

# Arizona Water Watch Volunteer Data Process



Leveraging Technology and Empowering  
Volunteers to Collect High Quality Data



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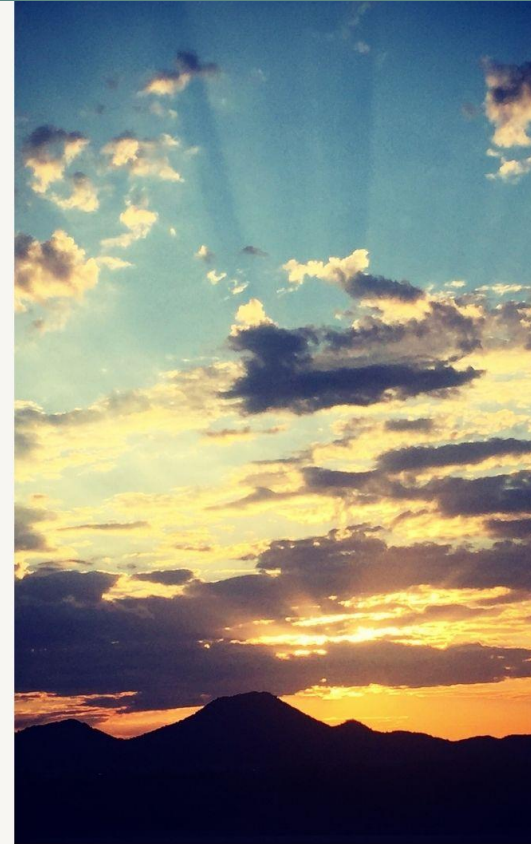


## ADEQ MISSION

TO PROTECT AND ENHANCE  
PUBLIC HEALTH AND THE  
ENVIRONMENT



### Arizona Waterbody Statistics



**COMMUNITY SCIENCE  
TO THE RESCUE!**



## Survey123 Data



App



Portal

- App: you can't update
- Portal updates in real time
- Equipment Calibration Data
- Pre-populated for each volunteer group

## Convert Data



GIS Model



Python  
Script

- GIS Model pulls data from the cloud
- Python script turns data into proper excel format

## QAQC, Upload, and Approve



QAQC  
Dashboard,  
Upload  
WQDB



Update  
WQDB,  
Approve

- QAQC
- AWW Dashboard-view all data in real time
- Uploaded to WQX

# Data Collection and Submission

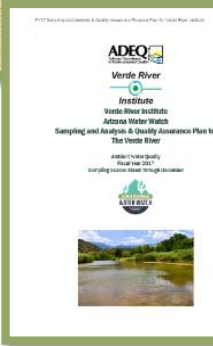


## ARIZONA WATER WATCH

- **Step 1:** Dedicated volunteers: annual training, SAP, annual audit required



CHECKLIST	NOTES
<input type="checkbox"/> 1. Check for fuel	
<input type="checkbox"/> 2. Check for oil leaks	
<input type="checkbox"/> 3. Check for oil stains	
<input type="checkbox"/> 4. Check for oil drips	
<input type="checkbox"/> 5. Check for oil puddles	
<input type="checkbox"/> 6. Check for oil spots	
<input type="checkbox"/> 7. Check for oil smears	
<input type="checkbox"/> 8. Check for oil streaks	
<input type="checkbox"/> 9. Check for oil splatters	
<input type="checkbox"/> 10. Check for oil drips	
<input type="checkbox"/> 11. Check for oil stains	
<input type="checkbox"/> 12. Check for oil puddles	
<input type="checkbox"/> 13. Check for oil spots	
<input type="checkbox"/> 14. Check for oil smears	
<input type="checkbox"/> 15. Check for oil streaks	
<input type="checkbox"/> 16. Check for oil splatters	
<input type="checkbox"/> 17. Check for oil drips	
<input type="checkbox"/> 18. Check for oil stains	
<input type="checkbox"/> 19. Check for oil puddles	
<input type="checkbox"/> 20. Check for oil spots	



- **Step 2:** Field work: paper forms

**ADEQ CITIZEN SCIENCE DATA FORM**

PROJECT NAME: \_\_\_\_\_ FIELD CREW: \_\_\_\_\_

SITE NAME: \_\_\_\_\_ ADEQ SITE ID: \_\_\_\_\_

DATE: \_\_\_/\_\_\_/2017 TIME: \_\_\_ AM / \_\_\_ PM LOCATION: \_\_\_\_\_

**FIELD DATA: FILL IN THE BLANKS**

AIR TEMPERATURE: \_\_\_\_\_ °C

WATER TEMPERATURE: \_\_\_\_\_ °C

DISSOLVED OXYGEN: \_\_\_\_\_ mg/L

pH: \_\_\_\_\_

SPECIFIC CONDUCTIVITY: \_\_\_\_\_ uS/cm

TOTAL DISSOLVED SOLIDS: \_\_\_\_\_ mg/L

TURBIDITY: \_\_\_\_\_ NTU

**SAMPLE COLLECTION INFO: CIRCLE ALL APPLICABLE INFORMATION IN EACH SECTION**

LOOKING DOWNSTREAM: GRAB, POLE

LOOKING UPSTREAM: LEW, 1/4, 1/2, 3/4, REW

COLLECTING: RIFFLE, RUN, POOL

QC SAMPLE NAME: \_\_\_\_\_

E. COLI: COLLECTED, METALS, NUTRIENTS, SSC, INORGANICS

E. COLI: CIRCLE AND FILL IN APPLICABLE INFORMATION

COLLECTED	INCUBATED	COUNTED	LRG WELL	AM WELL	MPN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

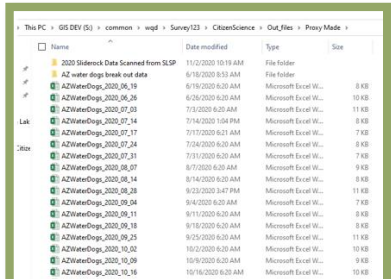
Duplicate:  AM \_\_\_:\_\_\_ PM \_\_\_:\_\_\_

Blank:  NA \_\_\_:\_\_\_ AM \_\_\_:\_\_\_ PM \_\_\_:\_\_\_

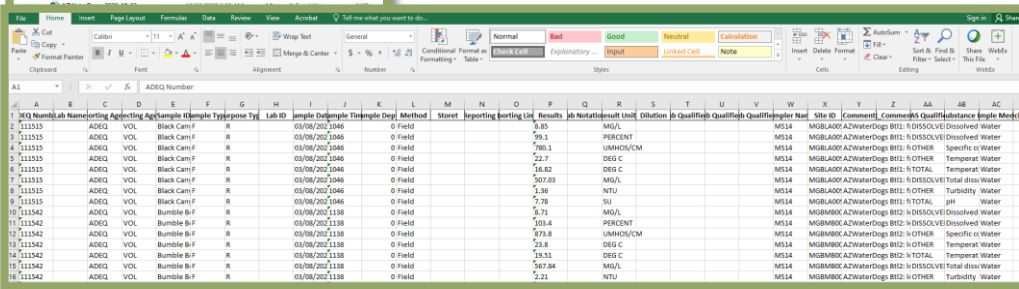
- **Step 3:** Data Entry: App or portal



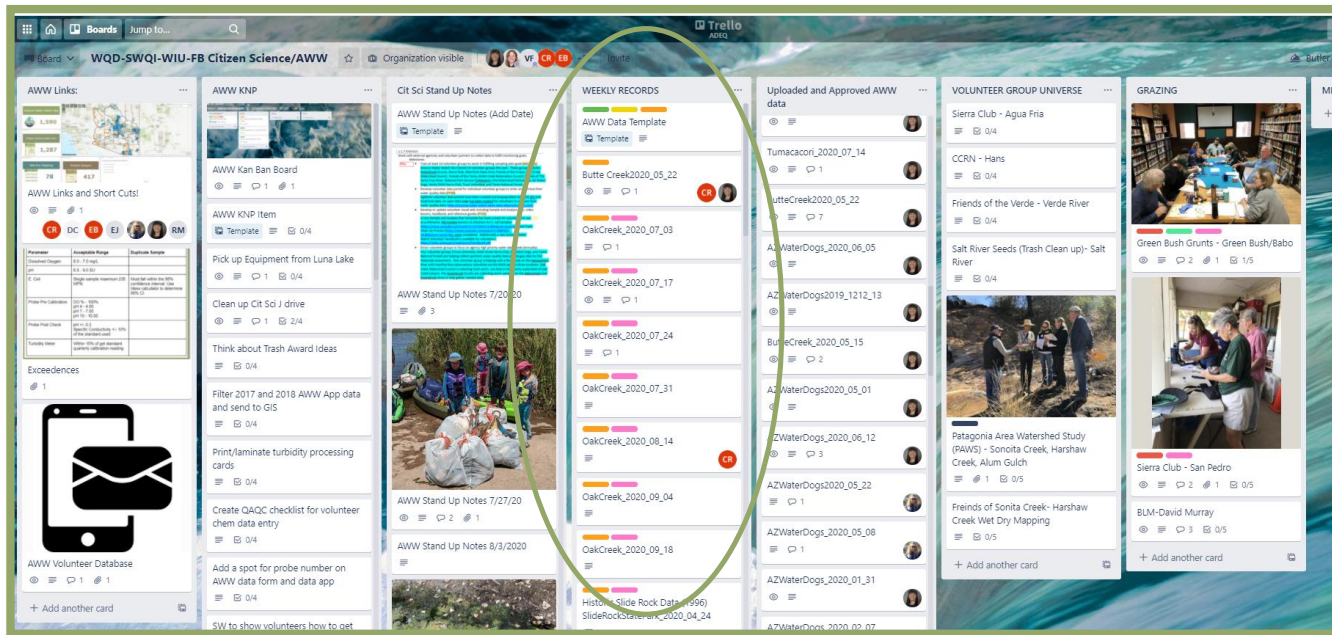
# Data Conversion



**Step 1:** Data is pulled from the cloud using a GIS model

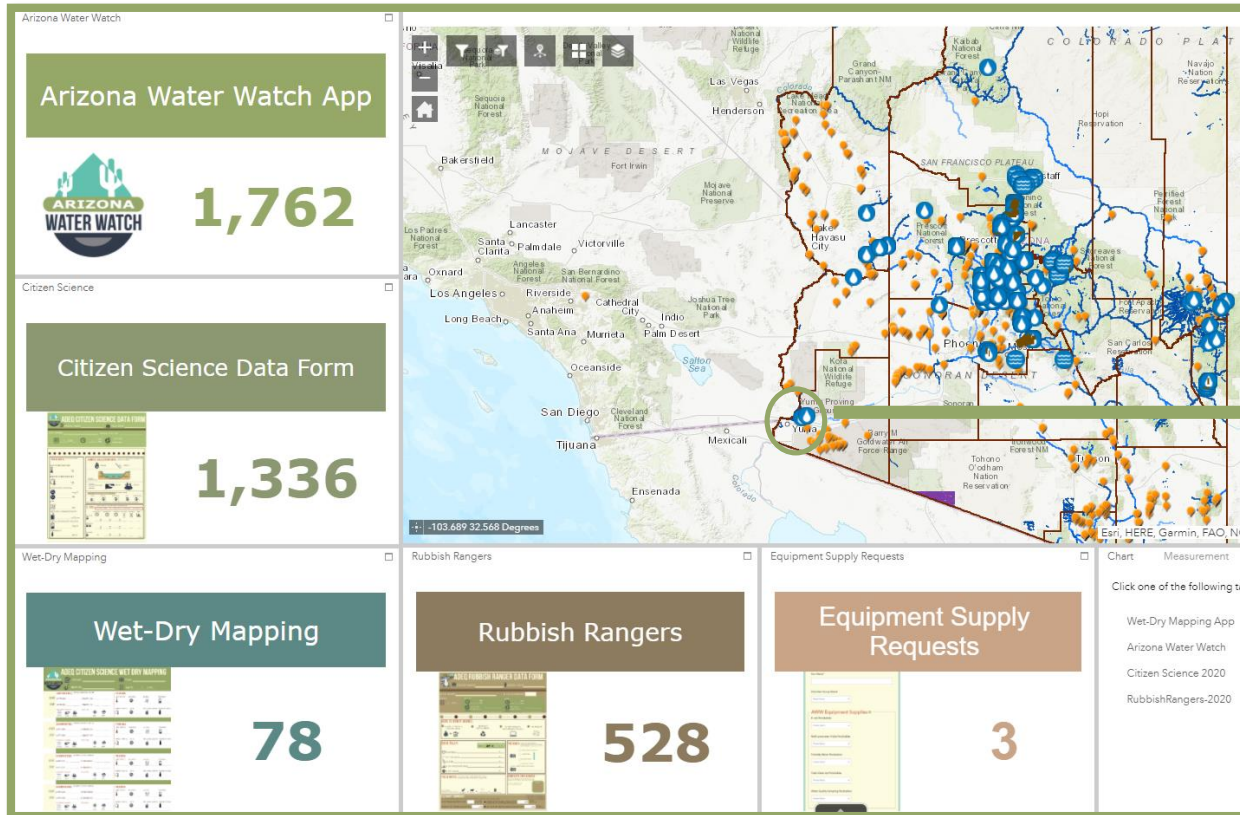


**Step 2 :** Data runs through a python script to make sure ADEQ's Water Quality Database will accept the upload



**Step 3 :** A proxy is made for each excel sheet submitted, ADEQ staff champion a proxy

# QAQC Process – upload to WQX



Field Data	12/19/2020, 12:00 PM
Collection Date	
Field Data	10:02
Collection Time	
Air Temperature (°C)	12.60
Water Temperature (°C)	8.56
Dissolved Oxygen (mg/L)	8.84
Dissolved Oxygen (%)	76.10
pH (SU)	7.95
Specific Conductivity (uS/cm)	4,013.30

[Zoom to](#)

- Step 1:** Data is viewed in AWW dashboard
- Step 2:** Pre/post equipment calibration checked (automated)
- Step 3:** Notes and photos confirmed
- Step 4:** Upload to ADEQ database → **WQX**



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## Arizona Water Watch Website:

<http://www.azdeq.gov/programs/azww>

