



Catch the Hatch Field Protocol and Datasheet

Catch the Hatch Protocol

Step 1. Prepare. Prior to an observation, you should complete some important preparation steps listed below:

1. Register for Catch the Hatch project on citsci.org (see instructions under Technology and Data Entry Below).
2. Participate a virtual training event (either with instruction or self-directed)
3. Receive a gear kit by coordinating a pickup or delivery with project staff on the [Project Page](#) (items listed in Observation Day Overview above)
4. Sign up for the creek site and observation date (see instructions under Sign Ups above)
5. Optional: download My Watershed app on your mobile phone.

Step 2. Choose a Timeframe. During preparation, plan a time when you can visit a designated project site for at least 30 minutes. There are two possible time frames between 11am and sundown to record observations of PMD adults and sub-adults. If possible, give priority to observations during the Tier 1 timeframe.

Remember that observations of “No PMDs Present” are just as important as those finding PMDs!

- **Tier 1: 11am to 2pm.** During this time, you will be looking for sub-adults that have a characteristic “pale” appearance (see ID guide).

Sub-adults may be emerging from the creek’s surface, a time when they are metamorphosing from larvae (nymph) to sub-adult. They are also vulnerable prey to fish- makes good fishing!

You may also find sub-adults flying from creek shoreline, where they will rest and morph into full adults. Even if you don’t see them actively emerging, be sure to check the shoreline substrate and vegetation for resting sub adults or adults.

- **Tier 2: 2pm to sundown.** During this time, you will be looking for sub-adult or adult forms. Adults have a darker appearance with clear wings.

Sub-adults or adults may be found along substrate or vegetation. You may also find adults flying in the air as they prepare to mate. After mating, females will return to the water’s surface to lay their eggs. They will be vulnerable to predators one last time!

Step 3. Navigate to Observation Site. The [Catch the Hatch webpage](#) provides coordinates, navigation option, and written out instructions on how to get to each creek location. (see <https://lwog.org/programs/stewardship/catch-the-hatch/>)

To review: creeks, site names, coordinates, and simple instructions are listed below:

1. Boulder Creek- Memorial Park: 40.005056, -105.337028

From Eben G. Fine Park on Boulder Canyon Drive, continue up Boulder Canyon Drive for 3 miles. After driving through tunnel, turn Left onto pull off. Site location includes entire section of creek accessible from the park pull off. Follow instructions on protocol upon arrival.

2. Left Hand Creek- Buckingham Park: 40.111333, -105.307139

From US-36 W in Altona, turn Left onto Lefthand Canyon Drive for 2.5 miles. Turn right into parking area at Buckingham Park. Site location includes entire section of creek both upstream and downstream of parking lot. Follow instructions on protocol upon arrival.

3. North St. Vrain Creek- Button Rock: 40.228889, -105.341278

From Lyons, head northwest on US-36 W for 4 miles. Turn Left onto Longmont Dam Road for 3 miles. Parking area for Button Rock will be on your left. Site location includes entire section of creek accessible from the parking lot. Follow instructions on protocol upon arrival.

Step 4. Make an Observation and Record Data.

Remember to always use a paper datasheet and store photos on your phone or camera! Then, after returning to your computer or cellular connectivity, enter data to the website and/or My Watershed

A. Record site information. Upon arrival, record the following site information and data:

- Recorder (datasheet only)
- Date
- Site Name: Boulder Creek- Memorial Park, Boulder Creek- Eben. G. Fine, Left Hand Creek- Buckingham Park, North St. Vrain Creek- Button Rock, St. Vrain Creek- Bohn Park
- Arrival Time: date and time
- Weather: clear, hail, wind, rain, overcast, partly cloudy

B. Take a site photo. Take a landscape photo that captures both edges of the creek using your mobile phone. Please take and store all site photos locally to your phone or camera and upload with your data on the website or My Watershed app later.

C. Take a creek temperature and record. During your site visit, take one water temperature measurement. Submerge and leave your thermometer in slower moving water, or a place it will not wash away. Leave the thermometer submerged for 5-10 minutes. Record temperature reading.

D. Observe for PMDs. While you fish, recreate, and enjoy your watershed, look on the water's surface, vegetation, and substrate for sub-adult and adult PMD. Remember that depending on the time of day, you may see sub-adults or adults emerging, resting, or flying. See Step 2. instructions for further details.



If you see mayflies or any insect you suspect may be a PMD, please use your aerial net and ID guide to capture and identify.

E. Record observations. If you do not observe and/or capture and identify adult or sub-adult PMDs during your site visit, then record 'No' for visual observation data next to both adult and sub-adult life stages and 'No' for sample storage.

If you do observe and/or capture and identify adult or sub-adult PMDs during your site visit, then record 'Yes' for visual observation data and the observation time next to the applicable the life stage, adult or sub-adult. If your PMD was captured and identified, then proceed to Step 5. instructions before you end your observation.

We would like a captured sample for all recorded 'Yes' observations! Try your best to limit 'Yes' observations without capturing, identifying, and storing a sample.

F. End your observation. After you have finished making observations and enjoying your time on the creek, record your time of departure. Your departure time is when you leave the creek site- this can be hours after a PMD observation!

Step 5. Sample storage and photo. If you have captured and identified an adult or sub-adult PMD, then take a photo of the sample and carefully transfer it into a project provided vial for storage until the end of the project. Multiple samples per vial are welcome! You can take a photo before or after placing it in the vial- or both. The citsci.org website can upload multiple photos.

Using a strip of paper (use post-it note, Rite in the Rain, or card stock; printer paper will degrade) and pencil, label your sample with the site name, date, and time. Place the paper label into your vial and screw your cap on tightly.



Please store your vials in a cool, safe place! They are filled with 80% ethanol solution. We recommend storing vials in the plastic bag for safe keeping in and out of the field.

While making observations, be sure to fill out the datasheet below. Then upload data on the citsci.org website or the My Watershed app. Additional copies of datasheets will be provided depending on your observation needs.

Datasheet

While making observations, be sure to fill out the datasheet below in addition to uploading data on the citsci.org website. Additional copies of datasheets will be provided depending on your observation needs.



Catch the Hatch Datasheet

Instructions: Please fill out the following information.

Main:

Date: _____

Recorder: _____

Site Name: _____

Comments: _____

Site Data:

Arrival Time: _____

Weather conditions: Clear Hail Wind Rain Overcast Partly cloudy

Creek Temperature (F): _____

Did you see adults? Yes No

If yes, what time? _____

Did you see sub-adults? Yes No

If yes, what time? _____

Did you store a sample? Yes No

Departure Time: _____

Photo: *Please take and upload a site photo and photos of captured adult or sub-adult Pale Morning Duns.*