

**Appendix VI.1. Instructions and data forms for Van Dyke's salamander surveys. Use 1 form per site visit.** The shaded area of the first form is only filled in if a target species is captured.

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**Van Dyke's Salamander Survey Data Form**  
**(to be used during all site visits)**

**Recorder/Observers:** Names of observers and the recorder, including middle initials.

**Protocol/Supplemental:** Circle the survey type that applies.

**P\_\_ of \_\_:** Page number of total pages for this particular site for this particular site visit.

**Survey Team:** This is the affiliation and location of the parties involved in surveying. For example, it might read, "surveys conducted for USDA Forest Service, Packwood RD, contracted through Schmill Biological Contracting, Schmillville, WA. Jill Schmill, survey team lead, 360-555-642-8941.

**Protocol citation/date:** Enter the citation and publication/draft date for the protocols being used. If other documentation exists (e.g., letters of guidance from Regional Ecosystem Office or Protocol Amendment) include those references also.

**Project Identifier:** The name or number assigned to the site-disturbing activity project area. This should be in permanent record with the land manager.

**Survey \_\_ of \_\_:** The sequential number of the survey for that site. For example, if it is the 2nd of 3 visits, it would be 2 of 3.

**State:** Two-letter state code.

**Co:** County name.

**Environmental Conditions:**

**RH:** Measured relative humidity of air in %, 1 m from ground, 10 m from edge of body of water or (for upland surveys) at starting point.

**Air temp:** Air temperature in °C, measured 1 m from the ground, 10 m from edge of body of water, in shade or (for upland surveys) at starting point.

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- Soil temp:** Soil temperature, measured 1 m from the ground, 10 m from edge of water, in shade or (for upland surveys) at starting point.
- Proceed?:** Circle Yes or No, depending on environmental conditions. If they do not meet minimally acceptable, circle no, and do not proceed with survey unless it is done as a supplementary search.
- Start and Finish:** Date (month/day/year) and time (2400 h-clock) of start and finish of survey.
- Detected?:** If target species was detected, circle Yes. If not detected, circle No.
- Survey Area:** Estimate of the Survey Area (e.g., length \* mean width) that was searched in m<sup>2</sup>.
- % Area:** Percent of the Survey Area that was adequately surveyed.
- Net time:** The amount of time in person-hours (p-h) expended doing this survey. Always use net time (recording time, lunch, traveling, etc., not included).
- Verified by:** The name of the person(s) that verified the specimen(s) was a PLVA or Larch Mountain salamander.
- Locality Data:** Refers to starting point, locality of PLVA and/or Larch Mountain salamander. It could be for an individual capture or at the center of detections for that species.
- T./R./S/QS:** Township, range, section, and quarter section (1/16th or better should also be recorded). Sites need to be relocated to within 100 m.
- UTM's** Universal Transverse Mercator coordinates, N and E, to nearest m or best measure possible.
- Elev:** Elevation in m or feet (circle).
- Aspect 1:** Azimuth reading to nearest degree along downhill slope.
- Aspect 2:** Azimuth reading for the overall slope direction. For example, if target species is on a west-facing valley wall of a north-facing slope, aspect 1 is W and aspect 2 is N. Aspect 1 and 2 may be the same. Record to nearest cardinal direction (NSEW).
- Drainage:** The drainages involved in active project area, starting with smallest drainage and working towards larger drainage. For example, unnamed

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tributary of Salamander Creek, a tributary of the North Fork Tailed Frog River.

**Locality of captures:** Very important if target species are captured. This is a written description of how you got to the area and just where the species was detected. Use additional sheets if necessary and attach maps, photos, field notes, and GPS filenames.

**Markers:** Written descriptions of how the site was marked with particular reference to permanence of the markers.

**Method:** Circle the one(s) that applies.

**Habitat:** The type(s) of habitat that is/are being surveyed. Circle all that apply.

**Species Tallies:** Total count of captures for each species detected during survey.

**Optional but Recommended Data Form for Protocol Surveys**

**Always use this form for Site Delineation Surveys**

**Species:** Four-letter code (see attached) of species sampled. All species of amphibians are recorded. Each row entry is for a single individual.

**Stage:** H = hatchling (terrestrial species); J = juvenile (terrestrial species, includes subadults); A = adult (showing secondary sexual characters or of approximately reproducible size for terrestrial species; any fully metamorphosed aquatic species); L = larva (even if neotenic); M = metamorphosing (larval and metamorphosed characters present).

**TL:** Total length, in mm. Measured from tip of snout to tip of tail (tail may break, so SVL is important to record also).

**SVL:** Snout-vent length, in mm, to posterior margin of vent.

**Cover:** Cover object. S = on top of the substrate; R = rock; W = wood; O = other.

**Moist:** Moisture at point of capture. D = dry; M = moist; W = wet; S = saturated, a noticeable layer of water present.

**DS:** Distance in m to nearest dm to stream edge.

**DW:** Distance to other water, if closer, if applicable (if not enter N/A).

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- DV:** Distance to bottom of valley wall if applicable (if not, enter N/A). If below a valley wall bottom, number is negative; if above, number is positive.
- DL:** Distance to linear project. If above the disturbance area (e.g., a road construction) the number is positive; below is negative.
- Status:** C = collected for museum specimen; V = collected for verification (this animal is the one addressed in “Verified by” field); R = released; P = photographed; D = discarded.
- Field\_No:** Field number that will go on the tag of any vouchered specimens. Usually, it is someone's initials (cataloger) and a sequential number.
- Comments:** Add anything that may be important.

## Van Dyke's Salamander Survey Data Form (to be used during all site visits)

Recorder:	Observers:	Supplemental	P_____ of _____
Survey Team: _____ Protocol			
Protocol citation/date:			
Project identifier:	Survey___of___	State:	Co:
Environmental Conditions:	RH:	Air Temp:	Soil Temp: Proceed? <input type="checkbox"/> Yes <input type="checkbox"/> No
Envl Start:	Date:	Time:	Van Dyke's Salamander: _____ etected? <input type="checkbox"/> Yes <input type="checkbox"/> No
Finish:	Date:	Time:	Larch Mountain Salamander: _____ Detected? <input type="checkbox"/> Yes <input type="checkbox"/> No
Survey Area	% Area:	Net time: _____ p-h	Verified by _____
Starting Point:	T/R/S/QS	UTM's	Elev: ft. m. Aspect 1 2
Van Dykes's	T/R/S/QS	UTM's	Elev: ft. m. Aspect 1 2
Larch Mountain	T/R/S/QS	UTM's	Elev: ft. m. Aspect 1 2
Drainage:			
Locality of capture(s):			
Markers:			
Method: (1) Upland Transect (2) Streamside Search (3) Area Search (4) Other: _____			
Habitats: (1) Stream (2) Seep (3) Lake (4) Waterfall (5) Upl and (6) Cave (7) Rockface (8) Talus (9) Other _____			
Species Tallies:			

**Data Form for Sites with Target Species Detections**  
**(Protocol Surveys: form is optional but recommended; Site Delineation Surveys: form is always used)**

Species	Stage	TL	SVL	Cover	Moist	DS	DW	DV	DL	Status	Field_No
Comments											