

## Live Sessions Week 1:

### Essential Skills 1 and 2: Field Preparation, Safety, and Planning, and Effective Note-taking



# Importance of these skills

- Apply to every discipline
- Ensure we come home safely at the end of the day
- Ensure we provide quality information for our time in the field.
- Apply every time we go into the field

# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety



# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety

Situational awareness



# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety

Potentially hazardous plants and animals

**Anthrax outbreak confirmed in Wood Buffalo National Park**

**Rabid fox attacks two people in Eastern North Carolina county, health officials say**

# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety

Working near water



# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety

When the unplanned becomes reality



# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety

Being unable to leave the field



# Live Session 1: Essential Skill #1: Field Preparation, Planning, and Safety

Recommendation:

Seek out training, examples include:

- overnight survival training
- wilderness first aid training.



# Scenario #1

Your crew has been requested to investigate a stream site where some silt from a road has been noticed in the water by local fisherman. You've been asked to record how much area from the road is adding silt to the stream. The date requested for the site visit is Friday before the May long weekend.

- The stream site is located about 40km from town on a gravel road. The access road to the actual site has not been used in several years.
- Weather is calling for significant rainfall in the day prior to your field site visit

## Scenario #2

Your crew is needed to investigate a snow avalanche that may have caused damage to a bridge crossing a creek. The month is December. It has snowed about 50cm in the past three weeks.

- The avalanche happened a few days ago and the weather forecast is for increasing snowfall in the next few days prior to your field visit. Temperatures are projected to be around  $-5^{\circ}\text{C}$  for the next few evenings. Daytime temperatures will be  $0^{\circ}\text{C}$  to  $+2^{\circ}\text{C}$ .
- There is road access to the site, but the road has not been ploughed in the last few weeks.

## Scenario #3

There has been a report of wildlife poaching in the mountain ranges south of town. The month is January.

- The report was noted by the local snowmobile club. However, the site is located about 5-6 hours away by snowmobile. Your crew is very limited for time and the days are short. However, the site needs to be visited to determine if poaching occurred so charges can be placed if needed

## Scenario #4

Bridge construction on a local stream has been stopped because fish have been noticed in the stream area. The construction manager has requested that your crew determine the fish species present and prepare a plan to protect the fish from any harm during construction.

- The month is April and the worksite is located about 50km from town along a gravel Forest Service Road. The work project is big, and the construction manager has several excavators along with about 12 crew members.

# Live Session 2: Essential Skill #2: Effective note-taking

- document existing conditions
- identify sensitive areas or features of concern or consideration
- outline progress being made on a project and challenges faced
- account for your day of work and so are a form of job security

July 31, 2022

10:15 - 10:30 HRS : Instruction on wildlife trees assessment and assignment of assessing five trees for:

- (1) Decay class
- (2) Species
- (3) DBH
- (4) Cavity Presence and;
- (5) Height of Cavity (if present)

10:30 - 11:15 HRS : Class determining wildlife trees and describing in area.

Diana's group (Upper side of Fountain Lake Road)  
found plenty of bear signs (scat, torn up logs)

Note to self: In future include CWD in teaching material  
- classifying the timber once it is on the ground.

3 photos on phone of decaying cabin  
- old, small, collapsing cabin in site, several decades old

JR and Brad found portion of Mule deer skull. I am keeping it  
to use the teeth to determine age by cementum layers.

11:15 HRS : Finish wildlife tree assessment; regroup, discuss, rest

11:50 HRS : Go on a generalized wildlife survey walk up  
Rusty Creek Road (Non-linear transect)

(P 3 of 4)

# Document existing conditions



# Identify sensitive areas or features of concern



# Outline progress of project



# Account for your day of work (job security)

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(P 3 of 4)



Charles Darwin's notebooks from the *Beagle*.  
(notebooks from 1830s)

Write in the Rain.  
ALL-WEATHER  
**METRIC GRID**  
Nº 383

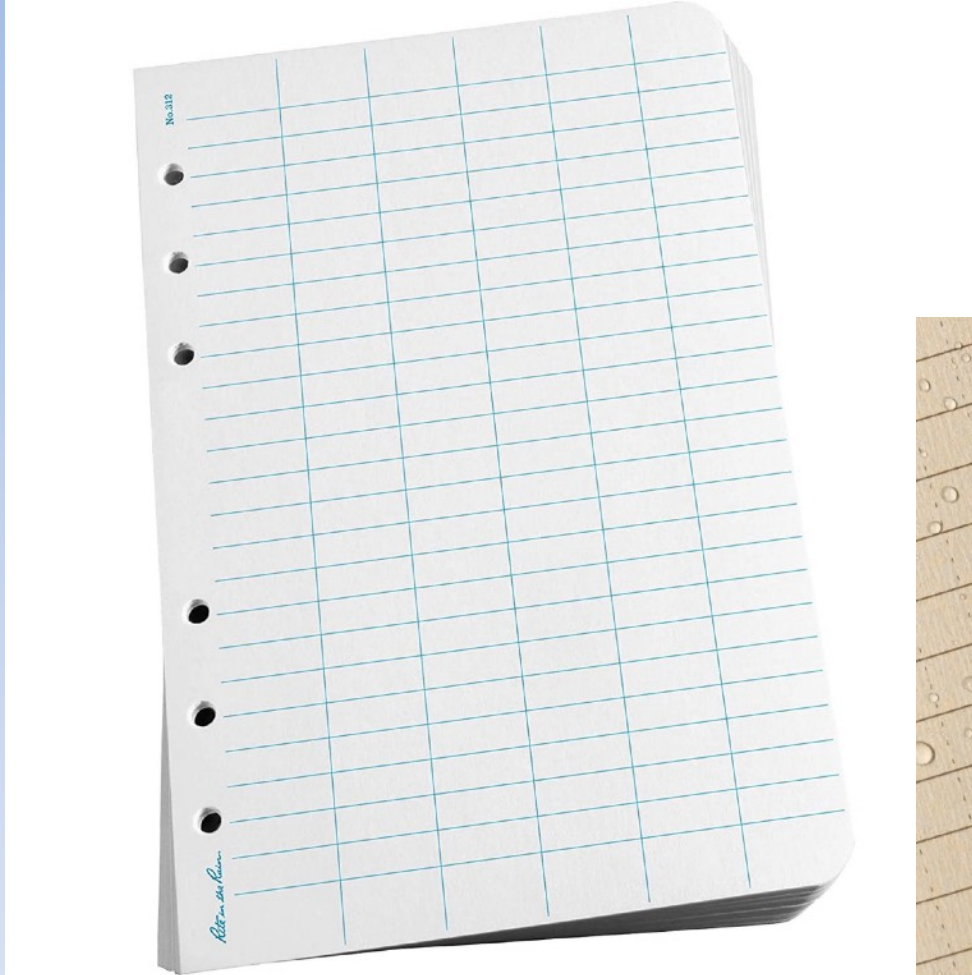
## Six ring binder



## Hard bound



# Field paper



# Digital field notes



# Ecosystem-Field-Form

Date:	Surveyor(s):
Project Identification:	Ecosection:
General Location:	

## General Site Features:

1. Elevation: _____ m	2. Slope gradient _____ % (average)	3. Aspect: _____ * azimuth (range)
4. Slope position:	_____ crest _____ middle slope _____ toe _____ level _____ upper slope _____ lower slope _____ depression	
5. Slope shape:	_____ convex _____ straight _____ concave _____ hummocky	
6. Surficial Material:	_____ fluvial _____ colluvial _____ glacio-fluvial _____ eolian _____ morainal _____ organic _____ lacustrine _____ bedrock	7. Surface Expression: _____ blanket _____ veneer _____ hummock _____ terrace
8. Terrain Code: _____		10. Site Diagram
9. Disturbance History: _____ _____ _____		

1015 - 1030 hrs. instruction on wildlife tree assessment and assignment of assessing five trees for (1) decay class, (2) species, (3) DBH, (4) cavity presence, and (5) Height of cavity (if present)

1030 - 1115: class determining wildlife trees and describing in area.

Diana's group (upper side of Fernheim Lake Road) finds plenty of bear sign (scats, torn up logs).

Note to self - in future include CWD in teaching material - classifying the timber once it is on the ground.

3 photos of decaying cabin on phone - old, small, collapsing cabin in site several decades old

JR and Brad found portion of mule deer skull. Keeping it and use the teeth to determine age by cementum layers (teaching tool)

1115 hrs finish wildlife tree assessment regroup, discuss, rest.

1150 hrs go on generalized wildlife survey - walk up Rusty Creek Road (non-linear transect)

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# The Beaufort Scale

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Sea heaps up, waves 13-20 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Moderately high (13-20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Whole trees in motion, resistance felt walking against wind
9	41-47	Strong Gale	High waves (20 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Very high waves (20-30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	Exceptionally high (30-45 ft) waves, foam patches cover sea, visibility more reduced	
12	64+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	

# Note Taking and Data Recording

- How do you determine if notes and data recording are of high quality?

Neat  
Complete  
Accurate

# Quality tests for field notes

- Never assume your notes and data will only be looked at by you
- Has all required information been collected, using prescribed methods and presented in an understandable format?
- Could you understand your data and associated information tomorrow?
- Could you understand your data and associated information 5 years from now?
- Journalists 6 Ws (Who, What, When, Where, Why, How)

# Note Taking and Data Recording

- What is the single best thing an Environmental Professional can do to ensure high quality note taking and data recording?

*Slow Down*

- *You are not in a race*
- *Measure twice, record once*

# Recording what is important

Paying attention to things around you

1. Avoid being hyper-focussed
2. Be curious
3. Look deeply
4. Drawing as a tool to look closely
5. The more you look the more you see

# Photo-documentation

Very important part of documentation process

- The most important consideration: What is it you are trying to show? Why? What is its importance?



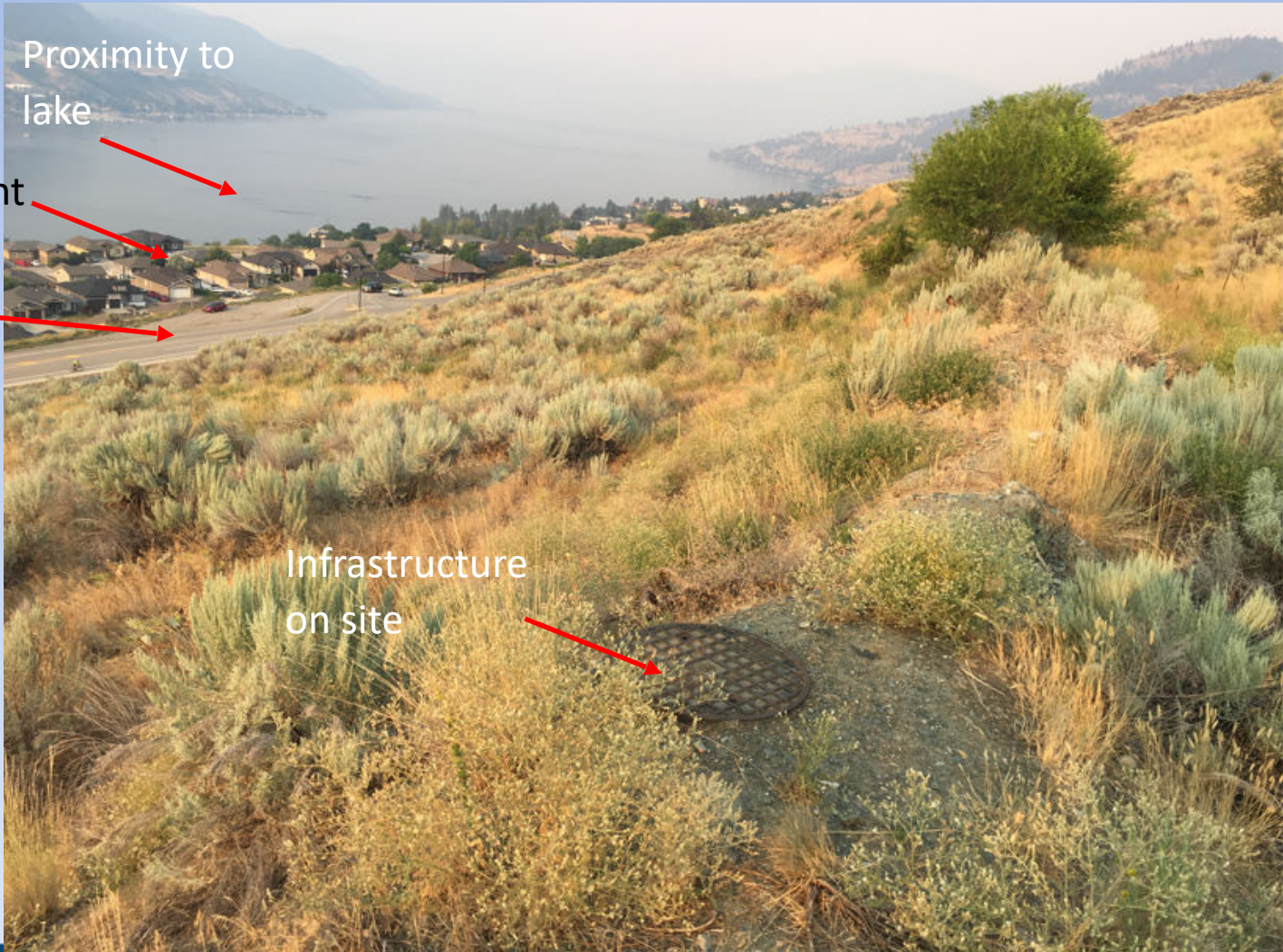
# What is the purpose of your photograph?

Urban  
development

Road  
presence

Proximity to  
lake

Infrastructure  
on site



# Photo-documentation

## Some general considerations

- Do not photograph a person or their property without their permission.
- When documenting stream conditions, photograph four directions for your point: upstream, downstream, left bank, right bank.
- Record photographs in field notes, either by photograph number on camera or description of the subject photographed.

- Watch for shadows interfering with clear image or bright light resulting in lack of contrast.
- Near water check for water on the lens before photographing as that will distort images

## Photo-documentation

- For close-ups photograph the subject multiple times from different angles to account for variations in sun glare and shadows.
- Include something for scale in close-up photographs
- Download and back up photographs frequently for data security.



# Photo-documentation

Use a variety of scales.



Otter scat

# Essential Skills 1 and 2: summary

## Take home messages

- Always be aware of conditions around you and their changes (situational awareness)
- Slow down and record the best notes you can
- Know why you are taking photographs, and capture the highest quality images you can