







# Boreal Toad Project



# surveyor packet

Contains:
Waterbodies Cheatsheet
Datasheet Guidelines
Amphibian ID Cheatsheet
Day Trips Calendar
Independent Site Visits
Camping Trips Calendar









### Waterbodies

### and their characteristics

### Permanent lake/pond/ reservoir

- Larger, deeper bodies of water
- Have aquatic vegetation in shallows
- · Connected to other bodies of water
- Have fish inhabitants



### Temporary pond/pool (vernal/ephemeral)

- Smaller, shallower pond
- No fish inhabitants
- May see cracking on pond bed
- May see terrestrial plants underwater
- No connections to other ponds or streams



### Marsh/bog

- Waterlogged mud with scattered open water
- Mud, decaying matter, grass or moss
- Emergent vegetation throughout
- No defined banks



### **Spring**

- Very deep, usually surface outflow
- Moving sediment at the bottom
- Very cold water



### Waterbodies

### and their characteristics, continued

#### Stream

- Flowing water
- Defined channel
- Can be silt or pebble substrate



### **Active beaver pond**

- Dams
- Lots of open water
- Ponds at different levels/ heights
- Complexes of streams and ponds
- Vegetation with diagonal cuts on branches



### Inactive beaver pond

- Unkept dams with water flowing over
- Dried out areas where water once was
- Abundant willow trees



#### Wet meadow

 Expanse of shallow water with emergent vegetation



# Datasheet Guidelines

or straight edges,

concrete barriers.

written in the notes

	Amphibian Survey and Habitat Assessment Field Form, Version 2.0, April 2019												
DATE		rvey and H		Assessme N TIME:	ent Field F		END TIME: DURATION:				If you use mo		
	IAME:		1000			_	OBSERVER NAMES:					than 1 datashe	et
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WEAT	HER CO	NDITIONS										page 1, page	2,
WEAT	WEATHER: Mostly Clear (0-10% cloud) Partly Cloudy (10-50%) Mostly Cloud (50-99%) Overcast (100%) Rain Snow							etc with site	е				
WIND	: Calm	Light Str	ong	AIR TEM	P. (°C):		RAIN ES	TIMATE	IN LAST 7	2 HRS: none	light/drizzle heavy/storm	name	
Amph	ibian Sp	ecies Prese	ent		-	AMPH	IIBIANS D	ETECTED	DURING S	SURVEYS? Yes	No No		
Water- body #s	SI	pecies	# Egg mass	# Tadpole	# Meta- morph	Juv.,	/ Adult mm	Survey Method	Photo No.	PIT status (recap/ new/ none)	PIT tag number	First and last	
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Site D	escription	on											
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below for each 0- not Recreation: present, 5- high disturbance)  Ag & Graz ng:			Mining: Unnatu		re soil:			i > 13 cm deep:	Road: Hiking trail:	section instea	ad		
present, 5- high disturbance) Ag & Graz hg: Unnatural bare soil: Grazed veg (by livestock): Hiking trail: Section  Notes on disturbances seen:								3cction instead	<i>1</i> G				
	<u>Permanent:</u> continuous flow												
								year round	J V V				
							ery light, or of greater intensity localized in minimal areas); 2: Minor (e.g. –					1	ŀ٠
disturbance of low intensity or occasional c currences of higher intensity); 3: Moderate (e.g. – disturbance of moderate Severe (e.g. – disturbance common to frequent, and of high intensity); 5: Extreme (e.g. – disturbance widespread and of							flow depende						
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closed system

This top
section will
describe the
entire site as
a whole.
Below will
focus on one
waterbody at
a time

Breeding water bodies are still, open, areas of water

Choose just ONE of the waterbodies to describe each time

Emergent
veg: Above
the surface
of the water.
Submergent
veg:
completely
below
surface of
the water

Turbid: cloudy or opaque from suspended matter

Amphibian Survey and Habitat Assessment Field Form, Version 2.0, April 2019 COLLECT DATA AT UP TO THREE REPRESENTATIVE WATERBODIES AND THEN RECORD GENERAL CHARACTERISTICS General Characteristics of All Site Waterbodies # OF POTENTIAL BREEDING WATERBODIES: 1 2 3-5 >5 TURBIDITY: Mostly turbid Mixture of turbid/clear Mostly clear permanent lake/pond temporary pool/pond marsh/bog spring stream (circ e all applicable) active beaver pond inactive beaver pond wet meadow with standing water other: EMERGENT VEG. IN WATER Abundant Frequent Occasional Absent SURFACE ALGAE IN WATER Abundant Frequent Occasional Absent SUB MERGENT VEG. IN WATER Abundant Frequent Occasional Absent CHARA IN WATER Abundant Frequent Occasional Absent EMERGENT VEG ALONG SHORELINES Abundant Frequent Occasional Absent MAX DEPTH: <1 m 1-2 m >2 m SHA LOWS ALONG SHORELINES? Abundant Frequent Occasional Absent SILT/MUD SUBSTRATE Abundant Frequent Occasional Absent Waterbody 1 WATERBODY TYPE: permanent lake/pond temporary pool/pond marsh/bog spring active beaver pond inactive beaver pond wet meadow with standing water MA) DEPTH: <1 m 1-2 m >2 m PRIMARY SUBSTRATE: Silt/mud Sand/gravel Cobble Boulder/Bedrock **% VATER WITH EMERGENT VEG.** % SURFACE ALGAE 1-25 >25-50 >25-50 >50

#### Waterbody 2

% WATER WITH SUBMERGENT VEG.

WATERBODY TYPE: permanent lake/pond temporary pool/pond marsh/bog spring (circle one) active beaver pond inactive beaver pond wet meadow with standing water MAX DEPTH: <1 m 1-2 m >2 m PRIMARY SUBSTRATE: Silt/mud Sand/gravel Cobble Boulder/Bedrock WATER WITH EMERGENT VEG. % SURFACE ALGAE >25-50 >25-50 >50 % WATER WITH SUBMERGENT VEG. % CHARA 1-25 >25-50 >50 1-25 >25-50 >50 EMERGENT VEG ALONG SHORELINE Abundant Frequent Occasional Absent SHALLOWS ALONG SHORELINES? Abundant Frequent Occasional Absent TURBIDITY: Mostly turbid Mixture of turbid/clear

>25-50

>50

1-25

EMERGENT VEG ALONG SHORELINE Abundant Frequent Occasional Absent

SHALLOWS ALONG SHORELINES? Abundant Frequent Occasional Absent

% CHARA

#### Waterbody 3

WATERBODY TYPE: permanent lake/pond temporary pool/pond spring marsh/bog inactive beaver pond wet meadow with standing water other MAX DEPTH: <1 m 1-2 m >2 m PRIMARY SUBSTRATE: Silt/mud Sand/gravel Cobble Boulder/Bedrock Other: % WATER WITH EMERGENT VEG. % SURFACE ALGAE >25-50 >50 >25-50 >50 % WATER WITH SUBMERGENT VEG. 1-25 >25-50 % CHARA 1-25 >25-50 0 >50 EMERGENT VEG ALONG SHORELINE Abundant Frequent Occasional Absent SHALLOWS ALONG SHORELINES? Abundant Frequent Occasional Absent TURBIDITY: Mostly turbid Mixture of turbid/clear

Collect water chemistry data, below, near where amphibians are seen, or at one or more random location in shallow water (<20 cm) near shore. Indicate water depth and whether egg mass and tadpole where seen at measurement location.

Water- body #	Egg mass?	Tadpole ?	Stand. or Flow.	Depth of water (cm)	рН	EC (uS)	Temp (°C)	Color	Turbidity Tube (at water ≥20 cm deep)	Notes and/or Photo Ws
	Y N	Y N	S F					Clear Stained	(circle ane)	
	Y N	Y N	S F					Clear Stained	> or = (	
	Y N	Y N	S F					Clear Stained	> o (circle ox	

Indicate
what
egg/tadpole
species in
the notes
section

Describe the water where the meter is placed



1-25

TURBIDITY: Mostly turbid Mixture of turbid/clear Mostly clear

>25-50

>50

## **Amphibian Identification**

Eggs

### **Boreal Toad**

- Clear with black spots in the middle
- Laid in long strings
- Can be hundreds or thousands
- Usually wrapped around and through submerged vegetation



### **Boreal Chorus Frog**

- Laid in clumps on strands of vegetation below the water
- Usually 50 200 in one clump



### **Tiger Salamander**

- Can be laid individually or in clumps
- When laid in clumps have an extra gelatinous layer around them compared to chorus frogs



# Amphibian Identification

Larva / Tadpoles

#### **Boreal Toad**

- Jet black all over
- Eyes inset on top of their head
- Smooth outline when viewed from above
- Tear drop shaped



### **Boreal Chorus Frog**

- Dark in colour, but not even black
- Can have flecks of olive or gold
- Eyes on the side of their head
- Oval in shape



### **Tiger Salamander**

- Feathery gills on either side of their head
- More distinctive 'head' bode' and 'tail'
- Long bodies









### **Amphibian Identification**

Adult

#### **Boreal Toad**

- Olive green to brown in color.
- "Warts" across back.
- Creamy dorsal (back) stripe.
- Inky dark spots on underside.
- Usually 2-4in long.
- Do not call, only a panicked chirping when handled



### **Boreal Chorus Frog**

- Green/brown in color.
- Dark eye stripe from snout to shoulder on each side of their head.
- Three parallel broken stripes on their back.
- Small in size: 3/4-1 1/2 in long.
- Call resembles running your thumb nail across a comb



### **Tiger Salamander**

- Only salamander species in Utah.
- Brown, black, grayish, sometimes with spots or stripes and yellowish bellies.
- Bulging eyes with round snouts.
- Usually 6-12 in long.



# Join us in the Field: Day Trips

### June

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

### July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			



### August

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## Join us in the Field: Camping

### July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>1</b> Manti La Sals	2	3	4	5	6
7	Boulder Mountain 8	<b>9</b> Thousand Lake Mou	<b>10</b> Intain	11	12	13
14	15	16	<b>17</b> Strawberry Reservoir	<b>18</b> Night Survey	19	20
21	<b>22</b> Monroe Mountain	23	24	25	26	27
28	29	<b>30</b> Uintas - Duchesne	31			



### **Independent Site Visits**

### **Build your Own Adventure!**

As we continue to monitor toad populations across the state, we're looking for experienced outdoor enthusiasts to independently monitor areas to document amphibian presence & habitat conditions.

We have our areas of interest, but these independent surveys can be done anywhere in Utah where you're hiking above 7,200ft!



We request that volunteers monitor a site **at least twice** during the field season (June-September).

Volunteers can check-out **Toad Backpacks** from the
Hogle Zoo main entrance or
the Sageland Collaborative
office in downtown SLC these are equipped with all
the materials you'll need to
complete your surveys!

#### **Areas of Interest:**

Oquirrhs
Millcreek Canyon
Big Cottonwood Canyon
Little Cottonwood Canyon
Uintas
Strawberry River



# **Notes:**