AQWA:
Assessing Quality of Water Access Photo-evidence Toolkit

NOPREN Water Access Working Group

Weds., June 24, 2020

Short presentation by Christina Hecht

uwcphn

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Nutrition Policy Institute

Stanford MEDICINE

Research Question

Federal Child Nutrition Act legislation requires access to potable drinking water at no charge in the place where meals are served in school

"Letter of the law"

"Spirit of the law"

Can we develop an efficient way to assess "effective" access to water?

Research Team

PI:

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Co-investigators:

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Partners:

National Children's Oral Health Foundation

HOSA: Future Health Professionals of America

The research team with a HOSA student at 2017 Childhood Obesity Conference

Project funded by Robert Wood Johnson Foundation Healthy Eating Research

Many Ways to Use PET

For schools/school districts:

- Pinpoint opportunities and solutions for improving water intake in schools
- Identify schools that may need additional resources, and prioritize and plan for updates
- Engage high school students and help get them excited about science through collecting data and participating in an applied hands-on learning experience

For advocates:

- Promote local change by empowering citizen scientists to use the photos and data they have collected to present to school boards or other policymakers to advocate for water in schools

For researchers:

- Provide a cost-effective way to gather valid water source data remotely, using citizens (e.g. students)

Engaging citizen scientists in assessing the quality of water in schools and increasing student and community awareness about the importance of drinking water can grow effective access and increase water consumption.

Why do students (& teachers) like AWQA?

"This is a great method-involves students in research, practical application of skills used in higher education and beyond." Advisor

"The fact that we could participate in a national study such as this was a great learning experience and really made us work hard and be accountable for our own work. These are great skills for us to learn and use as we continue with our education." –Student

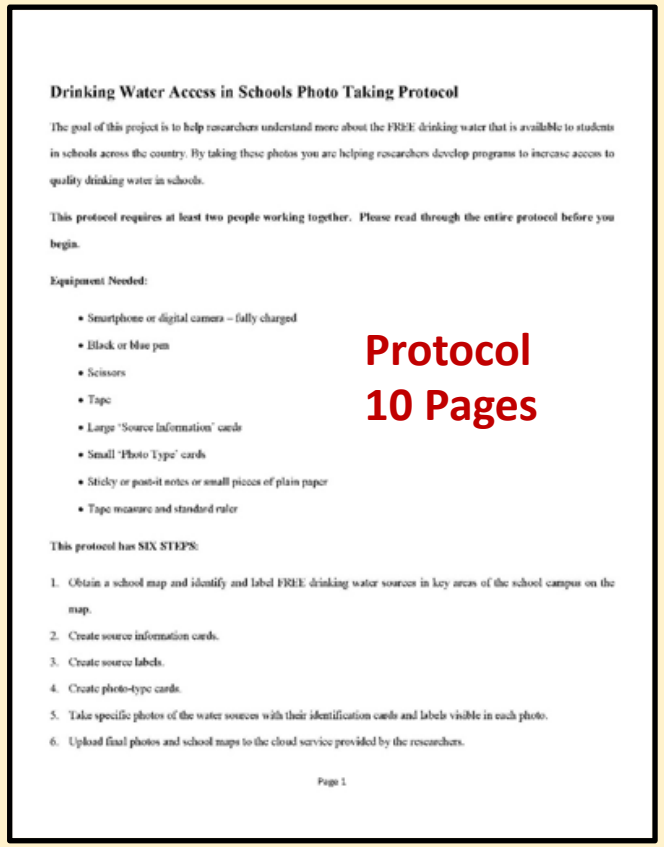
AWQA can be used to document all types of water sources

AQWA: Assessing Quality of Water Access Photo-evidence Toolkit

- ✓Factsheet/Flyer
- ✓Introductory documents
  - ✓Student letter
  - ✓Process overview
  - ✓Links
- ✓Instructional webinar
- ✓Protocol
  - ✓10-page instruction
  - ✓Source cards cut-outs
  - ✓Summary checklist
- ✓Tools for analysis
  - ✓Data entry & scoring instructions
  - ✓Scoring formula workbook

Photo-taking Protocol

Project Documents



Drinking Water Access in Schools Photo Taking Protocol

The goal of this project is to help researchers understand more about the FREE drinking water that is available to students in schools across the country. By taking these photos you are helping researchers develop programs to increase access to quality drinking water in schools.

This protocol requires at least two people working together. Please read through the entire protocol before you begin.

Equipment Needed:

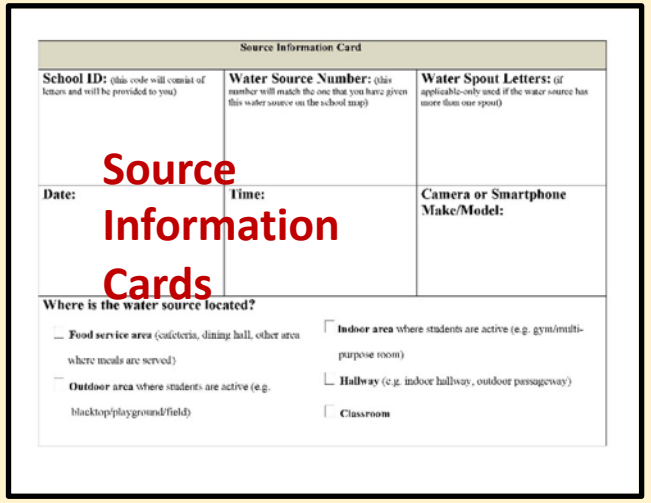
- Smartphone or digital camera – fully charged
- Black or blue pen
- Scissors
- Tape
- Large 'Source Information' cards
- Small 'Photo Type' cards
- Sticky or post-it notes or small pieces of plain paper
- Tape measure and standard ruler

This protocol has SIX STEPS:

1. Obtain a school map and identify and label FREE drinking water sources in key areas of the school campus on the map.
2. Create source information cards.
3. Create source labels.
4. Create photo-type cards.
5. Take specific photos of the water sources with their identification cards and labels visible in each photo.
6. Upload final photos and school maps to the cloud service provided by the researchers.

Page 1

Protocol
10 Pages



Source Information Card

School ID: (this code will consist of letters and will be provided to you)	**Water Source Number:** (this number will match the one that you have given this water source on the school map)	**Water Spout Letters:** (if applicable-only used if the water source has more than one spout)
Date:	**Time:**	**Camera or Smartphone Make/Model:**

Where is the water source located?

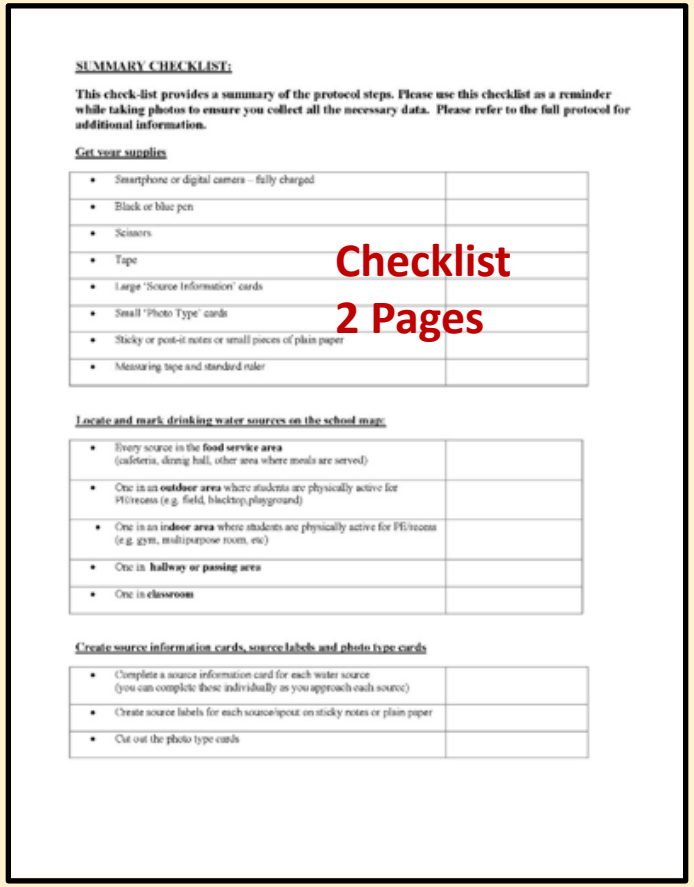
- ☐ **Food service area** (cafeteria, dining hall, other area where meals are served)
- ☐ **Outdoor area** where students are active (e.g. blacktop/playground/field)
- ☐ **Indoor area** where students are active (e.g. gym/multi-purpose room)
- ☐ **Hallway** (e.g. indoor hallway, outdoor passageway)
- ☐ **Classroom**

Source Information Cards

PHOTO TYPE CARDS:
Please cut these cards out.

CUPS	POSTERS
DISTANCE	CLOSE
DIRTY	DISPENSE

Photo Type Cards



SUMMARY CHECKLIST:

This check-list provides a summary of the protocol steps. Please use this checklist as a reminder while taking photos to ensure you collect all the necessary data. Please refer to the full protocol for additional information.

Get your supplies

• Smartphone or digital camera – fully charged	
• Black or blue pen	
• Scissors	
• Tape	
• Large 'Source Information' cards	
• Small 'Photo Type' cards	
• Sticky or post-it notes or small pieces of plain paper	
• Measuring tape and standard ruler	

Locate and mark drinking water sources on the school map:

• Every source in the **food service area** (cafeteria, dining hall, other area where meals are served)	
• One in an **outdoor area** where students are physically active for PE/recess (e.g. field, blacktop,playground)	
• One in an **indoor area** where students are physically active for PE/recess (e.g. gym, multipurpose room, etc)	
• One in **hallway or passing area**	
• One in **classroom**	

Create source information cards, source labels and photo type cards

• Complete a source information card for each water source (you can complete these individually as you approach each source)	
• Create source labels for each source/spout on sticky notes or plain paper	
• Cut out the photo type cards	

Checklist
2 Pages

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Step #1: Map and Label Water Sources

Go to Protocol
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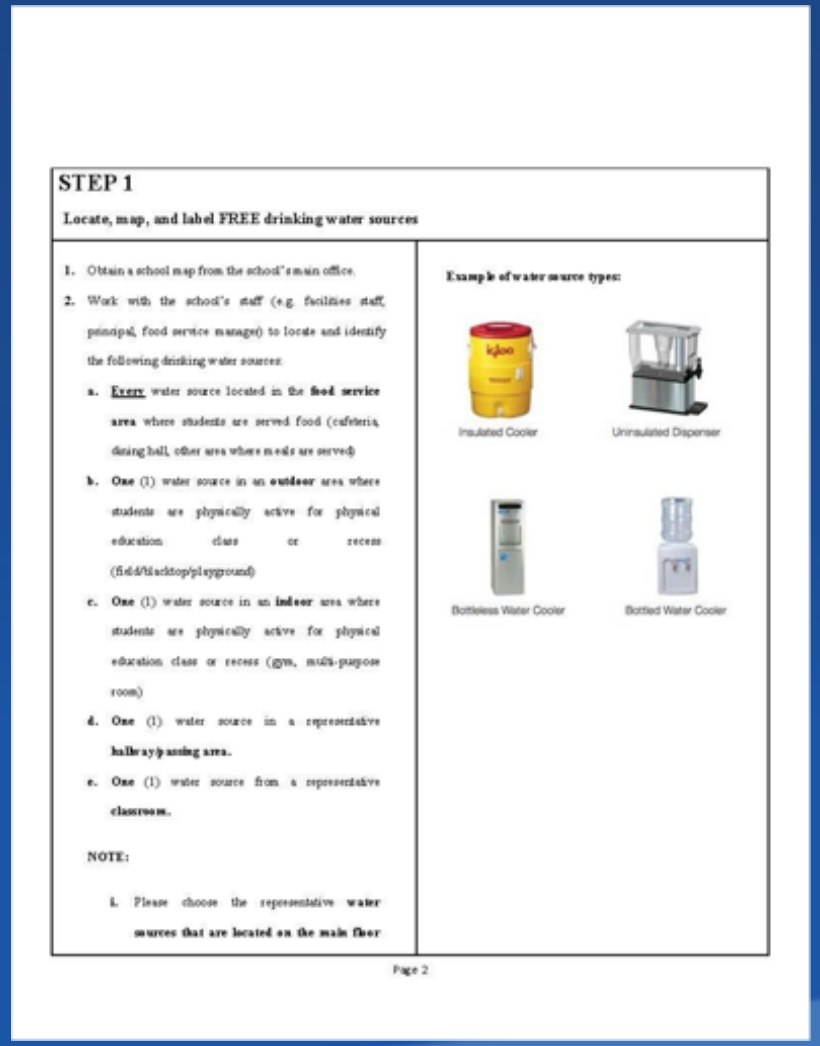

STEP 1

Locate, map, and label FREE drinking water sources

1. Obtain a school map from the school's main office.
2. Work with the school's staff (e.g. facilities staff, principal, food service manager) to locate and identify the following drinking water sources:
   a. **Every** water source located in the **food service area** where students are served food (cafeteria, dining hall, other area where meals are served)
   b. **One** (1) water source in an **outdoor** area where students are physically active for physical education class or recess (field/blacktop/playground)
   c. **One** (1) water source in an **indoor** area where students are physically active for physical education class or recess (gym, multi-purpose room)
   d. **One** (1) water source in a representative **hallway/passing area.**
   e. **One** (1) water source from a representative **classroom.**

NOTE:

i. Please choose the representative **water sources that are located on the main floor**

Example of water source types:

Insulated Cooler

Uninsulated Dispenser

Bottleless Water Cooler

Bottled Water Cooler

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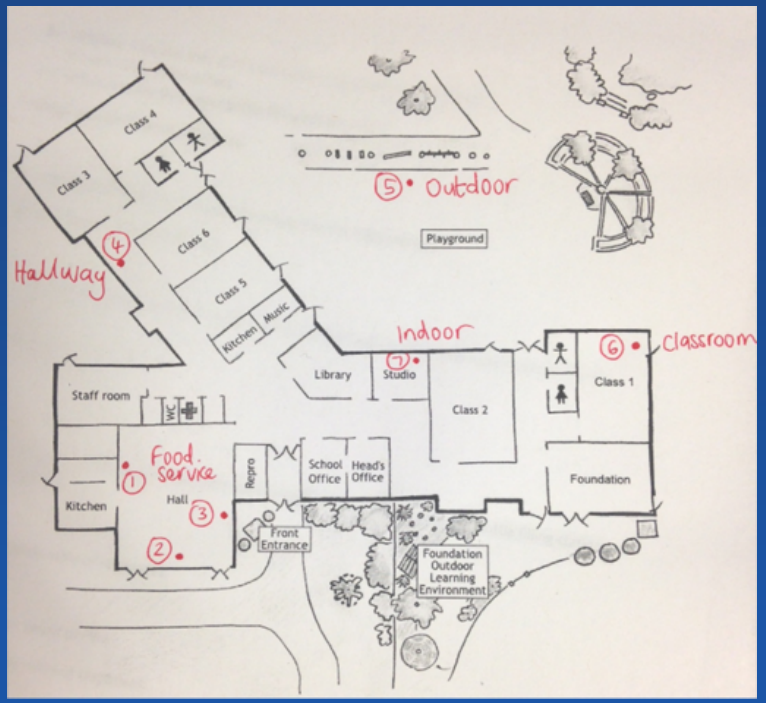
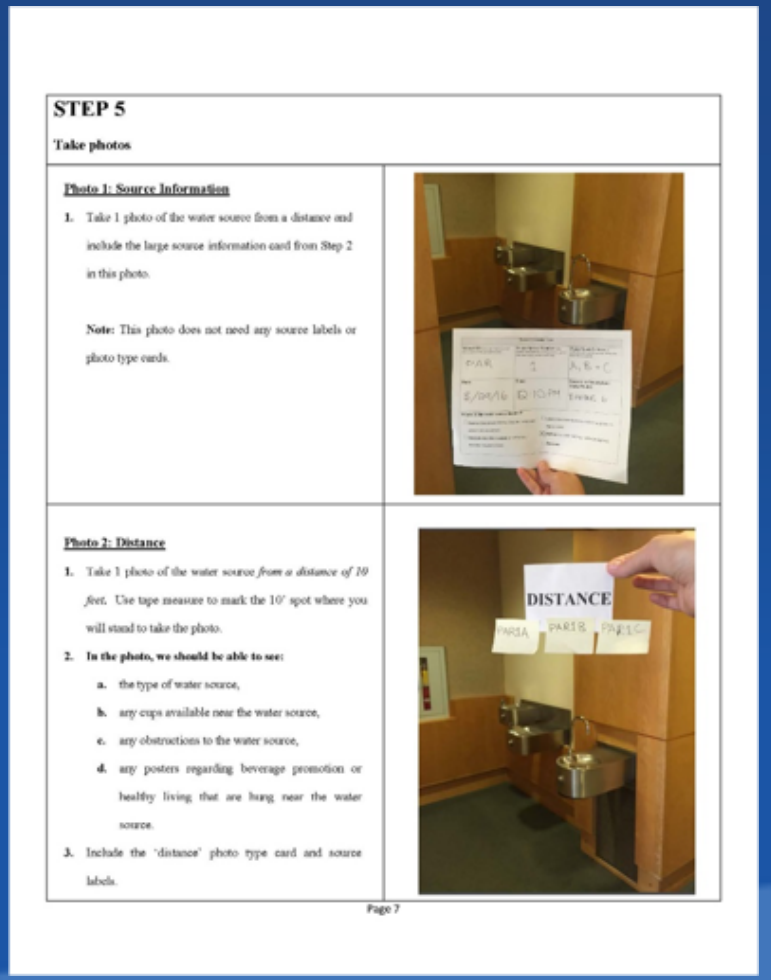


Step #5: Take Photographs

Go to Protocol
Page 6



STEP 5

Take photos

Photo 1: Source Information

1. Take 1 photo of the water source from a distance and include the large source information card from Step 2 in this photo.

Note: This photo does not need any source labels or photo type cards.

Photo 2: Distance

1. Take 1 photo of the water source *from a distance of 10 feet*. Use tape measure to mark the 10' spot where you will stand to take the photo.
2. **In the photo, we should be able to see:**
   a. the type of water source,
   b. any cups available near the water source,
   c. any obstructions to the water source,
   d. any posters regarding beverage promotion or healthy living that are hung near the water source.
3. Include the 'distance' photo type card and source labels.

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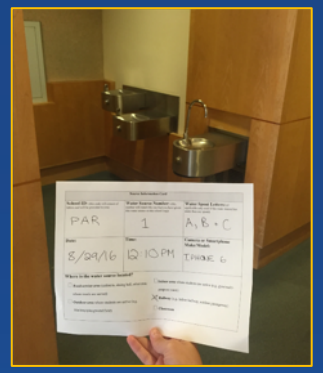
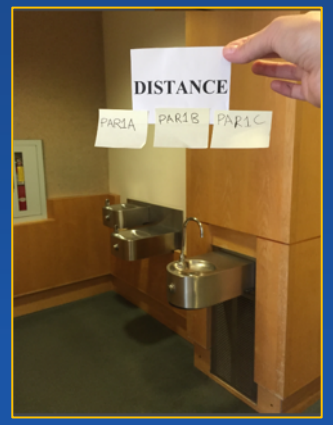
Step #5: Take Photographs – 7 types



1. Source Information: taken from a distance-include Source Information Card (no source labels or photo type cards needed)

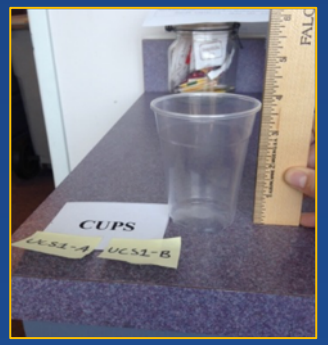
For all remaining photos, you will include a Source Label and a Photo-type card in every photo



2. Distance: taken from 10 feet away – shows type of water source, any cups nearby, any obstructions like garbage cans or mop buckets, any water promotional materials

3. Poster: capture any water promotional materials (like posters) near water source –TAKE 1 CLOSE UP OF EACH

Step #5: Take Photographs – 7 types



4. Cups: capture any cups near the water source – use ruler to show height and width – TAKE 2 PHOTOS-ONE SHOWING HEIGHT, ONE SHOWING WIDTH

5. Close: taken from 18 inches away – shows if water basin/water spout is clean or dirty: -Take at least 1 that clearly shows if basin/spout is clean or dirty

-Take one photo for each spout

Step #5: Take Photographs – 7 types

6. Dirty: Take photos for each spout to show any unclean characteristics of water source. If water source is clean, you won't need this photo.

7. Dispense: completely press or turn knob to dispense water. Shows how strong flow is (fountains); erratic flow

- If the water flow is erratic (fluctuating between high, satisfactory, and low within a few seconds): TAKE SEVERAL PHOTOS THAT DEMONSTRATE THE DIFFERENT LEVELS OF WATER ARCH OR STREAM
- If the water source is broken, or the jug of bottled water is empty, and there is no water dispensing, take a photo of yourself pressing/pulling the button/lever to demonstrate that there is no flow. Always take a 'dispense' photo, otherwise the it might be assumed that you have forgotten to take this photo.
- For bottled water or a pitcher, take a photo that reveals how full or empty the container is.

Step #6: Upload Map and Photos

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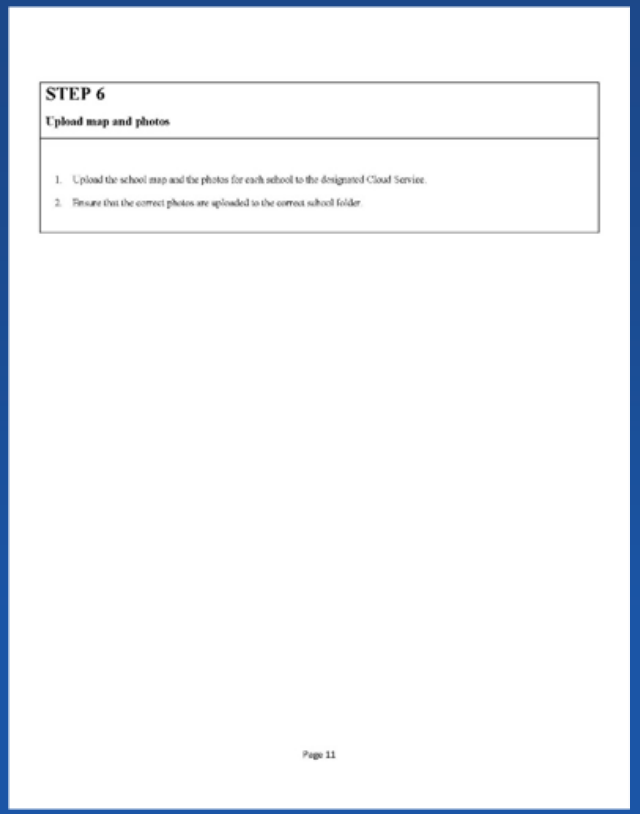

STEP 6

Upload map and photos

1. Upload the school map and the photos for each school to the designated Cloud Service.
2. Ensure that the correct photos are uploaded to the correct school folder.

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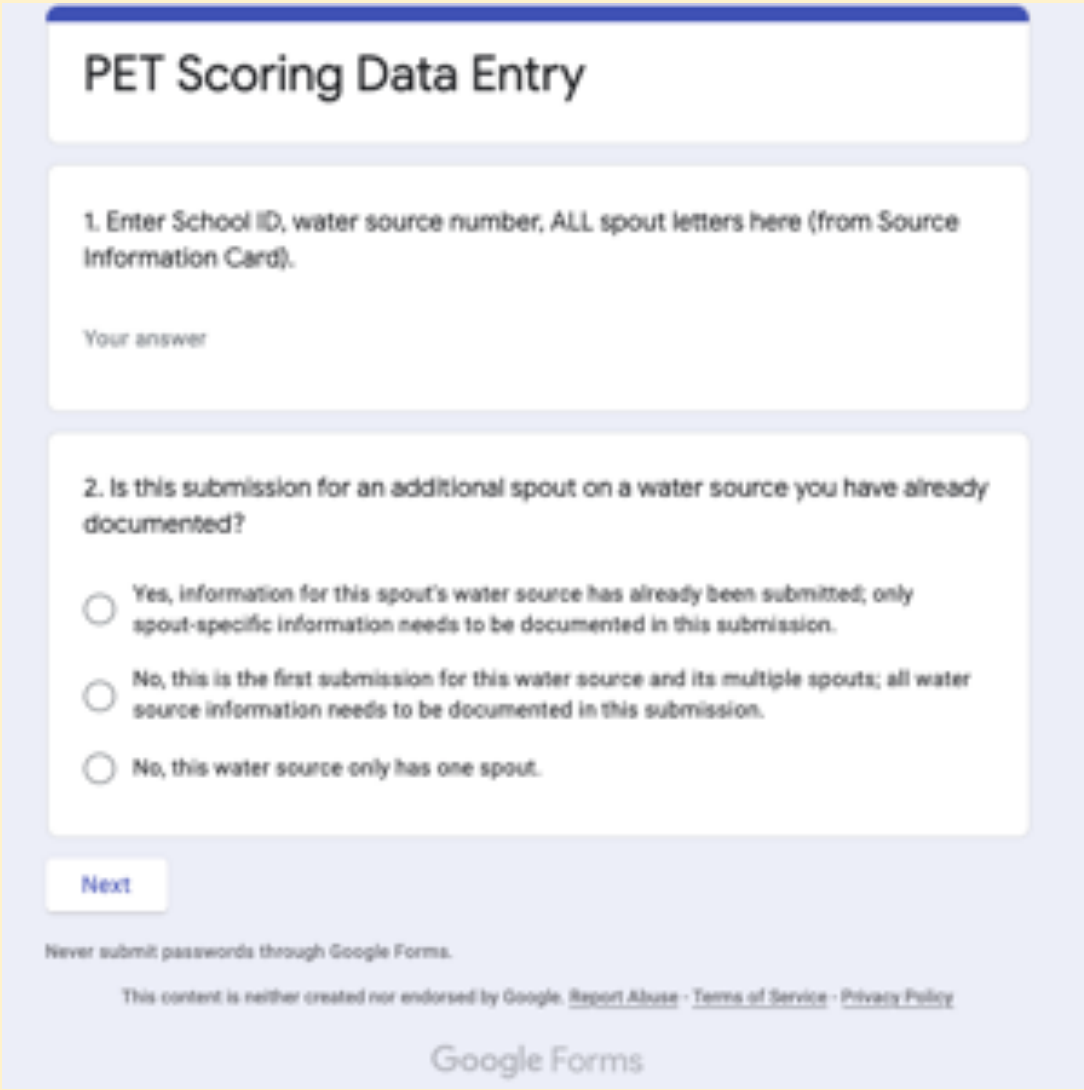
Interpreting and reporting the data

- Next steps
  - Score photos – using Google Form
  - Summarize data – using Excel Document
  - Report results



The AQWA Toolkit will be available soon on the National Drinking Water Alliance website, DrinkingWaterAlliance.org

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Step #2: Create Source Information Cards

Source Information Card		
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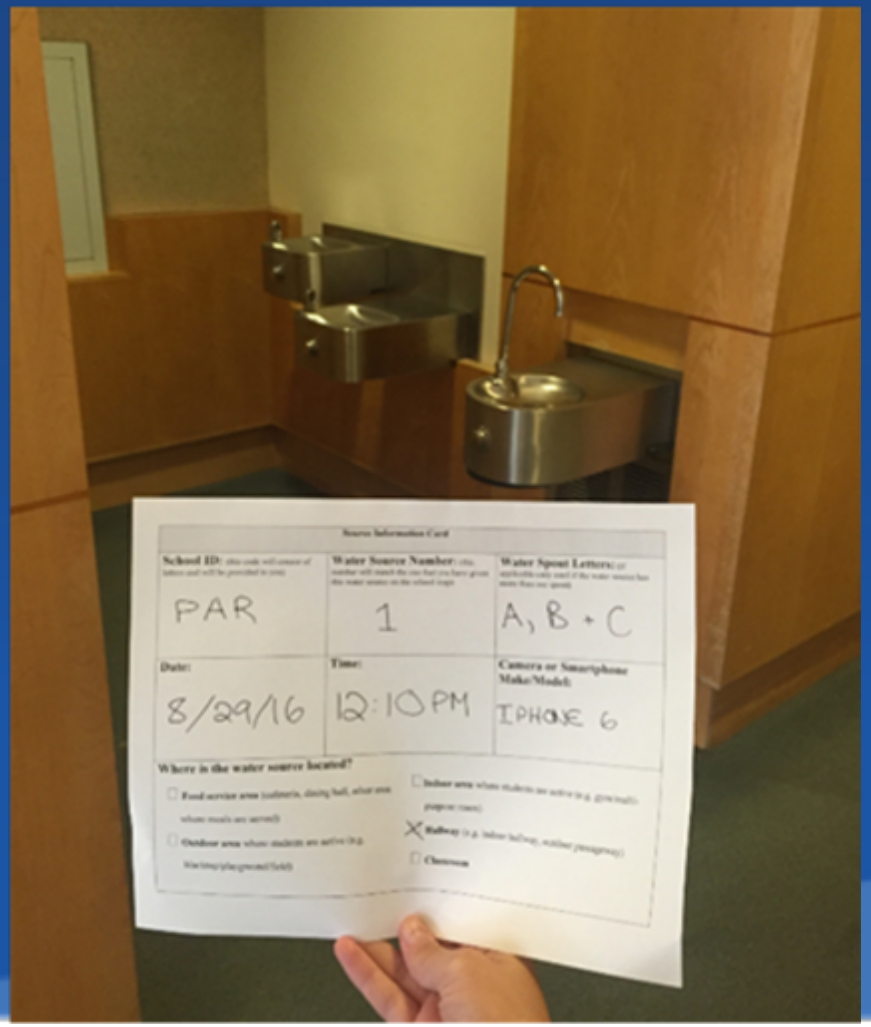

Step #3: Create Source ID Labels

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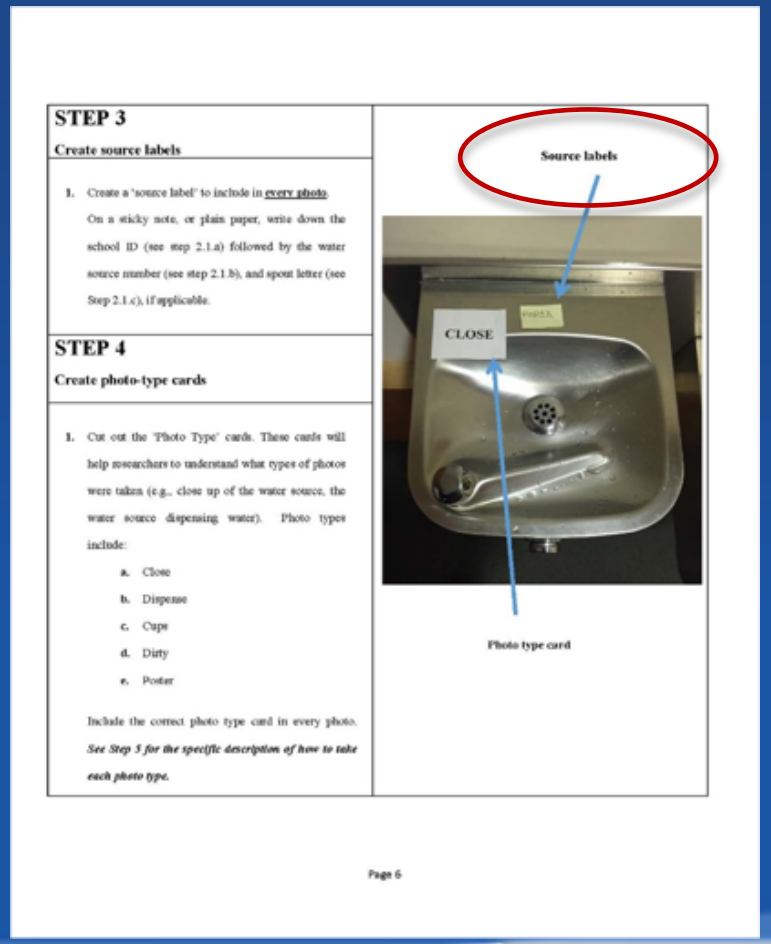

STEP 3

Create source labels

1. Create a 'source label' to include in every photo. On a sticky note, or plain paper, write down the school ID (see step 2.1.a) followed by the water source number (see step 2.1.b), and spout letter (see Step 2.1.c), if applicable.

STEP 4

Create photo-type cards

1. Cut out the 'Photo Type' cards. These cards will help researchers to understand what types of photos were taken (e.g., close up of the water source, the water source dispensing water). Photo types include:
   a. Close
   b. Dispense
   c. Cups
   d. Dirty
   e. Poster

   Include the correct photo type card in every photo. ***See Step 5 for the specific description of how to take each photo type.***

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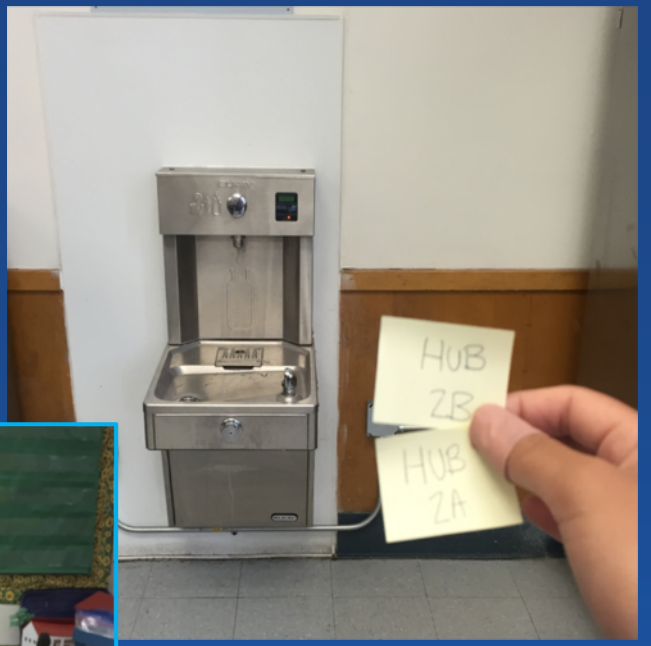

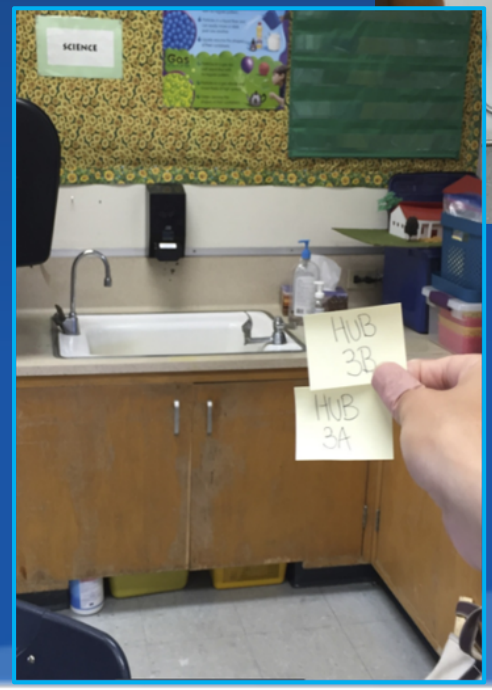

Step #4: Create Photo-Type Cards

Go to Protocol
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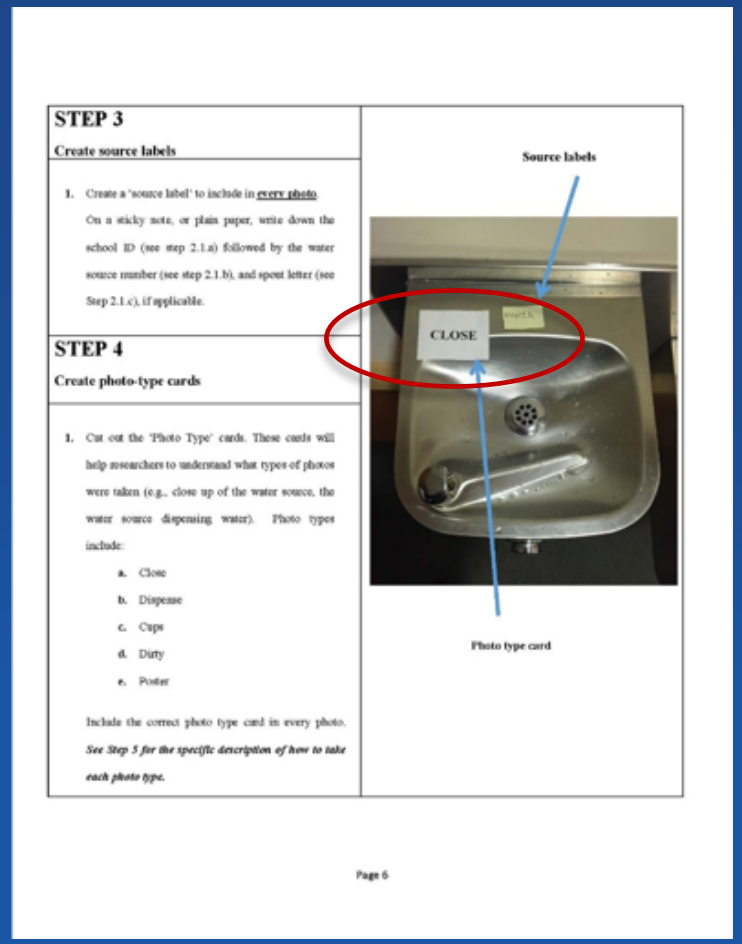

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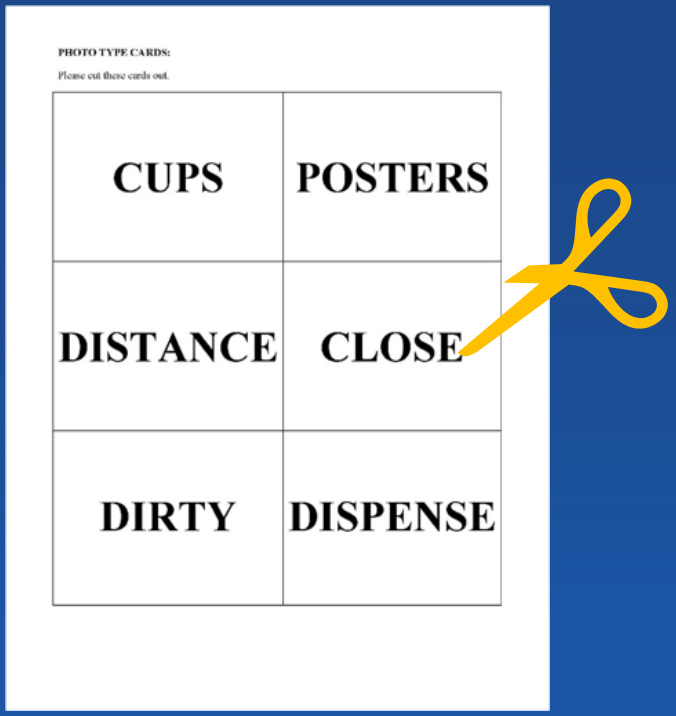
Source labels

Photo type card

Page 6



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DIRTY	DISPENSE