roots which is next to a large Oregon Ash.

LACR_51: Go back up to the road. The point is at a box elder (*Acer negundo*) which is down the bank of the creek visible from the road. Do point on road – point across from telephone pole with small metal #13 on it.

LACR_52: Go back to the road and continue northward. Point is at the barbed wire fence directly across from telephone pole with small #16. This is before the open area on riparian side. Watch for poison oak!

LACR_53: Continue along road to the solitary bay with shorter support telephone pole under it on creek side. Go towards the creek. The point is at the edge of the creek, directly in from the bay. Flagged a willow with orange in 2017.

Point Blue Point Count Directions – LACR (page 2 of 3)

LACR_54: Continue on the road, go to riparian creek edge at forby spot across from building with “750” painted in large letters on it. The tag (can no longer be seen) is on a large alder tree. Point @ 6 large/close-growing alders with poison oak growing up them.

LACR_55: Continue on the road, past the bend to just past mile marker 1.35. The point is on a large roadside Oregon ash through a little blackberry. Flagged ash orange in 2017.

LACR_56: Walk on the road. Can find point by walking down steep bank at the large turnout. Watch for poison oak! Near large black willow with 4ft tall stump (which is flagged orange 2017) nearby.

LACR_57: Go back out to the road, continue for 200 m. Point is on a bay with an NPS boundary sign and poison oak growing up trunk.

LACR_58: Continue along road for 200 m. Head in toward creek 25m past mile marker 1.04. Walk 25m in towards creek to the point. Flagged small willow branch orange in 2017.

LACR_59: Point on road, 200 meters further (25m before mile marker with .88 and 1.416). Low Poison Oak. Elderberry at point.

LACR_60: Continue 200 meters further along road. Point is across from an oak tree. ~28m before mile marker 0.74.

LACR_61: Continue 200 meters further along road. Point is 20 meters before the 30 mph right hand curve sign.

LACR_62: Continue 200 meters further. Point is at the end of the turnout on willow tree next to small buckeye.

Coordinates: DD, WGS84/NAD83

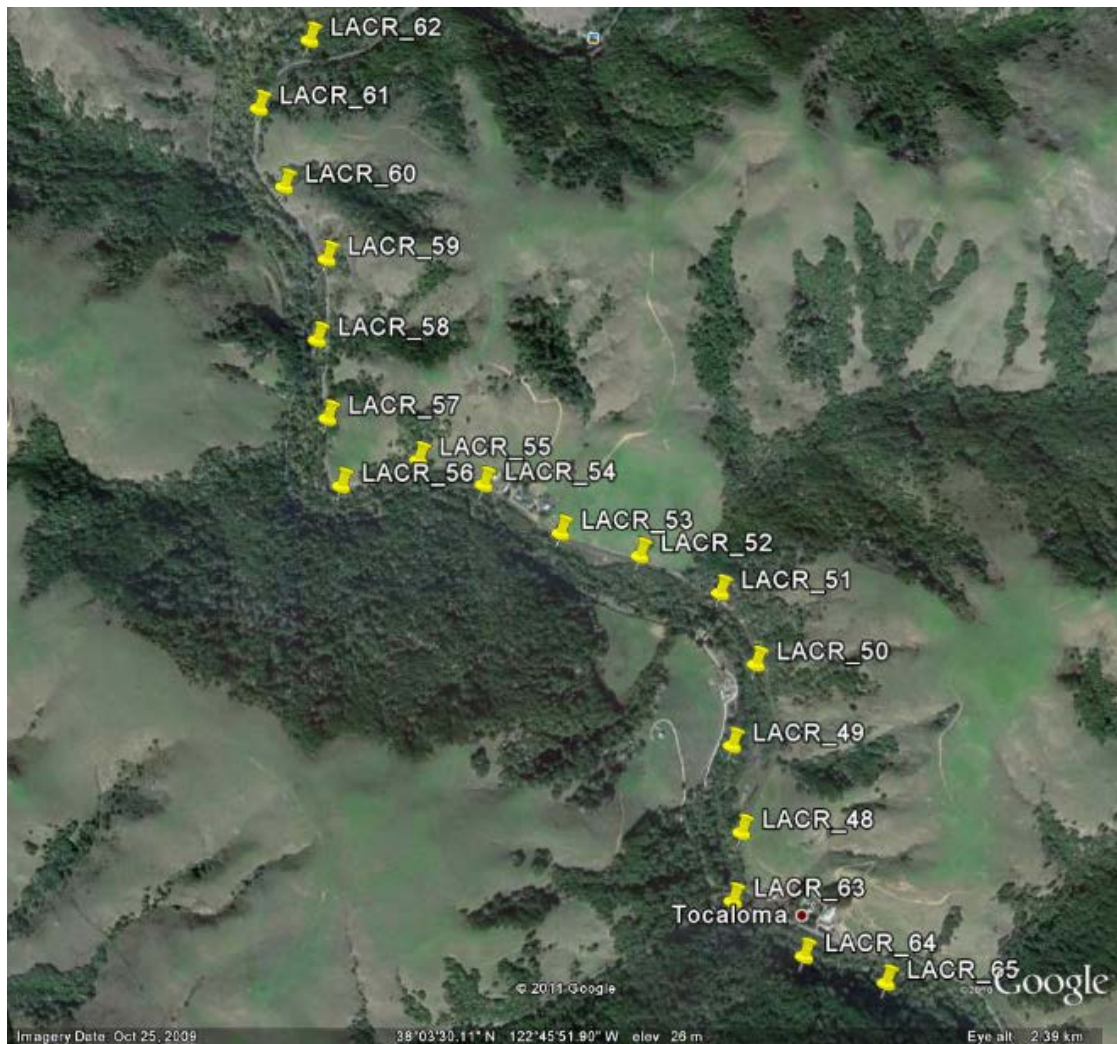
Site ID	Latitude	Longitude
LACR_48	38.05128	-122.75968
LACR_49	38.05304	-122.75984
LACR_50	38.05497	-122.75927
LACR_51	38.05654	-122.76026
LACR_52	38.05749	-122.76251
LACR_53	38.05786	-122.76472
LACR_54	38.05893	-122.76687
LACR_55	38.05947	-122.76868
LACR_56	38.05890	-122.77085
LACR_57	38.06039	-122.77122
LACR_58	38.06212	-122.77152
LACR_59	38.06389	-122.77124
LACR_60	38.06549	-122.77243
LACR_61	38.06723	-122.77316
LACR_62	38.06873	-122.77173
LACR_63	38.04978	-122.75992
LACR_64	38.04857	-122.75794
LACR_65	38.04800	-122.75568

Point Blue Point Count Directions – LACR (page 3 of 3)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~2008	2010	Gardali & Humple	point & route descriptions updated (Gardali); format changed, and added map, revision history log, and coordinates (Humple)	Standardization of format.
2010	2011	Humple	Fine-tuned point descriptions and notes.	Clarification
2012	2013	Humple	Fine-tuned point descriptions and notes; changed inaccurate coordinates for pt 49	Clarification
2013	2014	Dettling	Changed descriptions because of veg changes, LACR_52 moved due to thick veg	Updates, standardizing
2014	2017	Dettling	Updates	Clarifying

Map:



Lower Olema Creek (LOOL), Point Reyes National Seashore, Marin County, CA

Point Blue Point Count Directions – LOOL (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 11 (plus 4 historic ones not being currently surveyed)

Getting there: These points are located off Highway 1 between Dogtown and Five Brooks. They can be accessed from Point Blue's Hagmaier facility (next to the NPS Pacific Learning Center) or the Bat House. Hagmaier is in the middle of the transect.

Notes: Points are approximately 200 meters apart. GPS works well. Rubber boots are helpful on this route as there are a couple creek crossings and tall grass. Poison Oak at a couple points and along road. Historic points 57-60 are not being surveyed as part of the monitoring, are at Five Brooks, and must be driven to. See older versions of narratives for details if you need them.

LOOL_46: Across Hwy 1 from first euc tree to the northerly end of white "bat house", at willow edge on riparian side of a coyotebrush clump.

LOOL_47: In 2017 the veg was encroaching on Hwy 1 to a point that I was uncomfortable walking along the highway to get from 46 to 47. Instead I drove south on Hwy 1 past the turnout to the first spot that I could park off of the highway. Walk north along the highway to where the dirt shoulder disappears- just north of this is a break in the blackberry where you can walk up onto a grassy hill. You should be nearly directly east of point 49. Continuing walking north (don't head toward the riparian just yet) to find your way down the hill and into the meadow where points 47 and 48 are. Once down in the meadow, head toward the riparian corridor following it and the GPS to the point.

LOOL_48: Walk back south along riparian corridor following GPS to point.

LOOL_49: Go to Hwy 1, then south along the road to the Olema Valley Trail (this takes you well south of 49). Follow the trail north to the point. You could try to bushwhack from 48 to 49, but it is advised against. The point is on left side of trail before the bridge across a shrubby patch from a fir.

LOOL_50: Walk 200 m, following the riparian and GPS. You will see a short mound with sparse coyotebrush, the point is near the base of this mound. Point is along willow edge next to a coyotebrush.

LOOL_51: Follow riparian edge. Point is between willow patch and riparian.

LOOL_52: Out to the trailhead by going a little bit north to find an easy way to the trail, then south along Hwy 1 and into the Hagmaier driveway. Point is ~20 m north of driveway along willows. There are no trees between the point on the willow and the highway.

LOOL_53: Go back out driveway to Hwy 1 and enter field to the south at the Pacific Coast Learning Center sign (easiest access). Follow riparian edge to a line of coffeeberry and cut towards creek following deer trails through the willows and alder. Weave your way following GPS to point. Point moved in 2017 due to thick veg. *Note: there is some shin height poison oak on the path to this point.

Point Blue Point Count Directions – LOOL (page 2 of 3)

LOOL_54: Go back out to Hwy 1 the way you came in. Go south on Hwy 1 past the Eucalyptus grove and then into field towards riparian. Lots of hummocky grass. Follow riparian south of 54 to a marshy spot. There is a slight break in the riparian treeline, but this is becoming less distinct. There is a fair amount of cattails in the field where you cut in toward the creek. Go under old barbwire and cross creek. Then go back north to point following GPS and deer trails. Point moved in 2017 due to thick veg. *Note: there is some shin height poison oak on the path to this point.

LOOL_55: Staying on west side of riparian, go south. Follow grassy sparsely bushed area up a small rise. Go past lone Douglas-fir on top of rise, then turn into riparian along deer trails and following GPS. Point is under willows ~5m in from willow edge. Point moved in 2014 due to thick veg. *Note: there is some shin height poison oak on the path to this point.

LOOL_56: From 55, go back to marsh treeless spot, cross creek. Then go up east side of riparian to a part of the creek without willows. Go under barbwire to willow edge on west side of creek. Point is at willow edge. Corresponds approximately to mile marker 19.87 (can park near here).

Coordinates: DD, WGS84/NAD83

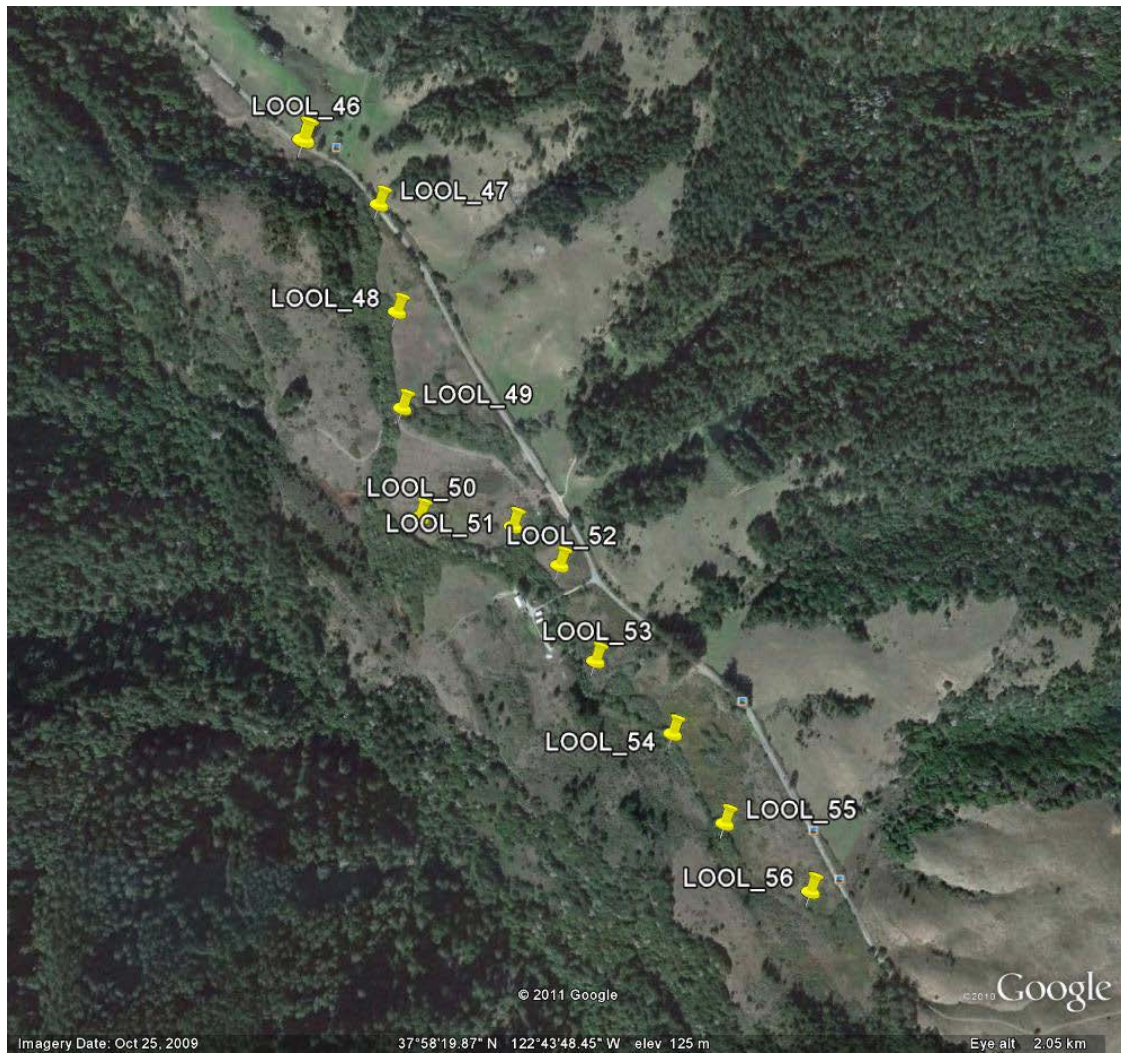
Site ID	Latitude	Longitude
LOOL_46	37.97881	-122.73628
LOOL_47	37.97770	-122.73454
LOOL_48	37.97578	-122.73412
LOOL_49	37.97406	-122.73400
LOOL_50	37.97212	-122.73360
LOOL_51	37.97196	-122.73149
LOOL_52	37.97127	-122.73043
LOOL_53	37.96949	-122.72953
LOOL_54	37.96813	-122.72790
LOOL_55	37.96655	-122.72662
LOOL_56	37.96552	-122.72480

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
2005	2011	Humple	Created standardized document. Also, 57-60 were not in most recent version.	Need maps / coordinates / and to reinstate pts 57-60
2011	2011	Porzig	Updated narrative. DEJU current	Trail re-routed
2011	2014	Dettling	Updated narrative. Moved LOOL_54 and LOOL_55 due to thick veg	Veg growth required new access, standardizing
2014	2017	Allen	Updated narrative. Moved LOOL_53 and LOOL_54 due to thick veg	Veg growth and highway activity required new access

Point Blue Point Count Directions – LOOL (page 3 of 3)

Map:



M Ranch (MRAN), Point Reyes National Seashore, Marin County, CA

Point Blue Point Count Directions – MRAN (page 1 of 2)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 8

Getting there: Park at the big pullout at the “School Bus Stop 400 Feet” sign, just before you reach Drakes Bay Oyster Farm sign when heading out from Inverness towards the Lighthouse.

Notes: GPS works well. Small amount of Poison Oak along road (but easily unavoidable). All the points are near the riparian vegetation along the creek, but are to be surveyed from the road due to the marshy nature of the vegetation. From MRAN_1 simply go back along the road headed toward Inverness to reach points 2-8. Do the point from the side of the road that the riparian habitat is on; when it crosses the road, you should do the same.

MRAN_1: Point is at the edge of the pullout (the furthest edge from the oyster farm sign; i.e., the first end you reach).

MRAN_2: This point is just after the power-line crosses the road, but before it crosses back (by about 50 m) to the riparian side.

MRAN_3: This point is about eight meters past the first pole, once the power line crosses across from the riparian. Across from a few willows on upland side of road.

MRAN_4: Directly across the road from the drainage with pine trees. Again in a spot where the power line begins crossing back to the riparian side. Near “Caution Flooded” sign that can fold up.

MRAN_5: Follow GPS to point. Across from steep bank with alders. Power lines running parallel and directly over the road.

MRAN_6: Across from ranch/pasture. This point is about 10 m. upstream of the culvert where it goes under the road.

MRAN_7: Go about 25m up the road to the Estero trail off of Sir Francis Drake. Point is on east side of Estero road at bridge over creek. This point can be noisy when the creek is running.

MRAN_8: Just before an alder on the creek side (a little hard to see over willows), and a pine across the street (~60m from point). This spot is primarily willow right at the roads edge.

Coordinates: DD, WGS84/NAD83

Site ID	Latitude	Longitude
MRAN_1	38.09158	-122.92609
MRAN_2	38.09141	-122.92402
MRAN_3	38.09188	-122.92199
MRAN_4	38.09235	-122.92014
MRAN_5	38.09285	-122.91808
MRAN_6	38.09277	-122.91596
MRAN_7	38.09364	-122.91404
MRAN_8	38.09488	-122.91239

Point Blue Point Count Directions – MRAN (page 2 of 2)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~1998	2011	Humple	Standardization	Needed map/coordinates
2011	2014	Dettling	A couple of grammatical and formatting edits	Edit wording, standardizing
2014	2017	Allen	A couple of word choice edits	Clarifications

Map:



Muddy Hollow (MUHO), Point Reyes National Seashore, Marin County, CA

Point Blue Point Count Directions – MUHO (page 1 of 4)

Project: Palomarin (PALO)

No. Points: 15 (originally 17 but points 76 and 77 have not been repeated since 1998, due to the thickness of the off-trail vegetation post-fire, which causes quite a disturbance plus takes a long time to navigate through. Please see older narratives if interested in the location of these points).

Getting there: On road to Limantour, turn right at sign for Muddy Hollow (left is Youth Hostel and Clem Miller Environmental Center), park in lot. Points are in both directions from Muddy Hollow parking lot. Points #70 - #61 are south, down Muddy Hollow Trail. Points #71 - #77 are north, up the Bayview Trail. Have to return to parking lot between each of the two sets of points.

Notes: Most points directly on trail. Landmarks change rapidly here - i.e. snags fall down, heavy vegetation growth, etc. Pts ~200 m apart (some less). Need rubber boots as point 65 typically flooded. Degrees relative to magnetic not true north. Note that trail rerouting (and lack of old trail maintenance) will influence points 65-66 & may make access difficult in future, but for now, especially because of power line maintenance, is reasonable to access and retain. Rain pants recommended for a couple pts. Not oaky. Flagged yellow or orange.

MUHO 70: Through gate at parking lot down Muddy Hollow Trail; point ~50m down road, left side of trail even with willow with two large branches sawed off; is 20m > 1st telephone pole.

MUHO 69: Point is ~15m just before 3rd pole, left side of trail on mid-sized alder (closest alder to trail; leans toward trail); flagged by trunk.

MUHO 68: Halfway between the 4th + 5th telephone poles, ~40m < turnoff to Estero Trail on right + ~50m > 4th pole. Point just off trail to right at willows.

MUHO 67: 20m < pump shed on the right side of road; pt ~15m off road to right, at the edge of elderberry patch and by coyotebush under alders.

MUHO 66: Off trail; continue on trail; do not take main trail when curves left ~100m > pumphouse: go on OLD trail following powerline (may take longer to access in future; for now being partially maintained for powerlines). Just before end of alders on right side of trail (last alder flagged near trunk). About 20 m beyond the 2nd telephone pole after the pump shed (which is 1st pole after leave main trail). Point is about 5 m off the trail to the right.

MUHO 65: Off trail; hard to access; takes a while and serious bushwacking. Narrative changed from historical description due to major change in vegetation. Follow GPS. Continue on old "trail"/powerline-path and, when you get near or to 3rd telephone pole you pass after you've left the main trail (2nd pole > pt 66), go off to right of "trail" into alder forest. Note: understory vegetation, status of alder trees, and slough locations subject to seasonal changes due to extensive winter flooding in this area as well as extreme mud deposition. In 2016: point in sedge marsh in closed alder forest; orange flagging on live alder trunk + a couple nearby branches.

MUHO 64: From pt 65: go back the way you came along trail (trust me) and take bridge/trail/boardwalk to right between points 66 + 67 (was to your left when you were walking to point 66), which will get you on the far side of the riparian. Decent (~700m) walk between points 65 and 64. Point is at far side of huge *Ceanothus* that is in scrub and just to right of trail; point above the riparian and slightly downslope of trail; more reachable coyotebush flagged.

MUHO 63: Continue along main trail. Point flagged on willow on right ~20m after you get out of alders that are directly along trail (and ~20m < a bishop pine immediately to left of trail).

Point Blue Point Count Directions – MUHO (page 2 of 4)

MUHO 62: Continue on main trail. Flagging on alder to left of trail, near bishop pine ~5m off trail also to left.

MUHO 61: Near end of willow patch at edge of marsh on right of trail, ~20m before view of open marsh (what used to be pond; highly variable); willow on right flagged.

The following points start back at the Muddy Hollow parking lot, but are along or on way to the Bayview Trail to the north.

MUHO 71: Off trail; along Muddy Hollow Rd walking towards Bayview Trailhead, at 1st scrubby clearing on right, turn in as if walking to net 10, pt ~25 meters into clearing, along willows. Is about 15 meters from the 1st pole of net 10, about 10m before big alder, and at willow edge.

MUHO 72: From 71, walk back to fire road, continue right, then turn off road to your right up the signed Bayview Trail. Go through cypresses, point + flagging is on right side of trail at the 2nd drainage that crosses the trail and goes to the creek once you hit the red elderberry shrubs lining the trail, and before you pass the first large live alder directly on the left.

MUHO 73: Off trail; point is near beginning of big scrub meadow to the right of trail and at middle of the smaller first distinct and bowl-shaped part of the meadow across from buckeye patch on left; point is ~10-15m off trail to right, at (flagged) coyotebush by low blackberry patch near lupine, in opening. From trail, pt on other side of super tall, lanky coyotebush near trail. Easiest to go just past point on trail, then cut in at pseudo-path to right.

MUHO 74: At first bridge, left side of trail before crossing creek.

MUHO 75: About 20 meters before signed fork in trail, at large alder ~3m to right of trail, at top of incline where trail goes uphill about 3 feet.

Coordinates: DD, WGS84/NAD83

Site ID	Easting	Northing
MUHO_61	38.0344963	-122.882402
MUHO_62	38.03563891	-122.8809375
MUHO_63	38.0370283	-122.8801489
MUHO_64	38.0387382	-122.8792038
MUHO_65	38.04098724	-122.8782822
MUHO_66	38.0428004	-122.8767241
MUHO_67	38.04393767	-122.875439
MUHO_68	38.04500518	-122.8739262
MUHO_69	38.04613708	-122.8720755
MUHO_70	38.04748891	-122.8702141
MUHO_71	38.04910897	-122.8696079
MUHO_72	38.05066465	-122.8684063
MUHO_73	38.05252073	-122.8679449
MUHO_74	38.0541642	-122.8672445
MUHO_75	38.05547653	-122.8656919

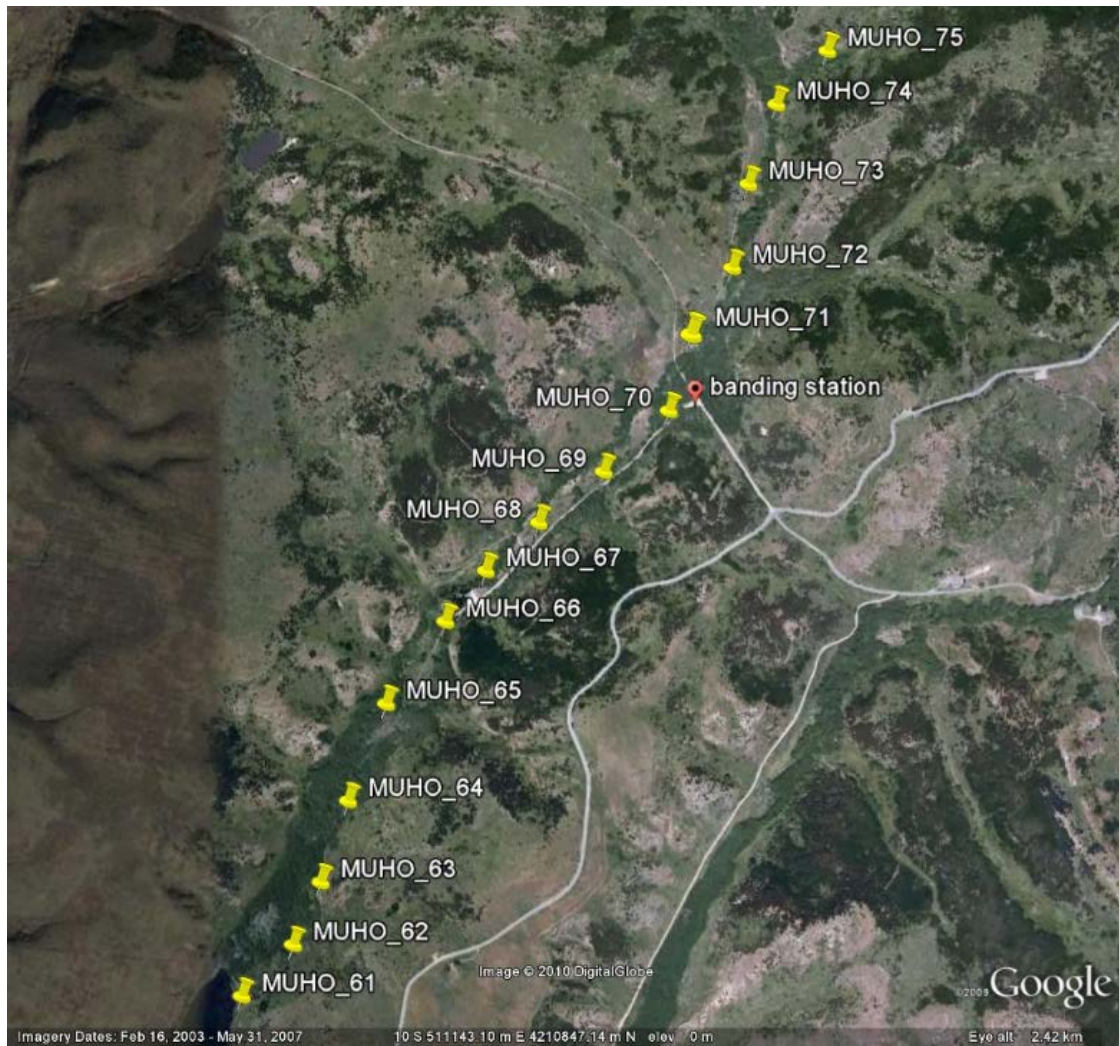
Point Blue Point Count Directions – MUHO (page 3 of 4)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
2005	2006	Humple	Redid narrative style to match new one; updated details, especially veg, at a few pts.	Change in narrative protocol; veg changes
2006	2007	Humple	Made just a few changes	Improvements to point descriptions
2007	2008	Humple	Made one change to point 73	Improvements to point descriptions
2008	2010	Humple	Access details for points 61-66; added map	Trail rerouting and restoration
2010	2011	Humple	Added map and fine-tuned details as per current conditions	Map and site changes
2012	2012	Humple	Fine-tuned details as per current conditions	Site changes
2012	2013	Humple	Fine-tuned details as per current conditions; changed coordinates for point 66 & 74 (inaccurate), 64 (needed to slightly move it again due to trail changes and access)	Site changes, coordinate updates
2013	2014	Humple	Fine-tuned details as per current conditions	Site changes
2014	2015	Humple	Fine-tuned details as per current conditions	Site changes
2015	2016	Humple	Fine-tuned details as per current conditions	Site changes
2016	2017	Humple	Fine-tuned details as per current conditions	Site changes
2017	2018	Humple	Fine-tuned details; moved pt 68 <10m due to access	Site changes

Point Blue Point Count Directions – MUHO (page 4 of 4)

Map:



Pine Gulch (PIGU), Marin County Open Space, Marin County, CA

Point Blue Point Count Directions – PIGU (page 1 of 2)

Project: Palomarin (formerly Coastal NPS Monitoring, even though not on NPS land)

Notes: some points not only < 200m apart, but < 150m!

Getting there: Park at pullout on Olema-Bolinas Road next to Pine Gulch Forest, and take trail into forest. Same location as mist-netting station

PIGU_1: At end of net number 1 (end that is closer to net 2 than net 5, the way you walk the trail, not as crow flies).

PIGU_2: At end of net number 2, at end closer to trail that you walk into Pine Gulch on then to the end that is nearer to net 1.

PIGU_3: Current best route: walk main trail near net 10 towards lagoon, and go right (instead of left turn in trail towards net 9); walk in marsh following contour of willow edge (deer trail?). Near lone fruit tree sapling slightly offset from willows, and ~45 m from pt 3 and 200m from pt. 4; go into willows following deer trail. Point in ~10m from fence, on interior/riparian side of a fruit (plum?) tree, with farm on other side of fruit tree across fence. Takes a bit of time but going direct from net 10 area is worse!

PIGU_4: At “far” end of net number 9 (end that is furthest from main trail).

PIGU_5: At “far end of net number 6 (end that is furthest from main trail).

Coordinates: DD, WGS84/NAD83**

Site ID	Latitude	Longitude
PIGU_1	37.92141	-122.69075
PIGU_2	37.92023	-122.69078
PIGU_3	37.91917	-122.69028
PIGU_4	37.92042	-122.68904
PIGU_5	37.92133	-122.68957

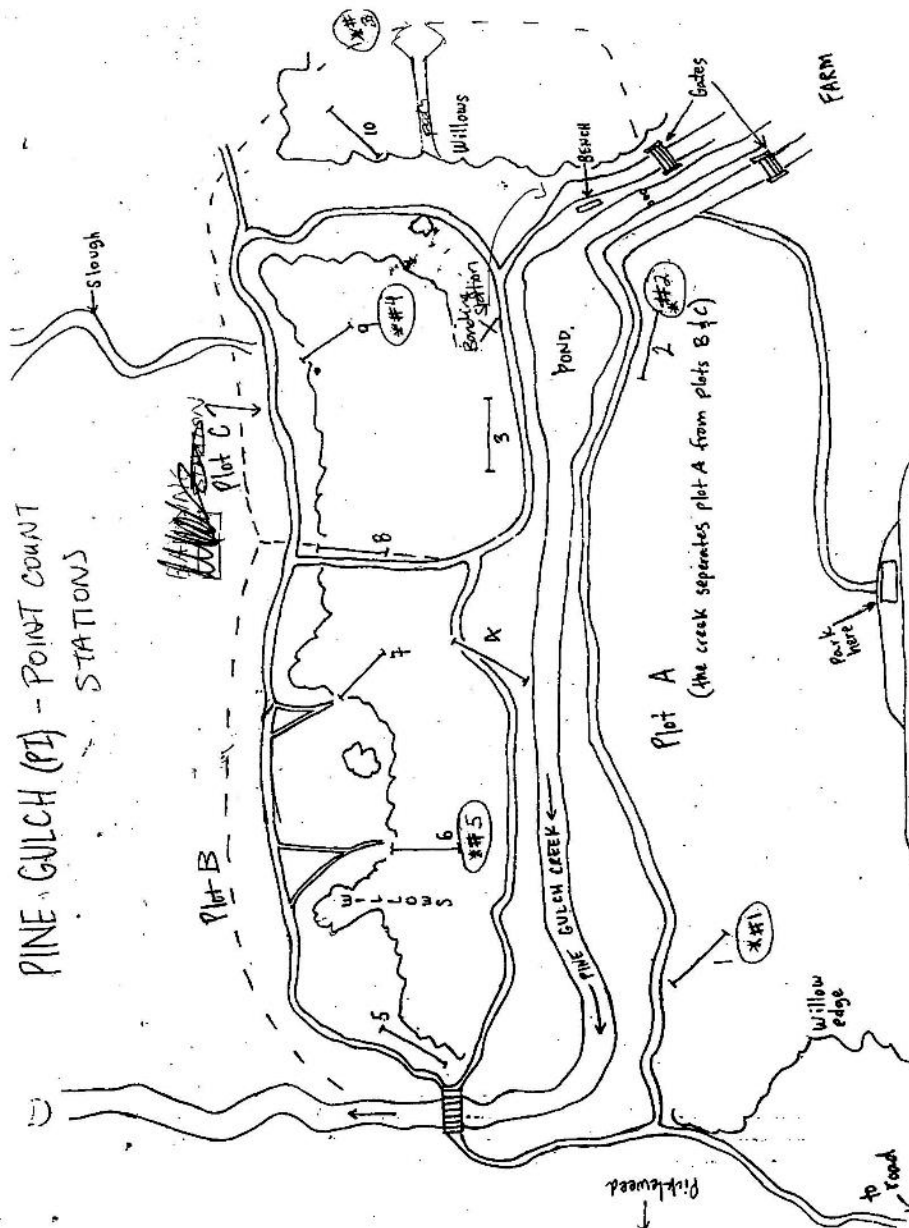
****NOTE:** most people do not use coordinates to find points, but use map with net locations. Would suggest using GPS for PIGU_3.

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~2005	2006	Humple	Complete re-do; added map to same document as narrative; added coordinates	Old and outdated
2006	2008	Humple	Changed project to Palomarin	Per new standard
2008	2010	Humple	Added coordinates & checked them in Google Earth that seem correct	Standardization
2010	2014	Dettling	Small edits to description	Veg changes, standardizing
2014	2015	Humple	Edits to description (esp. pt #3 access)	Veg / path changes
2015	2016	Humple	Edits to description + pt # 2 GPS coordinates	Slightly off
2016	2017	Dettling	Updates	Clarifying

Point Blue Point Count Directions – PIGU (page 2 of 2)

Map:



Redwood Creek (RECR), Lower Section, Golden Gate National Recreation Area, Marin County, CA

Point Blue Point Count Directions – RECR (page 1 of 3)

Project: Palomarin (formerly Coastal NPS Monitoring)

No. Points: 10

Getting there: ~35 min drive from Bolinas. Points 32-34 and 68-69 are around Muir Beach, the rest follow creek upstream. Take Hwy 1 S from Bolinas to town of Muir Beach. For lower points, if being dropped off turn right at Muir Beach Rd. just after the Pelican Inn, and get dropped off at Muir Beach parking lot. There is no public parking on Muir Beach Road in early morning, so if you are driving and starting at the lower end or the middle, instead park in the middle: turn left off (if coming from N) Hwy 1 onto the banding station dirt road, and park on pullout on right (putting you in middle of transect). To start at the upstream end, turn left off Hwy 1 up Muir Woods Road and park on left at pullout above the volleyball net area along creek (if you hit Santos Meadow you've gone too far).

Notes: GPS works well. **Rubber boots needed and rain pants are a good idea.** No Poison Oak. Flagging if present is usually orange or yellow; intervals ~200 m. This is done as a separate transect from the RECR "Upper Section", and numbers are unique. Pts 70-73 are part of restoration, so landmarks, especially vegetation, are changing. Highly recommend scouting route to point 68 before season starts as veg is thick and changes annually.

RECR_32: When going to parking lot, go to the left before bridge at the No Parking signs. Area mostly overgrown with small alders. Newly restored in 2014. Point is on bank of creek ~10m before overhead power line crosses creek. Flagged orange in 2018.

RECR_33: From RECR_32, go back to road and into parking lot. At the 3rd parking spot from the gate on the left (riparian side), there is a trail into the riparian and to the point. Point is between clump of 7 alder and clump of 4 alder. Not flagged.

RECR_34: From RECR_33, go back out to the parking lot and walk towards the beach. At the walking bridge, go down into the restoration towards the point following GPS. Go into alder grove, point is on the NW edge of the alder grove, at the pond/channel edge. Flagged orange on alder edge (2018).

RECR_68: This point is hard to get to (consider nest stick, or macheting before breeding season). In dry and wet years was able to access from Pelican Inn parking lot near white shed (~40m from point) and bushwhacking. In wet years rubber boots required to get through flooded area. For alternate route used in the past see old narratives. Use GPS. If doing the transect from upstream to downstream, still approach RECR_68 this way as trying shortcuts will just cause frustration. Was able to get 5-10m from point in 2018. Flagged orange on small alder right next to medium sized alder in 2018.

RECR_69: From RECR_68, go back to Muir Beach Rd, Pelican Inn and Hwy 1, walk N on Hwy 1. Take 1st dirt road to left (NOT the dirt driveway into a van parking area); residential addresses posted at the beginning of the dirt road (e.g., 1821, 1795). Point is at 1st tall elderberry on left before Quail in Area sign (which is on right). Not flagged.

RECR_70: Follow the dirt road to the Hwy, go left (north) along the Hwy, around the curve, to the private road on right (road to banding station). Continue ~130m up road and head towards creek. Point flagged orange (2018) on an alder, about 5 m from creek side of net #9, in direction of Hwy 1, on 3rd alder over.

RECR_71: Go back out to the road. Follow the road until the creek turns. Turn right into the grass and continue paralleling the creek. Point is ~15m before net #1, but can be accessed by using net lane to get into riparian. Point near old alder which is broken off ~4m up trunk in young alders. Flagged orange on small willow (2018).

Point Blue Point Count Directions – RECR (page 2 of 3)

RECR_72: Continue to parallel creek for another 200m through grass and other veg. Lots of young alders, widening the riparian (enter riparian at 1m tall PVC pipe flagged orange in 2018). Point is in thimbleberry at edge of creek. Flagged orange on small alder (2018).

RECR_73: Continue to parallel creek. ~50 m past 1st telephone pole, walk down to creek to right, and cross creek to reach point. Point is on the far side of the creek, metal tag on dead, broken alder limb on big alder 10m upstream from 6-trunked alder that's also on far side of creek.

RECR_74: >200m from last. From 73, go back across creek and continue upstream. Walk almost all the way to the cypresses at end of valley, then cross the human area with wooden structures to your right. Point is ~15m from elbow (L-shape) of willow patch, and at willow edge. No flag. If you are accessing point #74 first in your transect order, via the volleyball/junkyard parking area, you will have to cross a walking bridge to get to this point.

Coordinates: DD, WGS84/NAD83

Site ID	Latitude	Longitude
RECR_32	37.8632587	-122.5748707
RECR_33	37.86159037	-122.5743718
RECR_34	37.86046	-122.57568
RECR_68	37.86474465	-122.5757826
RECR_69	37.86634861	-122.5768823
RECR_70	37.86702989	-122.5795055
RECR_71	37.8687983	-122.5804953
RECR_72	37.86992668	-122.581941
RECR_73	37.87166474	-122.5827188
RECR_74	37.87376224	-122.5835074

Revision History Log:

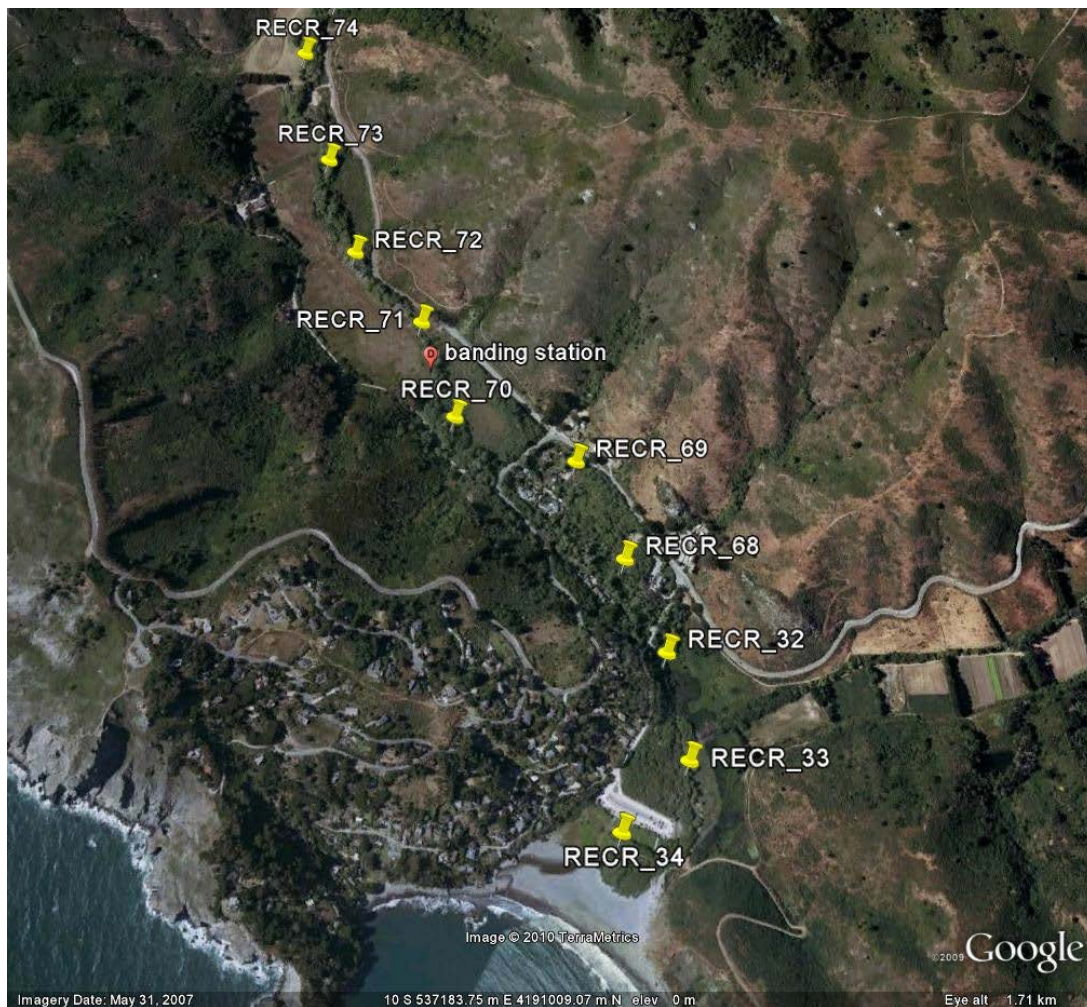
Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
2005	2006	Humple	Redid narrative style to match new one.	Change in narrative protocol
2006	2007	Humple	Added details to point descriptions; changed parking instructions	Details will help find people points; parking instructions updated since can't park at lower end of transect anymore
2007	2008	Humple	Added details and modifications to point descriptions; changed project to Palomarin	Details will help find people points; changed some (e.g., point 73) for which landmarks had changed; changed long-term Palo run sites to project=Palomarin
2008	2010	Humple	Added details and modifications to point descriptions; changed coordinates for point 34; added map	Changed some for which landmarks had changed. Also, point 34 had to move 15m due to flooding and channelization from restoration at Big Lagoon; changed coordinates.

Point Blue Point Count Directions – RECR (page 3 of 3)

Revision History Log (cont.):

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
2010	2011	Humple	Added map and fine-tuned some details	Needed map and observed some changes at points plus restoration
2011	2012	Humple	Fine-tuned some details	Observed some changes at points, plus restoration at Big Pond.
2012	2013	Humple	Fine-tuned some details; modified GPS coordinates for point 71	Observed some changes at points, plus restoration at Big Pond.
2013	2014	Dettling	New parking lot, Fine-tuning	Updating and standardizing
2014	2016	Dettling	Fine tuning descriptions	Updating
2016	2017	Dettling	Updates	Clarifying
2017	2018	Dettling	Fine tuning descriptions	Updating

Map:



Redwood Creek (RECR), Upper Section, Golden Gate National Recreation Area, Marin County, CA

Point Blue Point Count Directions – RECR (page 1 of 3)

Project: Palomarin (formerly Coastal NPS Monitoring)

No. Points: 14

Getting there: ~35 min. drive from Bolinas. From Hwy 1 head S from Bolinas; turn left onto Muir Woods Road at town of Muir Beach just past the dirt road to the RECR banding station. The lower end of transect (REC_45) is just up Muir Woods Rd from volleyball net area you will see on your left; park at Santos Meadow a little further up road. The upper end of it (RECR_47) is by what used to be NPS nursery area on left. If starting at this end, you'll have to obtain a parking permit for parking in nearby pullouts.

Notes: Need parking permit for parking at upper end! GPS works well. Some mostly avoidable Poison Oak. Flags generally orange & red; intervals ~200m. Rubber boots required. Rain pants & compass helpful, as would be a nest stick to get through thick veg in some spots. Bearing are likely magnetic north. Veg makes access difficult at some points. Done as a separate transect from the "Lower Section"; numbers unique, but all are called RECR. Points unusually ordered. In 2017 the main trail was officially "closed" and foot bridges were out- still closed in 2018.

RECR_47: Enter nursery area (no longer nursery in 2018) at "No Parking Fire Lane" sign on left side of road; Enter buckeye grove directly behind dumpster on left side. Follow 'trail' under trees to point, which is under a large buckeye on left of opening that is beneath a huge alder. Flagging on alder that is mostly horizontal.

RECR_46: Walk back out to road, then towards Hwy 1 along dirt road/path that runs along Muir Woods Rd (opposite side of road from parking spot). The point is 252 deg. from large Doug-fir before you reach a telephone pole across road (basically on other side of fir from path). In some years can be hard to access because of vegetation, and may need to do point on path-side of fir. Orange flagging on live, bent over willow.

RECR_36: Continue down road. Go in toward riparian from Muir Woods Rd at buckeye which is near C107 M1.99 k M3.202 sign across road. Veer to left side of buckeye, trail basically gets you to point. Watch for poison oak. Flagging on large elderberry ~20m in from road. Moved point toward road slightly due to thick veg (Old UTM: 538046, 4193412).

RECR_35: Continue down road; go down Redwood Creek Trail (to left of paved road when heading down to Hwy 1; across from fire road). Point is about 50m down trail from road, and 8m from the trail, to right. Can be hard to access. No flagging too close to trail. **Note: after this, whenever trail forks, never take trail to road; stay mostly along creek.**

RECR_37: Continue along trail. 22m after bridge; tag on a large buckeye with contorted trunk on right side of the trail before a large redwood tree. Could not find tag in 2014, no flagging.

RECR_38: Off right side of trail ~5m before trail intersection. Hard to get into veg. Point moved in 2014 due to very thick veg. No flagging. [in 2017 and 2018 point done right on trail due to impenetrable veg, which was 5m from 'true' point]

RECR_39: Continue on trail; do not fork left (if coming from RECR_38), stay on Redwood Creek Trail. When near point cut across grassy/coyotebrush field to creek. Point is on the creek bank in the alder grove to right of trail and before solid willow patch. Stand on bank looking down at creek under alder canopy. Flagging on alder branch at creek's edge.

Point Blue Point Count Directions – RECR (page 2 of 3)

RECR_40: Continue on trail. Fork left (staying on Redwood Creek Trail). Point is down creek bank at level ground in an alder patch before the creek. On trail, turn in before coyote brush and blackberry patch that comes out to trail on the right. Flagging on medium sized alder near small redwood by creek.

RECR_41: Continue on trail. 9m past southerly wall of abandoned building (on far side if coming from RECR_40); at willow edge. Watch for poison oak! Flagging on willow with crooked trunk.

RECR_42: Continue on trail. Cross bridge and pass short spur trail to road. Follow GPS to point on left side of trail at willow edge. Flagging (~1m high) on willow. Do from trail. Point updated in 2014 for better accuracy.

RECR_66: Continue on trail. Go down bank on left of trail to level alder patch which is directly across from willow patch adjacent to Muir Woods Rd (road to right of trail). Go into herbaceous (nettle and horsetail) area, point (flagged) on left-most of 3 huge alders with old fence post ~2m away from it.

RECR_43: Continue on trail. Go left towards the creek at willows ~15 m before junction of the trail that goes toward the road. Flag on willow trunk cut at ~2m high in clump of many willow trunks.

RECR_44: Continue, cross bridge (taking left fork of trail immediately after bridge). At Redwood Creek/Frank Valley sign, bear to the right; continue walking parallel to riparian corridor. The point is approx. 15m past the sign and 7m in from the trail, on right (may have to do from edge). Bushwhacked to point in 2014. Flag on elderberry. If doing transect in reverse order, from RECR_45, go back to horse trail and go up opposite side of creek from road.

RECR_45: From RECR_44, follow path across creek then up to road, walk road over bridge then head left along bank to point. The point is on the 3rd alder from auto bridge on left.

Coordinates: DD, WGS84/NAD83

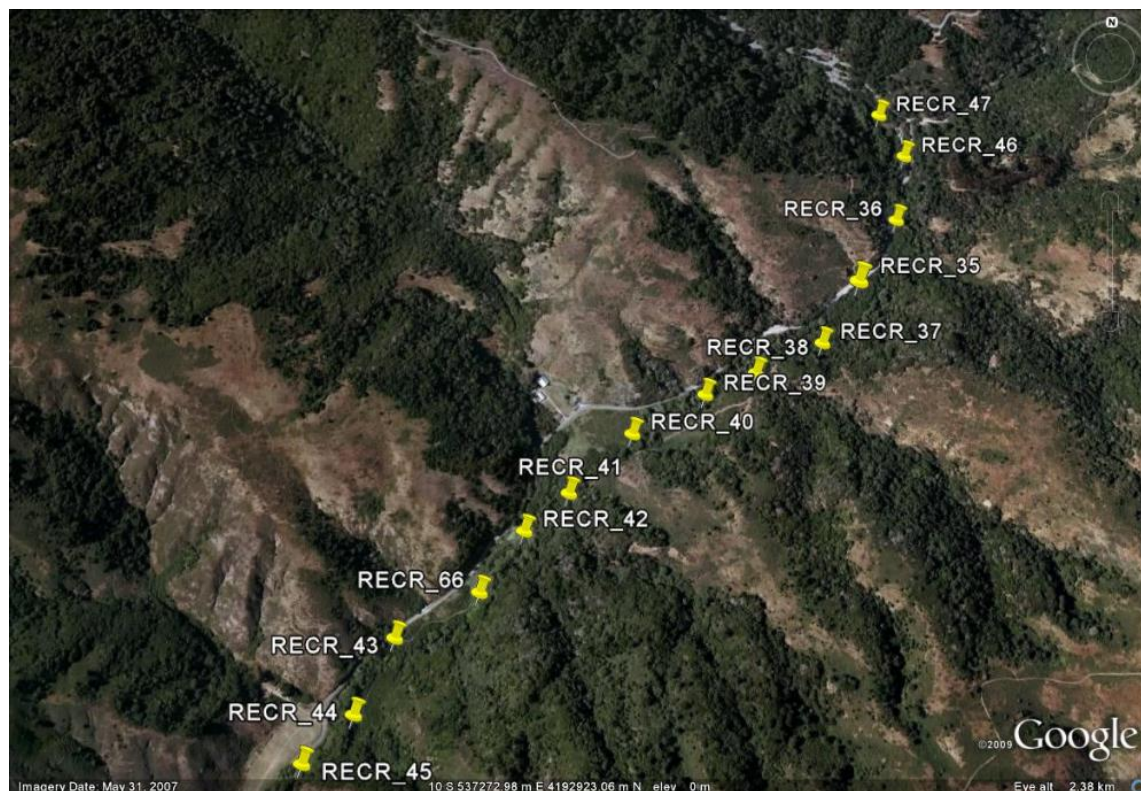
Site ID	Latitude	Longitude
RECR_35	37.88583218	-122.5684441
RECR_36	37.887651	-122.567264
RECR_37	37.88437842	-122.5694741
RECR_38	37.88361	-122.57108
RECR_39	37.88304268	-122.5727571
RECR_40	37.88207171	-122.5747527
RECR_41	37.8806877	-122.576421
RECR_42	37.87993	-122.57765
RECR_43	37.87744223	-122.5808198
RECR_44	37.87585972	-122.5817049
RECR_45	37.87484585	-122.5829119
RECR_46	37.88904546	-122.5670493
RECR_47	37.89007543	-122.5677789
RECR_66	37.87847756	-122.5786633

Point Blue Point Count Directions – RECR (page 3 of 3)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
2005	2006	Humple	Redid narrative style to match new one; updated information at a few points.	Change in narrative protocol; some changes observed
2006	2007	Humple	Updated information on a few points	To make it easier to find points, especially with vegetation changes.
2007	2008	Humple	Changed project to Palomarin	Changed long-term Palo run sites to project=Palomarin
2008	2010	Humple	Updated information on a few points; added map	To make it easier to find points, especially with vegetation changes.
2010	2011	Jennings	Moved point 36. DEJU updated	Couldn't get to original point anymore
2011	2012	Humple	Misc. site description changes	Increasing precision or addressing changes
2012	2014	Dettling	Moved RECR_38 (veg), reGPS RECR_42 (bad point), updates	Point coords, updates. standardizing
2014	2016	Dettling	Small updates for clarification	Small changes in sites
2016	2017	DiGaudio	Small updates for clarification	Veg changes
2017	2018	Allen	Small updates for clarification	Small changes in sites and parking

Map:



Tennessee Valley (TEVA), Golden Gate National Recreation Area, Marin County, CA
Point Blue Point Count Directions – TEVA (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 13 (plus 1 historic one not continuing to survey)

Getting there: Take Hwy 1 to Mill Valley. After Tam Junction and a little before Hwy 101 entrance, turn south (right if coming from Bolinas/Palo) on Tennessee Valley Road. If starting with northern points, park ~100m from point 27 at giant Tennessee Valley sign; walk back up road ~90m to 2nd Oakwood Valley Trail (not labeled right there). If starting with southern points, park where the road ends at the big parking area near Miwok Livery Stables.

Notes: pt 67 established and surveyed in 1998 only, dropped from transect afterwards and not included here. Points 1-7 are separated from points 26-31; it's not really slightly handy to bike between the sections as you have to ditch your bike in the bushes for much of it (parts of both sections are on no-bike-allowed trails). Description below is in the order of doing southern points first, but starting in middle of transect; for other visit, best order of points requiring least backtracking is 27-26-31-30-29-28, then 7 through 1. Some poison oak. Rubber boots may not be needed in dry years (waterproof hiking boots helpful due to some wet grass) but a couple points require creek crossings so wear rubber boots in wet years. Point 1 to 28 takes ~ 45 min.

Points 7-1: From main parking lot by Miwok Livery Stables, head down Tennessee Valley Trail. Signpost for that trail was broken in 2014, but it is trail that goes straight ahead and downhill from where you drive into parking area from road. To get to 7, stay on main trail until intersection where trail crosses creek; stay right following sign to Tennessee Beach.

TEVA 7: ~20 min from parking. On left of trail, across from side drainage/wash on right.

TEVA 6: Continue; take left fork on Lower TEVA Trail; walk down to riparian before shrubs start on left of trail, survey at riparian edge.

TEVA 5: By trunk of tagged Monterey Pine just to left of trail.

TEVA 4: continue on trail; after it crosses creek on bridge, take immediate left on spur trail (Wolf Ridge Trail). Point is on east side of the creek, just off trail to the right and ~2m behind trail blockade (possibly on an old trail?), just past next footbridge.

TEVA 3: Go back to Lower TEVA and continue same direction (SW) Cut in off-trail and cross creek at closest spot to point (~50m away); in all but driest years need rubber boots. Point across from coyote bush clump on east side of creek and near outermost bend in willows.

TEVA 2: Cross back over to W. side of creek and continue SW. on trail. Point on E. side of Lower Tennessee Valley Trail and W. side of creek, at W. edge of cattails just off trail.

TEVA 1: Continue on trail, then main trail; > 400m from pt 2. Pass pond. Point on east side of trail, just past where willows end. After you're done: consider continuing on for a beach picnic! Or if haven't done northern points: it's ~45min to pt 28.

Points 26-31: Note the non-numerical order of these points. If started with pts 7-1: return to parking area via main or lower trail.

Point Blue Point Count Directions – TEVA (page 2 of 3)

TEVA 28: From the main parking lot, take the Miwok Trail (starts where the paved road becomes gravel) for a few dozen meters; go left (upstream) off the trail before the riparian reaches the trail, point at edge of riparian corridor. Watch for p.o.

TEVA 29: Back to Miwok Trail and continue. Turn right at trail fork onto Rhubarb Trail (parallels road). Point along trail at second-to-last live oak.

TEVA 30: Continue on trail; cross gully on bridge and continue; the pt is between that gully and next euc groves, where to left of trail is very large dead coyotebush covered with poison oak.

TEVA 31: Continue on trail; the point (and tag if found) is on a euc tree which is part of a big euc grove; tree is on the trail side of the creek (may be dry), off trail ~ 12m, and before bridge. Watch for p.o.!

TEVA 27: Next point ~600m away. Continue on trail (north) to Tennessee Valley Rd, cross road, and continue N. on road (left). There are two unlabeled Oakwood Valley Trails to your right ~50+m apart. Take the second Oakwood Valley Trail (~90m more north and across from private bridge with red wood). After passing red-leaved trees visible off to right, pass prune/pine tree with fence posts at base immediately to right; go off trail to right on grown-over old footpath (note, there are a few of these) at more open area (pine needle understory). Have to bushwack a bit; beware of P.O. Point at incense cedar beneath big pines.

TEVA 26: Continue up Oakwood Valley Trail. Point is off-trail to right in middle of euc grove between oak tree and toyon.

Coordinates: UTM, WGS84/NAD83

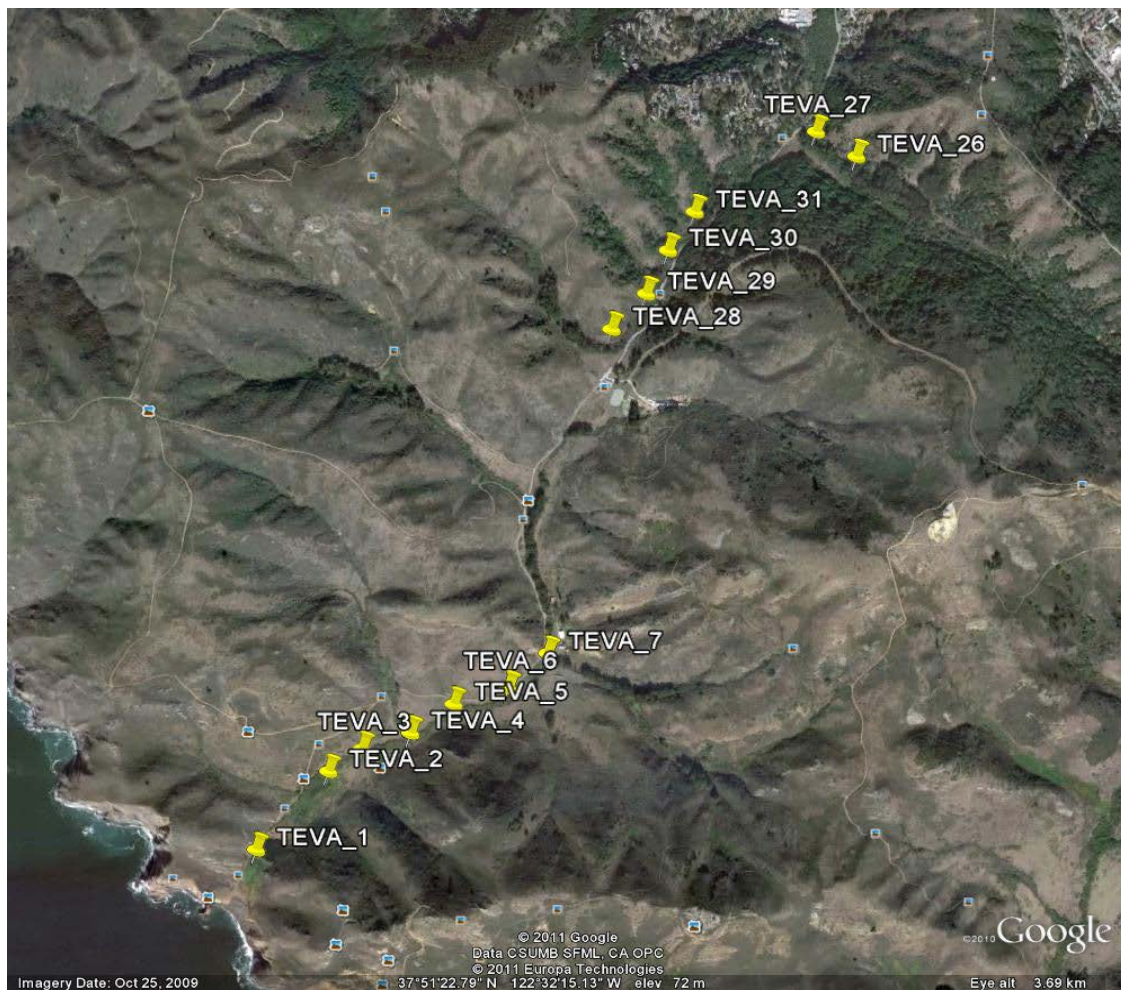
Site ID	Latitude	Longitude
TEVA_1	37.84326	-122.55145
TEVA_2	37.84643	-122.54851
TEVA_3	37.84683	-122.54662
TEVA_4	37.84741	-122.54453
TEVA_5	37.84859	-122.54275
TEVA_6	37.84923	-122.54039
TEVA_7	37.85037	-122.53905
TEVA_26	37.86815	-122.52536
TEVA_27	37.86915	-122.52691
TEVA_28	37.86157	-122.53598
TEVA_29	37.86316	-122.53442
TEVA_30	37.86473	-122.53348
TEVA_31	37.86612	-122.53233

Point Blue Point Count Directions – TEVA (page 3 of 3)

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~1998	2011	Humple	Standardization & Word version created	Needed map/coordinates
2011	2011	Porzig	Updated narrative.	outdated
2011	2014	Humple	Updated narrative, updated GPS coordinates for a few points (5-7, 27)	Outdated site descriptions; GPS coordinates off for 5-7, 27 (for site 6 original coords inaccessible, unknown if coordinates were just off)
2014	2017	Dettling	Updated narrative	Clarifying

Map:



Upper Olema Creek (UPOL), Point Reyes National Seashore, Marin County, CA
Point Blue Point Count Directions – UPOL (page 1 of 3)

Project: Coastal NPS Monitoring (CNPSM)

No. Points: 13

Getting there: To get to UPOL_78 from Olema, go 1.9 miles north on Hwy 1, turn L on Sir Francis Drake, and first point is 0.3 miles after the intersection (park at large turnout / parking area for Olema Trail on L side of road). To get to UPOL_90 from Olema, turn left towards PRNS HQ, and park at large pullout on right ~0.4 m from Hwy 1.

Notes: GPS works well. Lots of nettle, some poison oak (rain pants helpful). Need rubber boots, marsh and tall grass. Runs parallel to Bear Valley (BEVA) transect; potential for coordination with person counting that transect. Points are 200-250m apart. Transect is not along a trail, and some points require serious bushwacking, so start early and prepare for a long survey. Helps to cut/flag trails while scouting. Potentially do points 89 + 90, then drive further up road to park on other side of marsh to access 88, and do 88-78 on foot from there.

UPOL_90: Across pasture from large pullout on Bear Valley Road between Olema and Bear Valley Headquarters. Can get through blackberry at road edge from deer trail just south of pullout (other side of willow). Do point from a few meters into the willow edge.

UPOL_89: Go downstream along edge of willows and turn into forest at edge of cattails, towards campground. After getting deep into the forest (not heading directly to point here), the trees should thin out and make it easier to reach point.

UPOL_88: Crossing marsh from UPOL_89 is strongly inadvisable. Quickest to return to vehicle from points 89/90, drive or walk further up road past PRNS HQ, and park on right at pullout with yellow bicycle/share the road sign, across from white & green park buildings. Cross gate and walk on far side of marsh edge back toward riparian. Point at lone piece of wooden fence at riparian edge well before large live oak.

UPOL_87: Continue along riparian edge, first head up slope towards fence and around oaks, then head through riparian to point when ~100m from point. Point in willow patch near edge of grassy meadow on other side of riparian (meadow to East of point, and another riparian swath to East of meadow). Point next to old creek bed. In high water years, creek may be difficult to cross. Unsure of best way to get from 88 to 87, scouting would help.

UPOL_86: Go to creek, cross and follow west side until it's easy to exit riparian into field. Continue downstream. Point is on riparian edge where alder, live oak, and willow come together.

UPOL_85: Walk along west edge of riparian and continue north along riparian/meadow edge. Point beneath live oak.

UPOL_84: Continue same direction. Point on metal fencepost at north/far end of meadow. Becoming thick with blackberry and nettle.

UPOL_83: Difficult access. Continue downstream along creek (even in creek when possible), and as soon as possible get above riparian (west side) and continue along edge of meadow. Next to giant Live Oak that is along fence.

UPOL_82: Continue downstream, then uphill slightly and around a fence. Go up small hill and stay on the grassland side of the clump of trees. Continue along the edge of the trees to the point. Point on willow edge with some Poison Oak around.

Point Blue Point Count Directions – UPOL (page 3 of 3)

UPOL_81: Continue on riparian edge, go up around fence (or cross 2 fences) and continue along edge to point. Point along willows and fence on side of grassy hill, 40 m upstream from distant fence (that's perpendicular to riparian edge and fence you've been following).

UPOL_80: Continue NW to fence line, then left along the fence to the gate. Cross swallow box meadow towards point. Bushwhack through willows to large alder. Point is in a willow thicket.

UPOL_79: Continue along riparian edge of bird box meadow. At 2nd telephone pole after (downstream of) house, turn into riparian at opening. Bushwhack into willows ~5m and go to the far end of small clearing- do the point here (~10m from GPS point location).

UPOL_78: Go back out to riparian edge by second telephone pole and head north along edge, passing ponds. At far (downstream/N) end of 2nd pond, turn to R (NE) at corner where willows along stream meet willows along road. Do from willow edge. Note, to get out to road from here (or to get to the point from the road) come out via old 2-track/trail just west of where telephone wire you've followed intersects with road and telephone wire along road. To return to your car at other end of transect, take Olema Trail South (this is the trail/2-track) and then turn left when you hit road and walk along road. Point moved in 2014 due to thick veg.

Coordinates: DD, WGS84/NAD83

Site ID	Latitude	Longitude
UPOL_78	38.06332	-122.81029
UPOL_79	38.06190	-122.80829
UPOL_80	38.06033	-122.80607
UPOL_81	38.05867	-122.80527
UPOL_82	38.05672	-122.80449
UPOL_83	38.05579	-122.80217
UPOL_84	38.05422	-122.80069
UPOL_85	38.05194	-122.79888
UPOL_86	38.05014	-122.79781
UPOL_87	38.04892	-122.79682
UPOL_88	38.04679	-122.79604
UPOL_89	38.04505	-122.79435
UPOL_90	38.04327	-122.79281

Revision History Log:

Previous Version Year	Revision Year	Author	Changes Made	Reason for Change
~2005	2011	Humple	Standardization; changed site descriptions as per habitat changes. DEJU current	Needed map/coordinates; habitat change
2011	2014	Dettling	Moved UPOL_78 due to thick veg, updates	Veg changes, moved point, standardizing
2014	2017	DiGaudio	Improved directions to 89, and edited landmarks for points 83, 80, and 79.	Veg changes

Point Blue Point Count Directions – UPOL (page 3 of 3)

Map:

