

# What we've done and how we did it

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AZ Rivers is supported by:



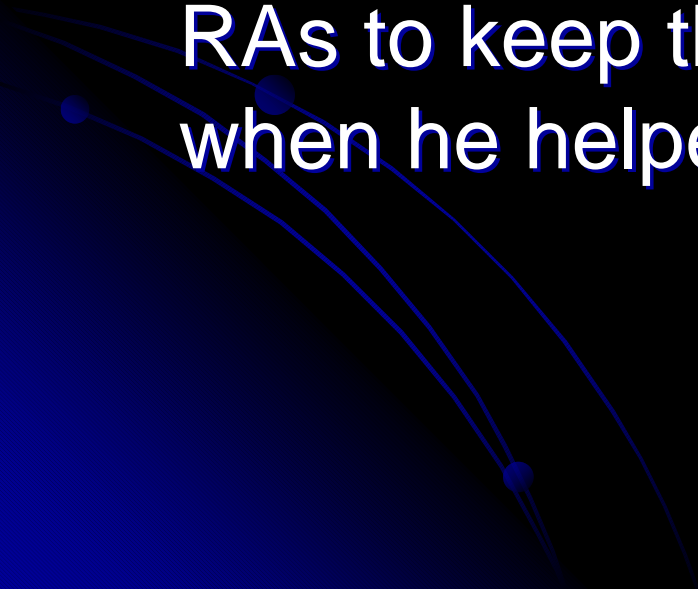
# Were we tested on our trip

- Cienaga Creek
- Gray Hawk Ranch
- The San Pedro House
- The Gila Box
- Dankworth pond
- The San Francisco River
- Along Tonto Creek And the Tonto Natural Bridge
- Along the Verde River
- Wet Beaver Creek
- Montezuma's Well

# Temperature

- Just stick the thermometer in the water
- Make sure to read it while in the water

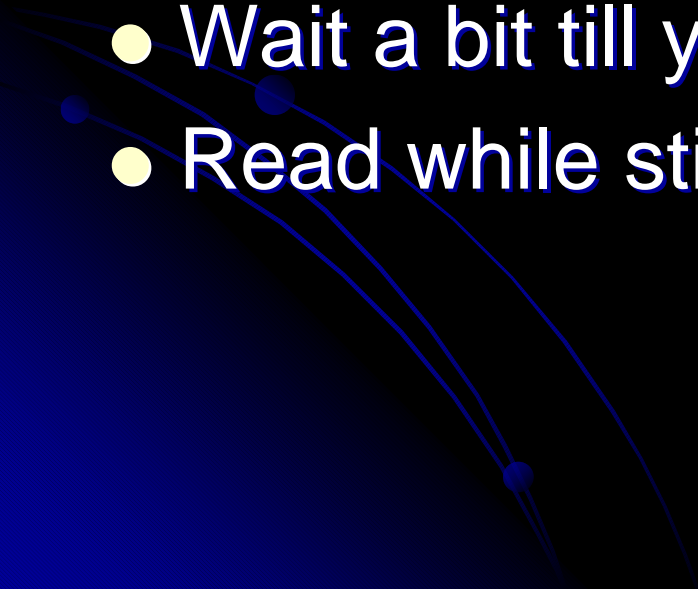
(We had to constantly remind one of the RAs to keep the thermometer in the water when he helped us)



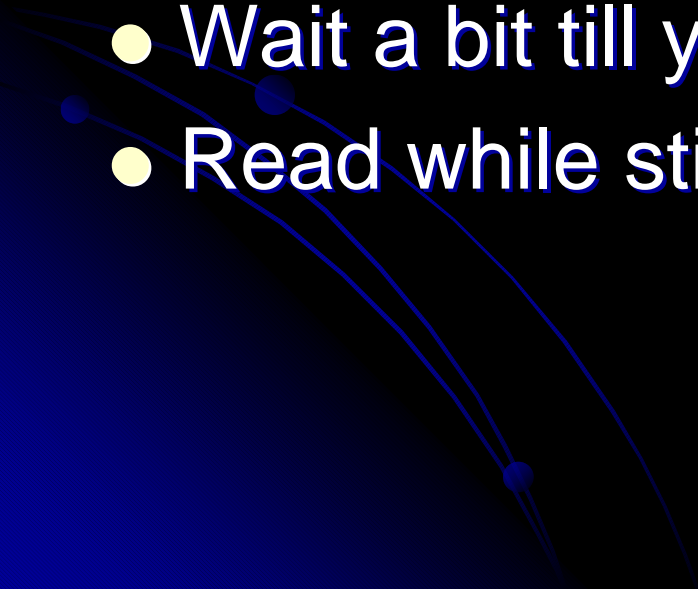
# What we tested for

- Temp
- PH
- Conductivity
- Dissolved Oxygen
- Alkalinity
- Nitrates
- Turbidity/Transparency of the water

# PH

- We used a Probe that was pre-calibrated while at the Biosphere
  - Turn on Probe
  - Stick probe about an inch into the water
  - Wait a bit till you have a steady reading
  - Read while still in the water
- 

# Conductivity

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# Dissolved Oxygen

- Used a DO kit
- Procedure: fill sample bottle so there is no air inside it
  - Add 8 drops of Manganous Sulfate Solution
  - Add 8 drops of Alkaline Potassium Iodide Azide
  - Cap and mix
  - Allow precipitate to settle somewhat
  - Add 8 drops of Sulfuric Acid
  - Cap and mix until reagent and precipitate dissolve
  - Fill test tube to the 20 ml line
  - Fill titrator with Sodium Thiosulfate
  - Titrate until sample is pale yellow
  - Add 8 drops of starch indicator
  - Continue the Titration until precipitate is clear.

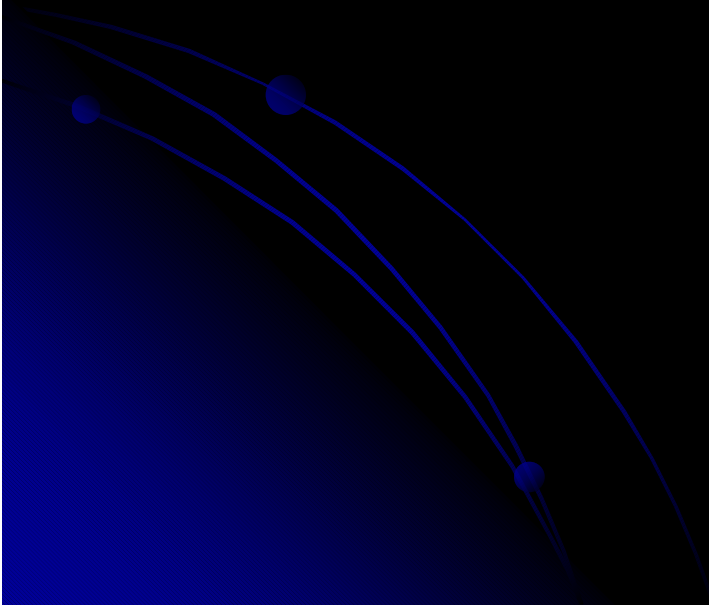
# Alkalinity

- Used alkalinity kit
- procedure: Fill the Titration tube to the 5 ml line with the sale water
  - Add one BCG-MR Indicator Tablet
  - Cap And mix until tablet dissolves. Solution will turn blue-green
  - Fill direct reading Titrator with Alkalinity titration Reagent B
  - Insert the titrator into the center of the test tube cap
  - Gently swirl tube while pressing the plunger of the titrator until the solution turns to a purple color
  - Read result



# Nitrates

- Used a Nitrates Kit
- Procedure: Fill the water sampling bottle with sample water
  - Fill one test tube tube



# Turbidity

- Use something like a bucket or a cup were you could get water without any of the sediment
- Put the tube completely in your shadow and slowly pour in sample water
- Pour until you could no longer see the pattern at the bottom of the turbidity tube
- Read the results

Location	North	West	Elevation	Temperature	P.H.	Conductivity	DO	Alkalinity	Nitrates	Turbidity
Cienaga	32.0167	110.6431	1007	23.3	8.2	132.4	7.5	269	0	32
Grey Hawk S1	31.60726	110.15517	1208	22	8.2	479	4.1	210	0	32
End of Gila Box	32.88732	109.49708	936	24	8.4	1280	6.5	172	0	77
Beginning of Gila Box	32.96535	109.31004	1012	27	8.2	600	5.9	176	0.3	83
San Fransico River	33.06081	109.30081	1058	29.5	8.1	1130	7	166	0	120+
Tonto Picnic Area	34.33985	111.09579	1661	16	7.9	200	7.5	84	0.1	120+
Tonto Natural bridge	GPS Wouldn't work			17	7.9	560	7.25	219	0.1	120+
Beaver Creek S1	34.67929	111.69571	1186	21	7.4	270	N/A	130	0	120+
Beaver Creek S2	34.67336	111.67346	1181	22	7	260	8.2	152	0.1	120+
Montezuma's Well	GPS Wouldn't work			25	6.4	1020	6.8	476	0.1	120+