AMPHIBIAN AND REPTILE SURVEY OF MARINE PARK WETLANDS

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Introduction

The City of Vancouver, Washington, contracted with the Northwest Ecological Research Institute to conduct a survey of amphibians, reptiles, and their habitats. The area to be surveyed was lands adjacent to the City's Marine Park and Water Resources Education Center, about two miles East of downtown Vancouver.

Study Area

The area is approximately 55 acres of bottomland, seasonally flooded by the Columbia River which flows along the south border of the site. The majority of the site is in wet meadows covered by reed canary grass (*Phalaris arundinacea*), with several shallow ponds, an inlet from the Columbia River, and small patches of willow (*Salix* sp.). A significant percentage of the site is in forested wetlands dominated by black cottonwood (*Populus trichocarpa*) and Oregon ash (*Fraxinus latifolia*). Cottonwoods also predominate on the upland areas, with native and introduced blackberries (*Rubus* spp.) on the driest, most open slopes. The woods are fairly mature, except for the younger stands at the southwest end of the site, and provide moderate amounts of medium-sized down logs. This supply is augmented in the lowest elevations of the site by large down wood brought in and deposited during floods.

Methods

The area was surveyed on December 16, 2000, during a several-day break in the unusually cold and dry fall. Weather and substrate conditions were checked and found to be suitable for fully terrestrial salamanders to be active at the soil surface. A half inch of rain had fallen the preceding day, and temperatures had remained above freezing for almost 48 hours. During the survey, air temperatures were between 45 and 55° F, and the cloud cover was close to 100% throughout the day. Although the wind was strong during the early afternoon, it did not desiccate the soil surface, and by mid-afternoon rain was falling. The soil and substrate underneath down logs was moist, but not fully saturated under some debris.

Two surveyors (Char Corkran and Chena Weitzer, and Cory Samia for most of the morning) traversed wooded sections of the site, working along roughly parallel meandering courses, searching under the majority of available down wood. Large diameter, well decayed logs were not dismantled. Instead, only the ends were broken open and any loose layers on top were lifted and replaced. Firmer logs that were too heavy to move were examined by searching under leaves and small debris along the sides. All sections of the site containing down wood were surveyed.

In addition to the survey for fully terrestrial salamanders, a reconnaissance of the wetland habitats was made. The ponds and inlet were briefly scanned from one or more vantage points, and one surveyor walked through part of the upper wetland, a marshy area at the northeast corner of the site.

Results and Discussion

No amphibians or reptiles were found during the survey. There was no typical habitat for the fully terrestrial salamander species. There was an abundance of down wood in some areas that could provide habitat, however cottonwood and ash do not generally decay into the layered and blocky substrate commonly associated with these species. No conifer trees were noted on the site, although several of the logs deposited by floods appeared to be conifer wood. Few log sections were large enough in diameter to provide interior habitat for amphibians. Weather conditions were not appropriate for any of the reptile species to be active, so they were not expected to be found.

During the reconnaissance, it was noted that good habitat exists on the site for several pond-breeding amphibians and for several reptiles. The shallow ponds are well exposed to sunlight with some shade provided along the southern edges, and have abundant low vegetation as well as logs and branches. These ponds provide excellent egg deposition sites and larval rearing areas for several salamander and frog species. The inlet and ponds also provide foraging and basking habitat for turtles. The upland areas appear to have some good log and rock habitat for several snake and lizard species, which may also use the dike of cement blocks just west of the inlet.

Further surveys are recommended. Ponds and wetlands should be surveyed in early spring for amphibian egg masses, in mid-spring for amphibian larvae, and in mid-spring to early summer for newly metamorphosed amphibians as well as for turtles and garter snakes. Upland habitats, especially rocky areas, should be surveyed in mid-spring to early summer for snakes and lizards.

CITY OF VANCOUVER CRITTER COUNT
WATER RESOURCES EDUCATION CENTER

DATE: / /	**BEGIN TIME:**	**END TIME:**	**SITE:**
T. R. SEC.	**LOCATION / DIRECTIONS:**		
NAMES OF ALL SURVEYORS:			
WEATHER: CLEAR PART CLOUDY CLOUDY RAIN		**AIR TEMPERATURE:**	**° F or C**
WIND: CALM LIGHT MODERATE		**WATER TEMPERATURE:**	**° F or C**

SPECIES	# OF ADULTS & SV LENGTH	# OF JUVENILES & SV LENGTH	# OF TADPOLES OR LARVAE & SV LGTH.	# OF EGG MASSES & DEVT. STAGE

PLEASE ADD COMMENTS. WATER QUALITY? ANY FISH? INTERESTING OTHER WILDLIFE OBSERVATIONS:

CITY OF VANCOUVER CRITTER COUNT

PLEASE DRAW A SKETCH MAP OF THE SITE. SHOW WHICH IS NORTH, WHERE YOU FOUND EGGS, LOTS OF TADPOLES, ETC., HOW MUCH OF THE SITE YOU SURVEYED, WATER DEPTHS, VEGETATION TYPES.

COMMENTS / SUGGESTIONS ABOUT CRITTER COUNT DAY

From Char, Maurita, and Chena, Northwest Ecological Research Institute

SCHEDULE

- Start on time. Don't wait more than 5 minutes for stragglers. Some people came early, and everyone had to wait around after the scheduled start time.
- Classroom time was too long, for both Northwest Service Academy (NSA) and all volunteers. Could pare down to ½ hour for NSA, 25 minutes of basic biology & ID, 5 minute break, 20 minutes of survey info. & amphibian declines, and 10 minutes to break into groups.
- Need more field time and less classroom time (unless weather is really bad).
- How about starting at 9:00 instead of 9:30? Kids get up early, and that's plenty of time for people to get there. Extra training for NSA could begin at 8:00 or 8:15.

ORGANIZATION / LOGISTICS

It wasn't really clear what different people's roles were, particularly at the sites. Some things that should have happened didn't (like keeping people together, and ensuring that data sheets were completely filled out, and that they were handed in). Roles could be defined any way you like, and there should certainly be overlap of some efforts, but here is our suggestion for the primary roles of each on the day of the Count.

NSA site coordinators should be responsible for:

1. Before leaving the WREC, counting the number of volunteers in your group.
2. Making sure that all members of the group disinfect boots before driving to the site.
3. Leading the caravan to the site, and counting volunteers at the site.
4. Distributing nets, hand lenses, and any other equipment.
5. Keeping the group together at the site, or splitting into 2 groups, each with a NSA leader.
6. Collecting nets, hand lenses, and other equipment after the survey.
7. Getting the group back to the cars, and counting volunteers one last time.

NERI leaders should be responsible for:

1. Being there!
2. Disinfecting all participants' boots before driving to the sites.
3. Bringing field guides and/or expertise to each site.
4. Getting the volunteers to fill in the data form header before the start of the survey.
5. Initiating the survey by spreading volunteers out to scan, walk slowly, use nets.
6. Helping volunteers use binoculars, nets, etc.
7. Ensuring that volunteers have the least impact on the site and on the animals.
8. Guiding volunteers in their identification of animals found.
9. Making sure that all data get entered on the survey form.

WREC coordinator should be responsible for (or can delegate):

1. Obviously, working with NSA, setting the date, sending out the notice, etc., etc.
2. Handing out something like this list of responsibilities to each group (NSA, NERI)
3. Finding someone (NERI?) to check candidate sites to ensure there are a few amphibians.
4. Receiving a report from NSA or NERI as to conditions at the sites the week before the Count.
5. Selecting sites, based on the conditions and on the number of volunteers and leaders who actually show up on Count day.
6. Dividing volunteers and leaders among the sites (see Other Details, below).

SITES

- We need to know ahead of time what habitat there is at all sites we visit. That will mean visiting each site within a week of the date, to ensure that there will be water in small ponds. (Add to NSA's responsibilities?).
- We need to know that there is at least one species of amphibian at any site we go to. Most people at the Mouth of Burnt Creek were good sports about not seeing much, but we might as well gather more data than just the fact that there's nothing there. (Add to NERI's responsibilities?).
- If we started earlier, and shortened the classroom time, we could venture a little further to sites. Perhaps we could have a variety of habitats represented in the site list.

OTHER DETAILS

- In the classroom Char tried to cover too much, and in way too much detail. Char has kept a list of the slides she used and has already radically pared down the list for next year. She could pare it down a lot further if we reduce classroom time.
- Hand out T-shirts (much appreciated!) at end of NSA pre-training. That would save time & disorganization during the scramble between classroom and site visit take-off. It would also identify all leaders right from the beginning of the time the kids are present.
- Construct a complete list of participants before and at the beginning of the day. Have a check-in table as they walk in the door. This would simplify dividing volunteers among the sites. Also have the list available when groups return to WREC. This would help get all names on the data sheets
- Tighten up the process of dividing volunteers among the sites. Usually people don't care what site they go to. Assign them to sites unless they insist on a particular one. Describe all the sites very briefly: point to each on a map, say how far a drive it is, and if there are ponds, conifer forest, etc. Or you could have this info. on a board/easel at the beginning of the classroom session (and you could have a sign-up sheet if you really want volunteers to decide sites for themselves). Divvy up volunteers, and send them off to each group's NSA leader. Have nothing else going on during that process (like getting lunch, picking up snacks, using the bathroom before heading to the field).
- Plan on brown bag lunch at the sites, not at the WREC. It was too easy for some cars to leave early and everyone to get disorganized before caravans left for the sites.
- Way too many plastic baggies used! Just hand out one type of snack, or mix cookies and crackers together. Or do you have to serve snacks at all? How about telling people to bring lots of lunch and snacks and drinks for themselves?
- Have extra copies of data sheets available for those who want or need them for school science credit.