

Arizona Hydrological Society

Charles C. Avery Intern Scholarship

Presented By: 2014 Summer Intern Rae Lynn Byars



Hello, my name is Rae Lynn.

Thank you for coming!

OUTLINE:

I. Welcome

- Introductions
- Email List for a copy of presentation

II. Arizona Hydrological Society

III. 2014 Intern Experience

IV. Wrap Up and Questions

I look forward to talking to you at the Lumberyard



The Arizona Hydrological Society



AHS

Formed in 1985, AHS is a nonprofit organization supporting public understanding, education, and training in the science and technology of hydrology and water resources through meetings, scholarships, grants, symposia, and other outreach and/or educational activities.

AHS Members

Disciplines

- ❖ Hydrologists
- ❖ Hydrogeologists
- ❖ Geologists
- ❖ Geochemists
- ❖ Chemists
- ❖ Biologists
- ❖ Ecologists
- ❖ Engineers
- ❖ Students

Affiliations

- ❖ Federal
(USGS, USDA, NPS...)
- ❖ Tribal Nations
- ❖ States
- ❖ Counties
- ❖ Municipalities
- ❖ Industry
- ❖ Consultants
- ❖ NGOs
- ❖ Academia (faculty & students)



When does AHS meet?

Chapter Meetings

Typically **monthly** for presentations and/or business

Corporate Board Meetings

Quarterly to discuss AHS business

All members welcome

General Membership Meeting

Concurrently with **annual** symposium

Annual Symposium

Chapters take turns hosting meeting in or near their cities

Include technical sessions, workshops, field trips

How can the **community** and **students** benefit from getting involved or joining AHS as a member?

Three ways students benefit:

- ① **3 Academic Scholarships** (4-year Colleges, Statewide) \$2,000
- ② **1 Academic Scholarship** (2-year Colleges) \$1,000
- ③ **3 Intern Scholarships**, (All Colleges, 1 for each chapter) \$3,000
 - ◆ Presentations at monthly meetings
 - ◆ Website, LinkedIn Group, e-Newsletter
 - ◆ Annual symposium
 - ◆ Field trips



Annual Symposium 2014



Winner of \$500
for the
Undergraduate
Poster Contest!

Field Trips!

2014 Field Trip - Grand Canyon

(Laura Crossey, 2014)



Opportunities for networking



Photos by Jon Mason, USGS



Thanks to Kurt Novy,
Jim Duffield, Jon Mason
and Erin Young!



ARIZONA
HYDROLOGICAL
SOCIETY

For more information, visit
<http://www.azhydrosoc.org/>
or scan this QR code



CHARLES C. AVERY INTERN SCHOLARSHIP

◆ Applications Due March 27th



Intern Scholarship

One student from each chapter.

200 hours of internship

\$3,000 Scholarship

Scholarships

- \$1,000 Scholarship (For a student enrolled in a 2 year Arizona college)
- \$2,000 Scholarship (For a student enrolled in a 4 year Arizona college)

Who can apply?

- Sophomores
- Juniors
- Seniors
- Grad students

You can apply to both!

Who can you work with:

- ❖ Federal
(USGS, USDA, NPS...)
- ❖ Tribal Nations
- ❖ State
- ❖ Counties
- ❖ Municipalities
- ❖ Industry
- ❖ Consultants
- ❖ NGOs
- ❖ Academia (faculty & students)



Applying for a Intern Scholarship



FLAGSTAFF CHAPTER 2014 CHARLES C. AVERY INTERN SCHOLARSHIP APPLICATION

Applicant Information Please print or type with Adobe Reader's Add Text or Acrobat's Typewriter

Name:	E-mail:
Address:	College/University:
Alt Address:	Year of Study: Sophomore Junior Senior Grad
Phone:	Department:
Alt Phone:	Major:

Activities, Skills, and Experience (attach additional pages if necessary):

Activities/Clubs:
Computer Skills:
Other Skills/Education/Experience:

All applicants must submit the following with their application:

- An unofficial copy of their college/university transcripts
- Two written references from instructors or previous employers (sealed envelopes can accompany application, or they may be sent electronically directly)
- A maximum two-page essay describing the applicants interest in hydrology and career goals
- A resume highlighting any academic and professional experience

All applicants must submit the following with their application:

- University Transcripts
- Two Written References
- Essay describing the applicants interest in hydrology and career goals
- Resume

Send all materials as hard copy or Adobe® PDF files (preferred) by 5:00 pm March 27, 2015:

AHS Flagstaff Intern Scholarship Program

ATTN: Erin Young, 211 W. Aspen Avenue Flagstaff, AZ 86001

E-mail: eyoung@flagstaffaz.gov

[Click here for link to Intern Scholarship Application](#)

AHS 2015 Intern Scholarship Program Details:

- ◆ Applications & all related materials must be received by 5:00 PM (Arizona time) Friday, March 27, 2015.
- ◆ Interviews are held the third week of April for the top three candidates. The recipient of the internship will be announced by May 4th, 2015.

2014 SUMMER INTERN SCHOLARSHIP



Total Hours

CITY	60
HOPI	75.5
USGS	64.5
200	

Field Work at Lee's Ferry!



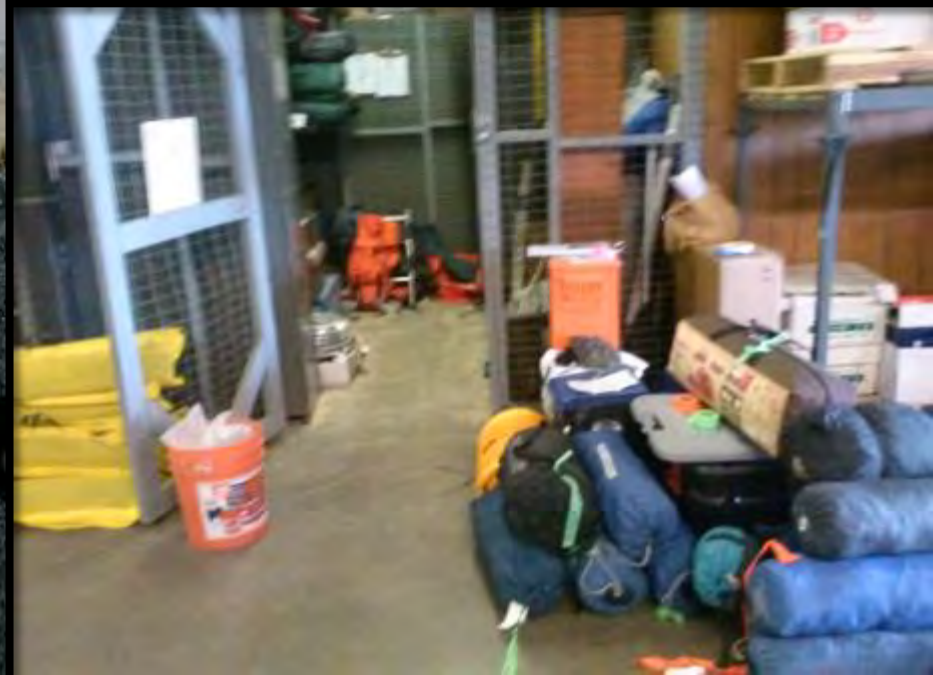
Acoustic Doppler Radar



Learning how to install and use equipment



When OCD takes over,
everyone is happy...
well at least
everything is clean!



THE CITY OF FLAGSTAFF

Utilities Department

Evaluation of the Water Conservation Turf Rebate Program



Fig. 1 Final Compiled List A (Fiscal Year)

DATE COMPLETE	NAME	REBATE AMT	SQ FEET	ADDRESS	LOCATION ID	S PER SQ Ft

11/03/09	AKO	29	11/09	11/10/09	2850.00		
10/05/09	AKO	32	10/09	10/12/09	3170.00		
9/03/09	AKO	29	9/09	9/15/09	2884.00	-00	
8/05/09	AKO	30	8/09	8/17/09	3443.00	-00	
7/08/09	AKO	34	7/09	7/14/09	4294.00	-00	
6/02/09	AKO	28	6/09	6/12/09	3320.00		
5/05/09	AKO	32	5/09	5/11/09	3449.00		
4/03/09	AKO	31	4/09	4/13/09	3431.00		
3/03/09	AKO	27	3/09	3/11/09	3418.00		
2/04/09	AKO	30	2/09	2/12/09	3273.00		
1/05/09	AKO	33	1/09	1/14/09	3177.00		
12/03/08	AKO	33	12/08	12/15/08	3495.00		
10/31/08	AKO	29	11/08	11/10/08	2916.00		
10/02/08	AKO	28	10/08	10/13/08	3324.00		
9/04/08	AKO	30	9/08	9/10/08	2880.00		

TOTALS: 1095 **137323.00 BEFORE** **137574.26 ADJ**
 AVERAGE DAILY USAGE: 128.63 .00

PREPARED 6/12/14
 PROGRAM UT475L CITY OF FLAGSTAFF
 ACCOUNT CONSUMPTION HISTORY PAGE: 2

EXCEPTION REPORT FLAG . . .	
CONSUMPTION ESTIMATE	0.00
DEMAND CONSUMPTION ESTIMATE	0.00
AVERAGE CONSUMPTION	128.63
AVERAGE DEMAND CONSUMPTION	0.00
TOTAL CONSUMPTION	420111
TOTAL DEMAND CONSUMPTION	0.00
TOTAL READING DAYS	3266

8/03/12	AKO	35	8/12	8/19/12	3710.00		0.00
7/03/12	AKO	27	7/12	7/20/12	3614.00		0.00
6/06/12	AKO	34	6/12	6/15/12	3040.00	-00	
5/01/12	AKO	27	5/12	5/17/12	4185.00	-00	
4/04/12	AKO	29	4/12	4/20/12	3370.00	-00	
3/04/12	AKO	32	3/12	3/22/12	4668.00	-00	
2/03/12	AKO	29	2/12	2/22/12	2766.00	-00	
1/05/12	AKO	30	1/12	1/20/12	2817.00		0.00
12/06/11	AKO	36	12/11	12/19/11	2260.00		0.00
10/31/11	AKO	31	11/11	11/18/11	3294.00		0.00
9/30/11	AKO	30	10/11	10/19/11	3504.00		0.00
8/31/11	AKO	26	9/11	9/16/11	3007.00		0.00
TOTALS: 1022					117696 AFTER	126102.68 ADJ	
AVERAGE DAILY USAGE:					115.14	0.00	

CONSUMPTION PARAMETERS FOR WATER
 PREPARED 6/12/14
 PROGRAM UT475L CITY OF FLAGSTAFF
 ACCOUNT CONSUMPTION HISTORY PAGE: 2

LOCATION: 126956
 EXCEPTION REPORT FLAG

CONSUMPTION ESTIMATE	0.00
DEMAND CONSUMPTION ESTIMATE	0.00
AVERAGE CONSUMPTION	128.63
AVERAGE DEMAND CONSUMPTION	0.00
TOTAL CONSUMPTION	420111.00
TOTAL DEMAND CONSUMPTION	0.00
TOTAL READING DAYS	3266

AFTER

Daily averages were calculated to 1095 days and provided adjusted amounts used in analysis for aquricey.

Consumption Analysis			
	BEFORE	AFTER	INDIVIDUAL TOTALS:
1	268,569	224,319	44,250
2	299,197	207,870	91,327
3	294,098	302,747	-8,649
4	305,950	224,612	81,338
5	267,218	211,210	56,008
6	395,988	297,430	98,558
7	444,536	303,953	140,584
8	328,448	261,446	67,002
9	159,200	129,098	30,102
10	170,614	204,849	-34,234
11	0	0	0
TOTALS:	2,933,819	2,367,534	

SUBTRACT: 2,933,819
2,367,534

CONSERVED: 566,285 GALLONS

REBATES GIVEN: 5,500 DOLLARS

TURF PULLED 53,516 SQFT

Analysis of Consumption Before and After Installation



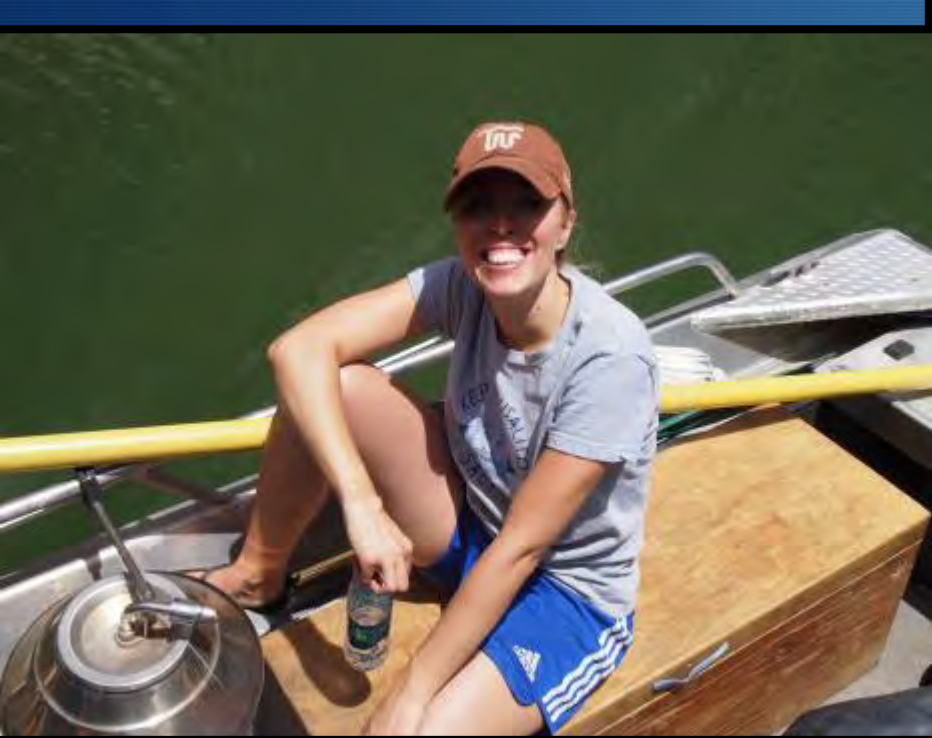
Percentage of Reduction	13.42%	4.64%	3.62%	13.38%	23.19%	-147.41	18.91%	14.78%	20.44%	91.31%	30.63%	10.65%	16.48%	30.52%	-2.94%	26.59%	20.96%	31.62%	24.89%	20.40%	18.91%	20.07%	-1.40%	0.72%	19.94%	37.48%	51.41%	40.35%	37.18%	11.77%	0.11%	17.24%	448.19	14.23%	
Turf Removed (cuY)	1,800	1,500	2,351	1,590	2,100	2,076	1,891	2,200	2,152	8,884	1,500	1,600	1,600	2,200	1,500	1,500	2,200	1,500	2,483	1,500	2,550	3,053	5,750	1,500	1,741	1,669	1,985	1,600	2,270	3,544	1,500	3,030	2,530	1,583	
# Rollout Amount	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Conserved	-11,750	20,110	28,300	18,919	25,475	72,197	26,888	61,826	-43,989	252,436	25,709	44,250	91,827	-8,669	81,338	56,008	140,688	18,518	67,002	30,202	34,234	-4,088	4,088	44,701	95,644	121,835	54,782	102,188	11,882	45	180,600	21,921	41,057	38,617	
# After Installation	907,894	995,693	1,055,894	1,401,940	88,306	309,600	140,632	351,548	200,223	345,243	213,623	234,313	307,870	302,747	24,612	11,310	335,950	297,430	261,446	129,098	304,849	293,410	135,640	308,143	259,550	114,985	190,550	72,677	93,593	42,417	303,129	149,054	107,887	117,895	
# Before Installation	89,144	411,800	294,184	160,819	115,852	388,119	160,819	200,000	50,000	497,852	250,000	268,560	300,000	300,000	280,000	270,000	444,531	375,498	378,448	159,231	170,614	293,410	313,640	311,941	253,200	130,000	135,780	274,869	113,251	42,442	122,520	27,132	14,239	137,121	

Evaluation Results

After evaluating
36 participants
that met the criteria, we
found that for every
one dollar the city
paid in rebate, these participants
conserved
76.78 gallons of water

THE HOPI WATER RESOURCES







Research and Database



		Use_of_Water	A&Ww	A&We	AgL	AgI	DWS	FBC	FC	PBC	PCC	GWR
		Range										
	SPRING	Ceremonial	A&Ww				DWS	FBC		PBC	PCC	
	SPRING	Ceremonial	A&Ww			AgI	DWS	FBC		PBC	PCC	
	SPRING	Ceremonial	A&Ww			AgI	DWS	FBC		PBC	PCC	
		Ceremonial										
		Ceremonial										
		Ceremonial										
		Ceremonial										
		Monitoring										
	SPRING	Range	A&Ww					FBC		PBC		
	SPRING	Monitoring	A&Ww					FBC		PBC		
	SPRING	Monitoring	A&Ww					FBC		PBC		
		Ceremonial										
		Ceremonial										
	SPRING	Ceremonial	A&Ww		AgL			FBC		PBC		
		Ceremonial										
	SPRING		A&Ww		AgL			FBC		PBC		
		Ceremonial	A&Ww		AgL	AgI		FBC		PBC		
		Ceremonial										
	STREAM		A&Ww		AgL	AgI		FBC		PBC		GWR
	SPRING		A&Ww					FBC		PBC		
		Ceremonial										
	SPRING		A&Ww					FBC		PBC	PCC	
		Ceremonial										
		Ceremonial										
	SPRING		A&Ww		AgL		DWS	FBC		PBC	PCC	
		Ceremonial	A&Ww			AgI	DWS	FBC		PBC	PCC	
	STREAM		A&Ww		AgL	AgI		FBC		PBC		GWR
	SPRING		A&Ww					FBC		PBC		
	LAKE	Ceremonial	A&Ww			AgI		FBC	FC	PBC		
	SPRING		A&Ww			AgI		FBC		PBC		
	SPRING	Ceremonial	A&Ww			AgI		FBC		PBC	PCC	
	SPRING	Ceremonial	A&Ww			AgI		FBC		PBC		
	LAKE		A&Ww			AgI		FBC		PBC		
	STREAM		A&Ww		AgL	AgI		FBC		PBC		GWR
	SPRING	Range	A&Ww				DWS	FBC		PBC	PCC	
		Range										
		Ceremonial										

STANDARDS													
Water_Level													
Flow		cfs											
Discharge		gpm											
Temp		Degrees C	</= 32.2	</= 32.2	</= 2.7	</= 2.7	NNS	</= 2.7	NNS	</= 2.7	NNS	NNS	NNS
Temp_Air		Degrees C											
pH_Field			6.0-9.0	6.0-9.0	6.5-9.0	4.5-9.0	5.0-9.0	6.5-9.0	NNS	6.5-9.0	6.5-9.0	5.0-9.0	
Dissolved_Oxygen		mg/l											
Barometric_Press		mm/Hg											
Cond_Field		(umhos/cm)	Variable	Variable	Variable	Variable	Variable	Variable	Variable	Variable	Variable	Variable	Variable
Turbidity		NTU	Variable	Variable	NNS	NNS	25.000	25.000	NNS	NNS	25.000	25.000	
Water_Elev													
Phys_Hab													
Mac_Invert													
TotColi		N/100 ml											
E_coli		Colonies/100 mL	NNS	NNS	NNS	NNS	Variable	Variable	NNS	Variable	Variable	Variable	Variable
NO3		mg/L					10.000						
Nitrate+Nitrite		mg/L	NNS	NNS	NNS	NNS	10.000	NNS	10.000	NNS	10.000	10.000	10.000
NO2		mg/L					1.000						
Ortho_PO4		mg/L											
SO4		mg/L	250.000	250.000	NNS	NNS	250.000	250.000	250.000	NNS	250.000	250.000	250.000
TDS		mg/L	500.000	500.000	NNS	NNS	500.000	500.000	500.000	NNS	500.000	500.000	500.000
As_Filtered		mg/L	.340-.150	.440-.230	0.200	2.000	0.010	0.030	0.010	0.280	0.010	0.010	0.010
Ba_Filtered		mg/L	NNS	NNS	NNS	NNS	2.000	186.670	NNS	186.670	2.000	2.000	2.000
Cd_Filtered		mg/L	Tbl -4'	Tbl -4'	0.050	0.050	0.005	0.470	0.008	0.470	0.005	0.005	0.005
Ca		mg/L											
Cr_Filtered		mg/L	NNS	NNS	1.000	1.000	0.100	NNS	NNS	NNS	0.100	0.100	0.100
Cu_Filtered		mg/L	Tbl -4'	Tbl -4'	0.500	5.000	1.300	9.330	NNS	9.330	1.300	1.300	1.300
Fe_Filtered		mg/L	NNS-1.	NNS	NNS	NNS	0.300	NNS	0.300	NNS	0.300	0.300	0.300
Pb_Filtered		mg/L	Tbl -4'	Tbl -4'	0.100	10.000	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Mg		mg/L											
Mn		mg/L	NNS	NNS	NNS	10.000	0.050	130.670	0.100	130.670	0.050	0.050	0.050
Hg_Filtered		mg/L	.0024D-.00001D	2.4D-.01D	0.010	NNS	0.002	0.280	0.002	0.280	0.002	0.002	0.002
K		mg/L											
Se_Filtered		mg/L	NNS-.0020T	.033-.002	0.050	0.020	0.170	4.670	4.200	4.670	0.170	0.170	0.170

Creating a Simple, Functioning Water Quality Database

AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ			
NO3	Nitrate+Nitrite	NO2	Ortho_PO4	SO4	TDS	As_Filtered	Ba_Filtered	Cd_Filtered	Ca	Cr_Filtered	Cu_Filtered	Fe_Filtered	Pb_Filtered	Mg	Mn	Hg_Filtered	K	Se_Filtered	Ag_F		
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
0.1	0.1	<.10		542	1050	<.02		0.01	<.002	4	<.005	<.01	0.04	<.002	<.1	<.02	<.0002	3	0.005	<.01	
1.22	1.22	<.10		368	631	<.002		0.04	<.002	110	<.020	<.01	0.25	<.002	23	<.02	<.0002	3	0.016	<.01	
5.15	5.26	0.11		454	908	0.002		0.03	<.002	115	<.005	<.01	0.06	<.002	40	<.02	<.0002	2	0.019	<.01	
						0.002		0.04	<.002	131	<.005	<.01	0.23	<.002	50	0.02	<.0002	7	0.012	<.01	
			17.2																		
9.36	9.36	<.10		1360	1070	0.002		0.02	<.002	149	<.005	<.01	0.03	<.002	56	<.02	<.0002	5	0.024		
						<.002		0.02	<.002	154	<.005	<.01	0.07	<.002	60	<.02	<.0002	6	0.015	<.01	
0.25	0.25	<.10		68.2	321	0.009	<.01	<.002		33	<.005	<.01	0.07	<.002	21	<.02	<.0002	7	0.008	<.01	
1.19	1.19	<.10	<.05	7.15	107.000					9		<.01	0.11		3	1					
1.2	1.2	<.10		5.12	107	0.006		0.03	<.0002	8			0.12	<.002	2	<.02	<.0002	2	<.002	.01	
			12.2																		
37.2	37.2	<.10		255	764	0.00		0.04	<.002	109	<.005		0.01	0.03	<.002	34	<.02	<.0002	6	0.018	<.01
						<.002		0.04	<.002	114	<.005	<.01	<.10	<.002	37	<.02	<.0002	7	0.015	<.01	
<.10	<.10	<.10	<.05	134	339.000	<.002		0.03	<.0002	53	0.04	<.01	0.12	<.0002	15	0.02	<.0002	2	0.004	<.01	
5.43	5.43	<.10		1630	1250.000	0.004		0.02	<.002	120	<.020	<.01	0.52	<.002	36	0.04	<.0002	8	0.002	<.01	
<.10	<.10	<.10	<.05	19.8	217.000	0.003		0.11	<.0002	30	0.028	<.01	0.05	<.002	13	0.03	<.0002	4	<.002	<.01	
3.91	3.91	<.10	<.05	18	130.000	0.002		0.05	<.0002	28	0.03	<.01	0.09	<.02	4	<.02	<.0002	2	<.0002	<.01	
<.10	<.10	<.10	<.05	19.1	219.000	0.003		0.11	<.0002	31	0.018	<.01	0.07		0.005	14	0.03	<.0002	6	<.002	
<.10	<.10	<.10		308.00	1230.00	0.00		0.01	<.002	9.00	<.005	<.01	0.50	<.002	3.00	0.02	<.0002	4.00	<.010	<.01	
2.31	2.31	<.10		457.00	566.00	<.002		0.03	<.002	111.00	<.02	<.01	0.42	<.002	20.00	<.02	<.0002	4.00	0.00	<.01	
		<.10		314		<.002		0.02	<.002	108	<.005	<.01	0.06	<.002	25	<.02	<.0002	3	0.003	<.01	
<.10	<.10	<.10		415	663.000	<.002		0.02	<.0002	120		<.01	0.33	<.002	26	<.02	<.0002	4	0.004		
6.15	6.15	<.10		782	824.000	<.002		0.02	<.002	99	<.005	<.01	0.02	<.002	36	<.02	<.0002	4	0.015	<.01	
4.22	4.22	<.10		2200	3290.000	<.020		0.03	<.002	314	<.005	<.01	0.14	<.020	259	0.02	<.0002	17	<.002	<.01	
3.48	3.48	<.10		160	430	<.02		0.01	<.002	62	<.005	<.01	0.55	<.002	15	<.02	<.0002	4	0.096	<.01	
		<.10		66.4		0.003	<.01	<.002		1	<.005		0.02	0.24	<.002	<.1	<.02	<.0002	2	<.002	<.01
0.19	0.19	.10		72.8	468.000	<.005	<.01	0.0002		1		0.02	0.28	<.002	<.1	<.02	<.0002	3	.002	<.01	
0.11	0.11	<.10		132.00	526.00	0.01	<.01	<.002		1.00	<.02	<.01	0.40		0.00	<.1	<.02	<.0002	1.00	<.002	<.01
0.8	0.8	<.10		45.4	292	0.002		0.04	<.002	24	<.005	<.01	0.16	<.002	6	<.02	<.0002	4	0.004	<.01	

WQX Web

You are here: [Home](#) > [Datasets](#) > Dataset Summary

Dataset Summary

Type: Activities and Results
 Import Configuration: [Rae Xtab Import Configuration](#)
 Organization ID: HOPI_WQX
 Status: Imported

Datasets are Temporary

Datasets are temporary and must be submitted to CDX to become permanent. To keep this system clean, please delete datasets that have been processed successfully at CDX or are no longer needed. The system will automatically delete this dataset in 15 days.

Import

Error/Warning/Message: 4633 / 0 / 7 [View Log](#)
 Start Time: 01-29-2015 02:12:33 AM
 End Time: 01-29-2015 02:17:35 AM
 File/Transaction ID: EPA Submission Sheet (1-27-15).txt

Entity	Total	Invalid	New	Existing
Activity	477	477	299	0
Result	4527	1477		

Validation Errors	Initial	Unresolved
Max Length Exceeded	233	233
Invalid Domain Value	1356	1356
Required Value Missing	534	534
Invalid Formatted Value	483	483
Other (view log)	1565	1565

[Return](#) [Delete](#) [Export/Submit File\(s\)](#)

WQX Web

You are here: [Home](#) > [Datasets](#) > Dataset Summary

Dataset Summary

Type: Activities and Results
 Import Configuration: [Activity/Results 2-16-15Rae](#)
 Organization ID: HOPI_WQX
 Status: Completed at CDX

Import

Error/Warning/Message: **0 / 0 / 8** [View Log](#)
 Start Time: 02-24-2015 03:50:33 PM
 End Time: 02-24-2015 03:58:16 PM
 File/Transaction ID: EPA Submission Sheet (2-18-15) (1).txt

Submission Completed!

Your submission was processed successfully. Please delete this temporary dataset now, to keep the system clean.

Export

0 / 0 / 5 [View Log](#)
 02-24-2015 03:59:38 PM
 02-24-2015 04:01:32 PM
 _5fc16584-529c-44dd-98aa-acce3ddd2c37

Entity	Total	Invalid	New	Existing
Activity	586	0	586	0
Result	4384	0		

Documents (available for download)[WQX Submission 37657 Update.zip](#)[ValidationResults.xml](#)[ProcessingReport.zip - View in Browser](#)

YAY!! BEST DAY EVER!!

While on a Walk One Day...



How quickly do storm events drain?

Where does water run, seep or sit?

What kind of classification would this soil be?

How do storm events effect the strength of the soils and eroding rock formations?

THANK YOU!

QUESTIONS?

