



# 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







**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

TYPES PRESENT: permanent lake/pond temporary pool/pond marsh/bog spring stream  
(circle 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

SUBMERGENT VEG. IN WATER Abundant Frequent Occasional Absent      CHARA IN WATER Abundant Frequent Occasional Absent

MAX DEPTH: <1 m 1-2 m >2 m      EMERGENT VEG ALONG SHORELINES Abundant Frequent Occasional Absent

SHALLOWS 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 stream  
(circle one) active beaver pond 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. 0 1-25 >25-50 >50      % SURFACE ALGAE 0 1-25 >25-50 >50

% WATER WITH SUBMERGENT VEG. 0 1-25 >25-50 >50      % CHARA 0 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 Mostly clear

**Waterbody 2**

WATERBODY TYPE: permanent lake/pond temporary pool/pond marsh/bog spring stream  
(circle one) active beaver pond 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. 0 1-25 >25-50 >50      % SURFACE ALGAE 0 1-25 >25-50 >50

% WATER WITH SUBMERGENT VEG. 0 1-25 >25-50 >50      % CHARA 0 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 Mostly clear

**Waterbody 3**

WATERBODY TYPE: permanent lake/pond temporary pool/pond marsh/bog spring stream  
(circle one) active beaver pond 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. 0 1-25 >25-50 >50      % SURFACE ALGAE 0 1-25 >25-50 >50

% WATER WITH SUBMERGENT VEG. 0 1-25 >25-50 >50      % CHARA 0 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 Mostly 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 were seen at measurement location.**

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

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

Indicate what egg/tadpole species in the notes section

Describe the water where the meter is placed



Chara

# 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

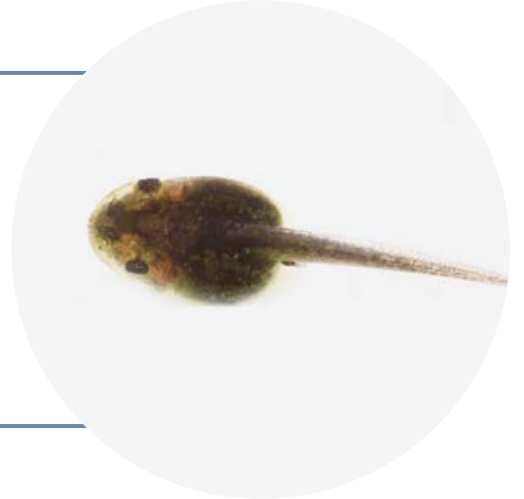
## Boreal Toad

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



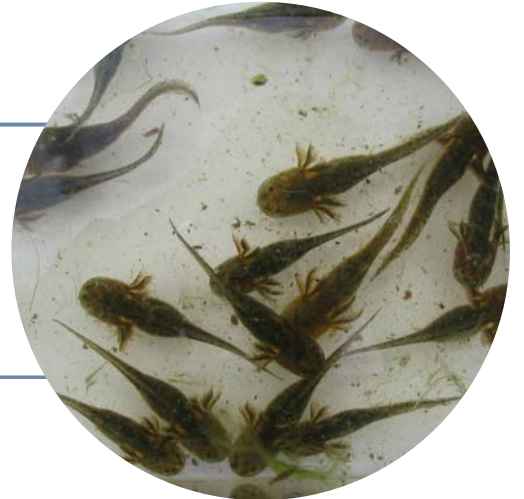
## Boreal Chorus Frog

- 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' 'body' and 'tail'
- Long bodies



**Boreal Toad**



**Boreal Chorus Frog**



**Tiger Salamander**

# 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			



Scan to sign up!



# 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
	1 Manti La Sals	2	3	4	5	6
7	8 Boulder Mountain	9 Thousand Lake Mountain	10	11	12	13
14	15	16	17 Strawberry Reservoir Night Survey	18	19	20
21	22 Monroe Mountain	23	24	25	26	27
28	29	30 Uintas - Duchesne	31			



Scan to sign up!

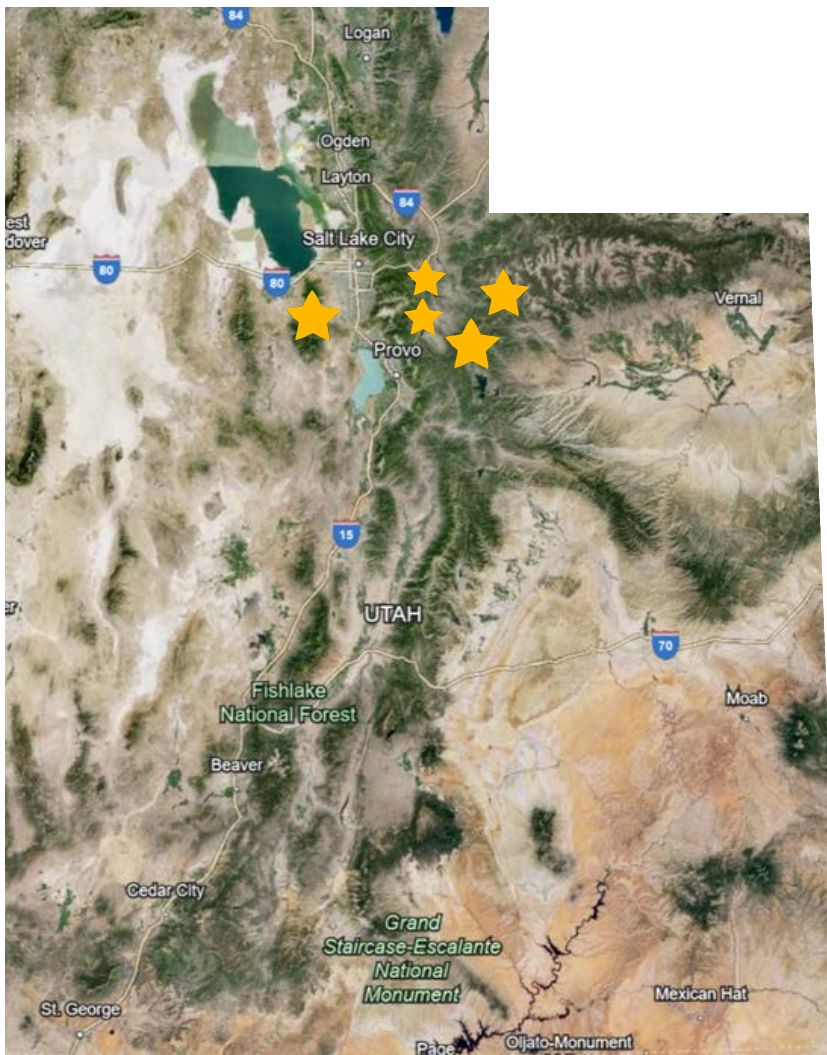


# Independent Site Visits

## 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:

- Oquirrh
- Millcreek Canyon
- Big Cottonwood Canyon
- Little Cottonwood Canyon
- Uintas
- Strawberry River



Scan to sign up!



